



A NATIONAL STRATEGY FOR CRITICAL MINERALS IN SIERRA LEONE (2026–2031)

**POWERING TRANSFORMATION,
STEWARDSHIP, AND SHARED PROSPERITY**

**MINISTRY OF MINES AND MINERAL RESOURCES
NATIONAL MINERALS AGENCY
GOVERNMENT OF SIERRA LEONE
MAY 2026**

"A world powered by renewables is a world hungry for critical minerals. For developing countries, critical minerals are a critical opportunity – to create jobs, diversify economies, and dramatically boost revenues.
But only if they are managed properly."
– UN Secretary-General António Guterres



TABLE OF CONTENTS

LIST OF TABLES	5
LIST OF ABBREVIATIONS AND ACRONYMS	6
ACKNOWLEDGEMENTS.....	10
EXECUTIVE SUMMARY.....	11
The Strategic Imperative.....	11
Sierra Leone's Endowment and Positioning	12
.....	13
Strategic Vision and Goal.....	13
Four Transformational Themes	13
Theme I: Empowering Transformation	13
Theme II: Advancing Stewardship	14
Theme III: Catalyzing Shared Prosperity.....	14
Theme IV: Securing Strategic Partnerships.....	14
Expected Outcomes and Success Metrics (2026–2031)	14
Strategic Success Factors	14
.....	16
1.0 PART I: SITUATIONAL FOUNDATION	16
1.1 Introduction and Strategic Context	16
1.1.1 The Global Green Energy Transition.....	16
1.1.2 Sierra Leone's Historic Moment	17
1.2 Definition of Critical Minerals for Sierra Leone	22
1.2.1 Primary Definition of Critical Minerals.....	22
1.2.2 Extended Definition: Strategic Context	23
1.3 Sierra Leone's Designated Critical Minerals.....	23
1.3.1 Primary Tier: High Commercial and Strategic Priority	23
1.3.2 Secondary Tier: Significant Commercial and Strategic Value	24
1.3.3 Tertiary Tier: Strategic Potential and Emerging Demand	26
1.4 Technical Perspective: Why These Minerals Are Critical	28
1.4.1 Geological Endowment and Commercial Viability	28
1.4.2 Demand-Driven Classification.....	28
1.4.3 Vulnerability and Opportunity Framework	29
1.5 Dynamic Definition: Evolving Mineral Criticality.....	29
1.5.1 Recognition of Changing Criticality	29

1.5.2	No Global Definition Consensus.....	30
1.6	Sierra Leone's Adaptive Critical Minerals Framework	30
1.6.1	Policy Implications: Why Critical Minerals Demand National Strategy	31
1.6.2	Critical Minerals as Development Strategy.....	32
1.7	Global Critical Minerals Landscape and Demand Drivers.....	33
1.7.1	Market Dynamics and Price Trends	33
1.7.2	Revenue Potential for Sierra Leone.....	33
1.7.3	Global Policy and Investment Trends	34
1.8	Geopolitical Significance and Supply Chain Dynamics	35
1.8.1	Strategic Positioning	35
		35
1.8.2	Competitive Landscape	36
2.0	PART II: STRATEGIC VISION AND FRAMEWORK.....	37
2.1	Vision Statement and Strategic Goal	37
2.1.1	Vision Statement	37
2.1.2	Strategic Goal.....	37
2.2	Guiding Principles	38
2.3	Strategic Framework: Four Transformational Themes.....	39
3.0	PART III: FOUR TRANSFORMATIONAL THEMES	40
	THEME I: EMPOWERING TRANSFORMATION	40
3.1	Unlocking Value Through Beneficiation, Industrialization, and Innovation.....	40
3.1.1	Intervention 1.1: Geological Mapping and Mineral Resource Characterization	41
3.1.2	Intervention 1.2: Mineral Processing and Beneficiation Infrastructure	41
3.1.3	Intervention 1.3: Downstream Industries and Special Economic Zones	42
3.1.4	Intervention 1.4: Technology Transfer and Innovation Partnerships.....	43
	THEME II: ADVANCING STEWARDSHIP	44
3.2	Environmental Sustainability, Governance, and Community Engagement.....	44
3.2.1	Intervention 2.1: Harmonized Regulatory and Policy Frameworks	44
3.2.2	Intervention 2.2: ESG Standards Exceeding International Norms	45
3.2.3	Intervention 2.3: Community Engagement and Benefit-Sharing Mechanisms	46
3.2.4	Intervention 2.4: Transparent Revenue Management and Governance.....	46
3.2.5	Intervention 2.5: Formalization of Artisanal and Small-Scale Mining (ASM)	47
	THEME III: CATALYZING SHARED PROSPERITY	49

3.3	Local Content, Workforce Development, and Inclusive Growth.....	49
3.3.1	Intervention 3.1: Local Content Requirements and Procurement Policies	49
3.3.	Intervention 3.2: Workforce Development and Skills Training	50
3.3.3	Intervention 3.3: Community Development and Infrastructure Investment	51
3.3.4	Intervention 3.4: Women's Economic Empowerment and Gender Inclusion	51
3.3.5	Intervention 3.5: Youth Empowerment and Economic Opportunity	52
	THEME IV: SECURING STRATEGIC PARTNERSHIPS.....	54
3.4	International Relationships and Global Value Chain Integration	54
3.4.1	Intervention 4.1: Bilateral Strategic Partnerships	54
3.4.2	Intervention 4.2: Regional Integration and African Value Chains	55
3.4.3	Intervention 4.3: Strategic Partnership with Private Sector Leaders	55
3.4.4	Intervention 4.4: Development Finance and International Partnerships	56
3.4.5	Intervention 4.5: Participation in Global Minerals Governance and Forums	56
4.0	PART IV: GOVERNANCE AND IMPLEMENTATION	58
4.1	Governance and Institutional Arrangements	58
4.1.1	Lead Ministry and Coordinating Body	58
4.1.2	Inter-Ministerial Coordination	58
4.2	Implementation Pathway: A National Strategic Plan	58
4.3	Monitoring, Evaluation, and Review	59
4.3.1	Key Performance Indicators (KPIs):	59
4.3.2	Review and Learning:	59
5.0	CONCLUSION	60
5.1	A Vision for Transformation	60
5.2	Imagining 2031	60
5.3	A Call to Action	60
	BIBLIOGRAPHY.....	62

LIST OF TABLES

Table 1: Sierra Leone’s list of critical minerals (as of May 2026) 11

Table 2: Critical mineral global price trends..... 33

Table 3: Critical minerals competitive landscape 36

Table 4: Integrated transformational themes 39

LIST OF ABBREVIATIONS AND ACRONYMS

AGMS	African Green Minerals Strategy
AI	Artificial Intelligence
AMV	Africa Mining Vision
ASM	Artisanal and Small-Scale Mining
AU	African Union
AfCFTA	African Continental Free Trade Area
CDA	Community Development Agreements
CDF	Community Development Funds
CEMEC	Critical Minerals Excellence Centre
CMF	Critical Minerals Fund
CML	Critical Minerals List
CMSEZ	Critical Minerals Special Economic Zone
CRMAL	EU Critical Raw Materials Act List
CSO	Civil Society Organizations
ECOWAS	Economic Community of West African States
EITI	Extractive Industries Transparency Initiative
EPA-SL	Environment Protection Agency-Sierra Leone
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessments
EU	European Union
GIS	Geographic Information Systems
GoSL	Government of Sierra Leone
ICMM	International Council on Mining and Metals
IEA	International Energy Agency
ILO	International Labour Organisation
IMF	International Monetary Fund
IoT	Internet of Things
KPIs	Key Performance Indicators
MDA	Ministries, Departments, and Agencies
MELSS	Ministry of Employment, Labour and Social Security
MLGCA	Ministry of Local Government and Community Affairs
MMDA	Mines and Minerals Development Act
MMMR	Ministry of Mines and Mineral Resources
MRR	Mining Revenue Reports

MSP	Mineral Separation Plants
MTI	Ministry of Trade and Industry
MTNDP	Mid-Term National Development Plan
MoE	Ministry of Energy
MoECC	Ministry of Environment and Climate Change
MoF	Ministry of Finance
NGO	Non-Governmental Organizations
NMA	National Minerals Agency
NRA	National Revenue Authority
ODA	Overseas Development Assistance
OEMs	Original Equipment Manufacturers
PGMs	Platinum Group Metals
REEs	Rare Earth Elements
SLCM	Sierra Leone Chamber of Mines
SLMMDMC	Sierra Leone Mines and Minerals Development and Management Company
SMHL1	Sierra Minerals Holding Limited 1
SRL	Sierra Rutile Limited
STEM	Science, Technology, Engineering and Mathematics
UK	United Kingdom
UN	United Nations
UNECA	United Nations Economic Commission for Africa
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
USGS	United States Geological Survey
WB	World Bank



FOREWORD

Sierra Leone stands at a defining moment in our nation's history. We are blessed with abundant critical mineral resources—lithium, platinum group metals, chromium, rare earth elements, and others—that are essential to powering the global green energy transition and meeting the technological demands of the 21st century. These minerals represent far more than geological assets; they embody an unprecedented opportunity to transform our national economy, create dignified employment, and build a prosperous future for all Sierra Leoneans.

This **National Strategy for Critical Minerals in Sierra Leone 2026–2031** is a bold commitment by the Government of Sierra Leone to harness our mineral wealth not merely for extraction and export, but to drive meaningful, inclusive economic transformation. This Strategy reflects our resolve to move beyond the paradigms of the past, where extractive industries enriched few while leaving communities vulnerable. Instead, we are charting a new course—one centred on **transformation, stewardship, and shared prosperity**.

This Strategy recognizes the urgency of the global moment. The world is transitioning to clean energy and digital technologies at unprecedented scale and speed. Electric vehicles, renewable energy systems, battery storage, and advanced electronics are reshaping the global economy. Sierra Leone's strategic minerals are indispensable to this transition. By positioning ourselves strategically, we can become a trusted, responsible supplier to the world while simultaneously industrializing our own economy and creating opportunities for all our people.

This Strategy is grounded in **four transformational themes**:

1. **Empowering Transformation** — unlocking the full value of our minerals through domestic processing, beneficiation, and industrialization.
2. **Advancing Stewardship** — ensuring that mineral development respects our environment, empowers our communities, and upholds the highest standards of governance.
3. **Catalyzing Shared Prosperity** — guaranteeing that the benefits of mineral development are equitably distributed, creating jobs, building skills, and strengthening local economies.
4. **Securing Strategic Partnerships** — engaging confidently with the world to attract investment, secure markets, and build the capabilities we need.

Implementation of this Strategy will require unwavering commitment from government, the private sector, civil society, and our communities. It will demand that we strengthen our institutions, invest in our people, and maintain the highest standards of transparency and accountability.

The road ahead is challenging but filled with immense promise. If we execute this Strategy with determination and integrity, Sierra Leone will emerge as a globally respected player in the critical minerals sector—a nation that has transformed its resource wealth into sustainable, inclusive development that benefits all.

Honourable Julius Daniel Mattai
Minister of Mines and Mineral Resources

Republic of Sierra Leone
May 2026



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The Government of Sierra Leone gratefully acknowledges the contributions of numerous stakeholders in developing this National Strategy for Critical Minerals.

Lead Institutions: This Strategy was developed by the **Ministry of Mines and Mineral Resources (MMMR)** and the **National Minerals Agency (NMA)**, with dedicated technical leadership and coordination.

Key Collaborators: We extend special appreciation to:

- Sierra Leone Mines and Minerals Development and Management Company (SLMMDMC)
- Ministry of Finance (MoF)
- Ministry of Energy (MoE)
- Ministry of Environment and Climate Change (MoECC)
- Ministry of Trade and Industry (MTI)
- Ministry of Local Government and Community Affairs (MLGCA)
- Ministry of Employment, Labour and Social Security (MELSS)
- National Revenue Authority (NRA)
- Environment Protection Agency-Sierra Leone (EPA-SL)
- Sierra Leone Chamber of Mines (SLCM)
- Government of Sierra Leone's Ministries, Departments, and Agencies (MDA)
- Development Partners and Bilateral Donors
- Non-Governmental Organizations (NGO)
- Civil Society Organizations (CSO)
- Academic Institutions and Research Centres
- Communities in Mining Regions

This Strategy reflects collaborative effort, honest dialogue, and shared commitment to positioning Sierra Leone as a responsible, prosperous player in global critical minerals supply chains. It represents the collective vision of government, private sector, civil society, and communities working together for national development.

EXECUTIVE SUMMARY

The Strategic Imperative

Critical minerals for Sierra Leone are defined as naturally occurring, finite mineral resources that are:

- **Strategically essential** to economic diversification, industrialization, and green economy transition.
- **Globally indispensable** to clean energy technologies, renewable energy, electric vehicles, and advanced electronics.
- **Economically vital** to government revenues, employment creation, and inclusive economic growth.
- **Geopolitically significant** to positioning Sierra Leone as a responsible supplier within concentrated global supply chains.

Based on the aforementioned definition, Sierra Leone possesses potentially significant deposits of critical minerals (Table 1) essential to the global green energy transition, including spodumene (lithium ore), bauxite, rutile, gold, ilmenite, garnet, zircon, iron ore, platinum group metals, chromite, rare earth elements, columbite-tantalite (coltan), nickel, copper, manganese, graphite, and cassiterite (tin ore).

Energy Transition Minerals	Industrial & Technology Minerals
1. Spodumene (Lithium Ore) – EV batteries, energy storage	9. Platinum Group Metals – Hydrogen fuel cells, catalysts
2. Bauxite – Aluminum for transport, renewable energy	10. Chromite (Chromium Ore) – Steel alloys for wind turbines
3. Rare Earth Elements – Wind turbine magnets, motors	11. Nickel – Battery cathodes
4. Graphite – Battery anodes	12. Copper – Electrical transmission
5. Manganese – Batteries, alloys	13. Cassiterite (Tin) – Electronics, solar cells
	14. Coltan – Electronics, telecoms
	15. Zircon – Refractory materials
Established Base Minerals	Precious & Specialty Minerals
6. Rutile – Titanium dioxide pigments	16. Gold – Electronics, jewellery
7. Ilmenite – Titanium production	17. Garnet – Industrial abrasives
8. Iron Ore – Steel, construction, renewables	

Table 1: Sierra Leone's list of critical minerals (as of May 2026)

Global demand for these minerals is projected to **increase by 500% by 2050**, driven by:

- Expansion of electric vehicle markets (projected to 80% of new vehicle sales by 2050).
- Renewable energy infrastructure (wind, solar, hydropower expanding at 15% annually).
- Battery storage systems for grid stability.
- Advanced electronics and digitalization (5G, AI, IoT).
- Defence and aerospace applications.

International Energy Agency (IEA) projections:

- Lithium demand to grow **7-fold by 2035** (up from 5-fold projection in 2021).
- Copper demand to grow **2-fold by 2035**.
- Graphite, nickel, and cobalt demand to grow **3-fold by 2035**.
- Rare earth element demand to increase **45% by 2030**.

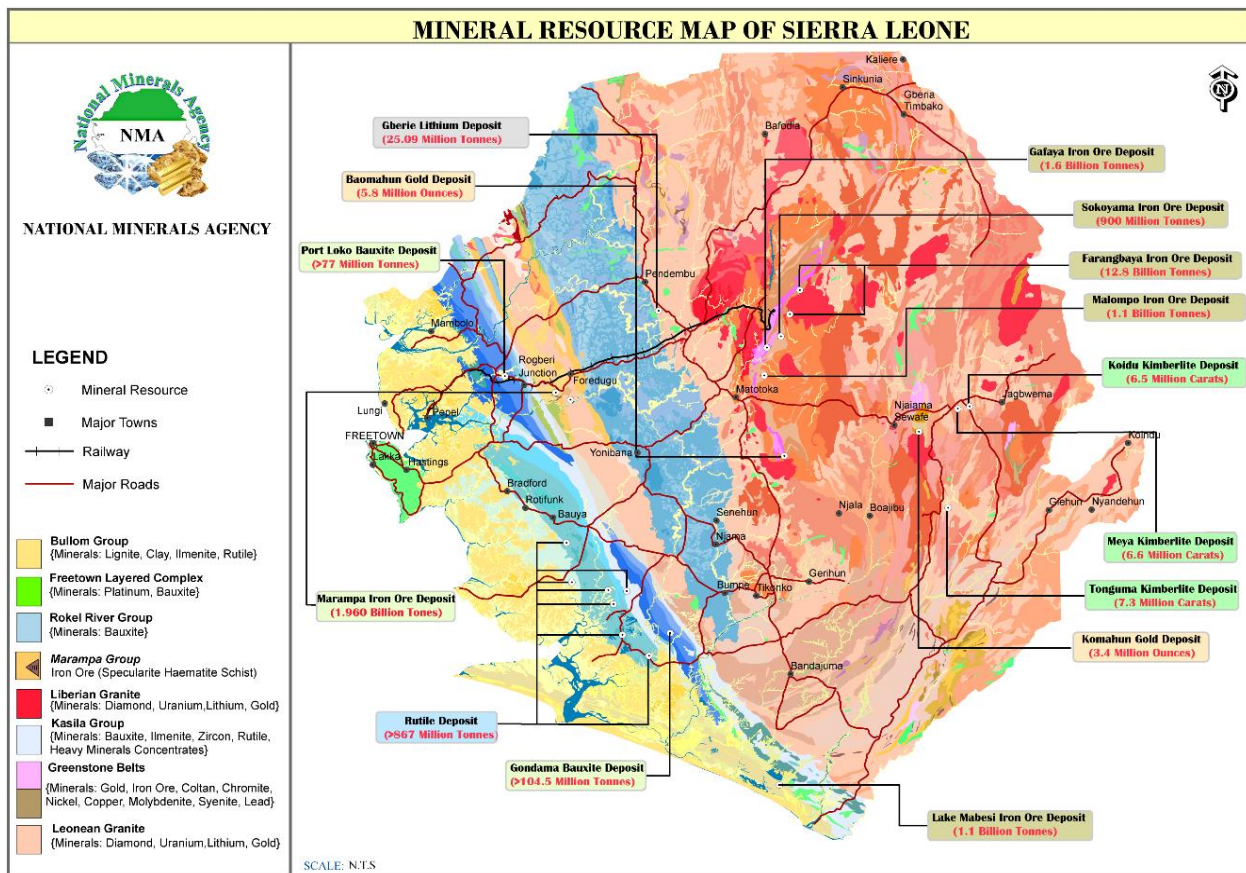
This unprecedented surge in demand presents Sierra Leone with a **historic opportunity**—but the window for early action is narrowing. Nations that develop critical minerals sectors responsibly now will capture market share, investment flows, and substantially greater value. Those that delay risk entrenchment as raw materials suppliers.

Critical minerals represent Sierra Leone's **most significant economic opportunity of this generation**. Strategic, responsible development will catalyze transformation across all Five Big Game Changers: strong institutions, food security, human capital development, economic diversification, and infrastructure. The nation is positioned to become a **globally recognized, responsible leader** in critical minerals production, capturing substantial value while contributing to the global clean energy transition and positioning Sierra Leone for sustainable prosperity throughout and beyond the 2026-2031 strategy period.

Sierra Leone's Endowment and Positioning

Sierra Leone's geological endowment is potentially substantial and strategically positioned:

- Spodumene deposits in Kangi Hills, Loko Hills, and Kambui Hills with commercial mining beginning in 2026/2027.
- Rutile deposits ranked among world's highest quality - e.g., Sierra Rutile Limited (SRL) operating world-class rutile assets in Area 1 and Sembehun, Moyamba District.
- Bauxite deposits in Moyamba, Port Loko, and Kambia Districts - e.g., Sierra Minerals Holding Limited 1 (SMHL1) operating a bauxite mine in Moyamba District.
- Platinum group metals in alluvial deposits from Freetown Complex (5,200 troy ounces historical production).
- Rare earth elements (monazite) with historic concentrations of 40–42%.
- Chromite deposits with high-grade ore (43–44% Cr₂O₃ content).
- Copper, manganese, and nickel occurrences in greenstone belts.
- Columbite-tantalite (coltan) production exceeding 600 metric tonnes annually.
- Cassiterite (tin ore) with deposits showing 40–60% tin content potential.



Strategic Vision and Goal

Vision: To become a globally recognized, responsible leader in critical minerals production and processing, powering the world's energy transition while catalyzing inclusive socio-economic transformation, environmental stewardship, and shared prosperity for all Sierra Leoneans.

Strategic Goal: To develop and responsibly manage Sierra Leone's critical minerals resources to drive sustainable industrialization, create dignified employment, generate revenue for national development, and position the nation as a trusted, sustainable supplier within global green supply chains.

Four Transformational Themes

Theme I: Empowering Transformation

Objective: Move from raw mineral exports to value-added processing, beneficiation, and manufacturing industries that capture exponentially greater economic value.

Key interventions include comprehensive geological mapping, establishment of mineral processing and beneficiation facilities, development of downstream industries, creation of special economic zones, and strategic technology partnerships.

Theme II: Advancing Stewardship

Objective: *Ensure environmental sustainability, social responsibility, and excellent governance, positioning Sierra Leone as a responsible supplier preferred by global partners.*

Key interventions include harmonized regulatory frameworks, environmental and ESG standards exceeding international norms, community engagement and benefit-sharing mechanisms, transparent revenue management, and formalization of artisanal mining.

Theme III: Catalyzing Shared Prosperity

Objective: *Create equitable distribution of benefits and inclusive economic growth, ensuring all Sierra Leoneans participate in prosperity.*

Key interventions include local content requirements, workforce development aligned with industry demand, community development agreements, infrastructure supporting mining regions, and women's and youth economic empowerment.

Theme IV: Securing Strategic Partnerships

Objective: *Build international relationships and partnerships necessary for investment, technology transfer, market access, and development finance.*

Key interventions include bilateral agreements with technology and consumer nations, regional integration - Economic Community of West African States (ECOWAS) and African Continental Free Trade Area (AfCFTA), strategic private sector partnerships, global financing access, and participation in international minerals forums.

Expected Outcomes and Success Metrics (2026–2031)

By 2031, implementation of this Strategy will position Sierra Leone to potentially achieve, approximately:

- **\$2.5 billion** in exploration and mining investment attracted.
- **3–5 minerals processing and beneficiation facilities** established.
- **45,000+ direct and indirect jobs** created in mining and allied sectors
- **15,000+ skilled workers** developed in mining and mineral processing.
- **\$300 million+** annual government revenues.
- **\$1.5 billion+** annual export value from processed and value-added mineral products.
- **Global recognition as a responsible and sustainable** critical minerals supplier.

Strategic Success Factors

Success depends on:

1. **Political commitment** to implement reforms consistently over the strategy period.
2. **Institutional strengthening** to manage the sector effectively and transparently.
3. **Investment in people** through education, training, and skills development.

4. **Infrastructure development** (energy, transportation, water, digital connectivity).
5. **Transparent governance** that builds investor and community confidence.
6. **Global and regional cooperation** to unlock scale and create integrated value chains.





1.0 PART I: SITUATIONAL FOUNDATION

1.1 Introduction and Strategic Context

Sierra Leone's **National Strategy for Critical Minerals (2026–2031): Powering Transformation, Stewardship, and Shared Prosperity** emerge at a pivotal moment in global economic history. The world is undergoing an unprecedented energy transition, driven by commitments to limit global warming to 1.5°C above pre-industrial levels, advances in renewable energy technologies, rapid electrification of transport and industry, and the digital transformation of economies worldwide.

This transition has created an extraordinary and growing surge in demand for **critical minerals** that are essential to:

- Clean energy infrastructure (e.g. wind turbines, solar panels, hydropower, geothermal systems).
- Electric vehicles and charging infrastructure.
- Energy storage systems (e.g. batteries, mechanical storage, thermal storage).
- Advanced electronics and digital infrastructure (5G, Artificial Intelligence (AI), Internet of Things (IoT), Big Data, Robotics, etc.).
- Hydrogen fuel cells and green hydrogen production systems.
- Aerospace and defence applications.
- Medical devices and advanced manufacturing.

1.1.1 The Global Green Energy Transition

The **2015 Paris Agreement** committed the international community to reducing global greenhouse gas emissions to net-zero by 2050, limiting global temperature rise to 1.5°C above pre-industrial levels. Achieving this transformational target requires complete transformation of global energy systems away from fossil fuels toward renewable energy sources. This transformation depends **fundamentally** on critical minerals:

- **Lithium, cobalt, nickel, manganese:** Essential components of lithium-ion batteries for electric vehicles and grid-scale energy storage.
- **Platinum group metals:** Catalysts for hydrogen fuel cells and electrolyzer systems critical to the hydrogen economy.

- **Rare earth elements:** Integral to permanent magnets in wind turbines, electric motors, and advanced manufacturing.
- **Copper:** Essential for efficient transmission of renewable electricity across grids.
- **Chromium, vanadium, manganese:** Strengthen steel alloys for renewable energy infrastructure, wind turbines, and transmission systems.
- **Silicon, tellurium, cadmium, selenium:** Essential components of solar panels and photovoltaic systems.
- **Graphite, cobalt, nickel:** Key components of battery cathodes and anodes.

Global Demand Projections by International Energy Agency (IEA) in 2025:

By 2030 (under baseline scenario):

- Lithium demand to increase **146%**.
- Cobalt demand to increase **50–75%**.
- Graphite demand to increase **50–75%**.
- Rare earth element demand to increase **45%**.
- Copper demand to increase **36%**.

By 2035 (net-zero scenario):

- Lithium demand to increase **7-fold** (compared to 2020 levels).
- Copper demand to increase **2-fold**.
- Cobalt and nickel demand to increase **3-fold**.
- Rare earth element demand to increase **3-fold**.

By 2050 (net-zero scenario):

- Overall critical minerals demand to increase **500 percent**.

1.1.2 Sierra Leone's Historic Moment

Sierra Leone possesses potentially substantial deposits of multiple critical minerals, positioning the nation to participate meaningfully and beneficially in global supply chains. However, this opportunity is **time-bound**. Other African nations—the Democratic Republic of Congo, Mali, Ghana, Nigeria, Zambia, Tanzania, Zimbabwe, Botswana, and Angola—are actively developing critical minerals sectors with strategic partnerships, targeted investments, and clear roadmaps. The nations that move decisively and responsibly **now** will:

- Capture market share in emerging global supply chains.
- Attract substantial direct foreign investment flows.
- Secure long-term offtake agreements at premium pricing.
- Build processing and manufacturing capabilities.
- Create sustained employment opportunities for their citizens.
- Generate substantial government revenues to invest in education, health, and development.

- Build geopolitical influence and partnerships.

Nations that delay risk entrenchment as raw materials suppliers with minimal value capture, subject to commodity price volatility, and with limited multiplier effects for economic development.



1.1.2.1 National Development Alignment

This National Strategy directly supports Sierra Leone's national development priorities and strategic frameworks: ***Mid-Term National Development Plan 2024-2030: A Transformative Acceleration Agenda for Food Security, Human Capital Development and Job Creation.***

The **Mid-Term National Development Plan 2024-2030 (MTNDP 2024-2030)** identifies critical minerals development as a key sectoral priority supporting the Five Big Game Changers: strong institutions and good governance; improved food security and agricultural transformation; human capital development and youth employment; economic diversification and resilience; and infrastructure development. This Strategy operationalizes critical minerals development as a key driver of economic diversification and job creation.

Government's Five Big Game Changers:

1. **Strong Institutions and Good Governance** – This Strategy commits to transparent, accountable governance in the minerals sector with Extractive Industries Transparency Initiative (EITI) compliance and independent oversight.
2. **Improved Food Security and Agricultural Transformation** – Mining revenues will support agricultural development, and mining operations will minimize agricultural land conflicts.
3. **Human Capital Development and Youth Employment** – Critical minerals development will create 45,000+ jobs and train 15,000+ skilled workers, primarily from Sierra Leonean youth.
4. **Economic Diversification and Resilience** – Moving beyond traditional agriculture toward minerals-based industrialization and value addition.
5. **Infrastructure Development** – Mining companies will develop energy, transportation, water, and digital infrastructure benefiting all communities.

Sierra Leone Mining Policy 2018

This Strategy implements the Sierra Leone Mining Policy 2018 commitment to "*maximize benefits to Sierra Leone from extractive activities while minimizing adverse impacts.*" Specific policies implemented include:

- Value addition through beneficiation and processing (Policy 3.7).
- Environmental sustainability and ecosystem protection (Policy 3.9).
- Community engagement and benefit-sharing (Policy 3.11).
- Formalization of artisanal and small-scale mining (Policy 3.6).
- Transparent revenue management (Policy 3.2).

Mines and Minerals Development Act 2023 (MMDA 2023)

This Strategy ensures full implementation of provisions in the 2023 Act including:

- Mandatory Environmental and Social Impact Assessments (ESIA).
- Community development agreements (CDA) with defined benefit-sharing.
- Local content requirements in mining licenses.
- Environmental bonds and restoration/rehabilitation guarantees.

- Extraction Industries Transparency Initiative (EITI) compliance

1.1.2.2 African Green Minerals Strategy 2025

The **African Green Minerals Strategy (AGMS)**, adopted by the African Union (AU) in 2025, establishes a framework for responsible critical minerals development supporting the African green energy transition. This Strategy aligns with AGMS pillars:

1. **Sustainable Critical Minerals Development** – Environmental standards exceeding international norms.
2. **Inclusive Growth and Value Addition** – Processing, beneficiation, and downstream manufacturing in Africa.
3. **Governance Excellence and Transparency** – EITI compliance; environmental, Social and Governance (ESG) standards, anti-corruption.
4. **Regional Integration and Value Chains** – AfCFTA integration, regional supply chains, technology sharing.
5. **Youth and Women Empowerment** – Skills development, local content, inclusive growth.

1.1.2.3 Africa Mining Vision 2009

The Africa Mining Vision (AMV), adopted by the African Union in 2009, articulates the vision of "***mining as a catalyst for broad-based sustainable growth and development.***" This Strategy advances the AMV vision through:

- Domestic value addition and beneficiation.
- Local procurement and support for African SMEs.
- Transparent governance and reduced corruption.
- Environmental sustainability and community development.
- Regional integration and African supply chains.

1.1.2.4 Strategic Positioning Within Global Supply Chains

Sierra Leone's critical minerals endowment positions the nation within several emerging geopolitical dynamics:

Supply Chain Concentration and Diversification Value

Many critical minerals are highly concentrated in supply from a few producing nations:

- Cobalt: Democratic Republic of Congo controls ~70% of global production.
- Rare earth element processing: China controls ~80% globally.
- Lithium: Australia, Chile, China, Argentina dominate.
- Nickel: Indonesia and Philippines dominate.
- Copper: Chile, Peru, China are major producers.

This concentration creates supply chain vulnerabilities that major economies are actively addressing through:

- **United States of America (USA):** Critical Minerals List; \$5 billion investment in domestic processing capacity; bilateral supply agreements with allied nations.

- **European Union (EU):** Critical Raw Materials Act; strategic diversification from China and Russia; supply chain security initiatives.
- **Japan, South Korea, Others:** Strategic stockpiling; bilateral supply partnerships; supply chain diversification agreements.

Opportunity for Sierra Leone: This diversification imperative creates unprecedented value for responsible suppliers. Nations with stable governance, strong ESG safeguards, transparent institutions, and alignment with democratic values are preferred partners.





1.2 Definition of Critical Minerals for Sierra Leone

This Strategy provides a comprehensive, professionally articulated **definition of critical minerals** as conceptualized by the Government of Sierra Leone (GoSL). The definition synthesizes technical geoscience understanding, national policy imperatives, global supply chain dynamics, and the strategic imperative to transform mineral resources into inclusive socio-economic development and environmental stewardship.

1.2.1 Primary Definition of Critical Minerals

Critical minerals are **naturally occurring mineral** commodities that are simultaneously:

1. **Geologically Abundant Within Sierra Leone** - Present in commercially viable, technically extractable deposits with sufficient quantity and quality to support industrial-scale development and long-term supply security.
2. **Economically Strategic** - Essential to sustainable acceleration of Sierra Leone's economic transformation, industrial development, and national prosperity; capable of generating substantial government revenue, private sector value, dignified employment, and multiplier effects throughout the national economy.
3. **Technologically Essential** - Indispensable components of global infrastructure systems and technologies fundamental to the 21st century economy, including: renewable energy generation (wind, solar, hydropower), energy storage systems (lithium-ion batteries, grid-scale storage), electric vehicle powertrains and charging infrastructure, advanced electronics and digital infrastructure (5G, artificial intelligence, Internet of Things), hydrogen fuel cell technologies, aerospace and defence applications, medical devices, and precision manufacturing.
4. **Globally Demand-Driven** - Subject to unprecedented and structurally increasing global demand driven by the worldwide energy transition toward decarbonization, rapid electrification of transport and industry, technological advancement and digitalization, and the commitment of the international community to limiting global warming to 1.5°C above pre-industrial levels.
5. **Strategically Positioned** - Located within Sierra Leone's geological formations and possessing quality characteristics (ore grade, mineral composition, metallurgical properties) that enable competitive participation in global supply chains and command premium valuation among technology-leading and clean energy nations seeking responsible, stable suppliers.

6. **Susceptible to Supply Chain Disruption** - Their supply chains are globally concentrated, subject to geopolitical risk, market volatility, and technological disruption; many critical minerals are sourced from politically unstable regions or single dominant suppliers, creating strategic vulnerability for consumer nations and premium opportunity for responsible new suppliers.

1.2.2 Extended Definition: Strategic Context

Within Sierra Leone's national context, critical minerals represent far more than geological commodities. They embody **an unprecedented and time-bound opportunity to catalyze inclusive socio-economic transformation** through:

- **Value Chain Advancement** - Moving deliberately and steadily from raw material extraction toward beneficiation, processing, and domestic manufacturing, thereby capturing exponentially greater economic value (e.g., raw spodumene ore valued at \$5,000-10,000/tonnes versus processed lithium carbonate at \$20,000-40,000/tonnes and battery-grade lithium hydroxide at \$100,000+/tonnes).
- **Industrial Development** - Establishing processing, beneficiation, and downstream manufacturing capacity within Sierra Leone, creating the foundation for a modern, technology-enabled industrial economy.
- **Employment and Dignity** - Generating 45,000 direct and indirect jobs with dignified wages, formal employment status, skills development pathways, and career advancement opportunities for Sierra Leonean workers at all skill levels.
- **Revenue Generation for Development** - Generating annual government revenues projected at \$300 million by 2031 to fund essential public services, including quality education, healthcare, infrastructure, and social protection for all Sierra Leoneans.
- **Community Prosperity and Inclusion** - Ensuring equitable distribution of mining benefits through local content requirements (20-50% of procurement and employment), community development agreements guaranteeing infrastructure and service improvements, women's economic empowerment, and youth opportunity.
- **Strategic Positioning** - Positioning Sierra Leone as a globally recognized, responsible, and preferred supplier of critical minerals to technology-leading nations pursuing clean energy transition and supply chain diversification away from geopolitically concentrated suppliers.

1.3 Sierra Leone's Designated Critical Minerals

For purposes of national strategic planning and policy implementation, the following mineral commodities are designated as **critical minerals in Sierra Leone**:

1.3.1 Primary Tier: High Commercial and Strategic Priority

1. Spodumene (Lithium Ore)

- **Strategic Imperative:** Lithium is the essential component of lithium-ion battery systems powering the global electric vehicle revolution and grid-scale renewable energy storage. Global lithium demand is projected to increase 7-fold by 2035.

- **Sierra Leone Endowment:** Commercial grade spodumene deposits in the Kangi Hills, Loko Hills, and Kambui Hills with first commercial production to start in 2027.
- **Commercial Potential:** Initial production 5,000-10,000 tonnes annually with expansion to 20,000-30,000 tonnes by 2031; value potential ranging from \$50-150 million annually in spodumene concentrates (SC6).

2. Platinum Group Metals (PGMs)

- **Strategic Imperative:** PGMs are critical catalysts for hydrogen fuel cell technologies and electrolyzer systems essential to the emerging hydrogen economy, with sustained premium global pricing.
- **Sierra Leone Endowment:** Alluvial platinum deposits in river systems draining the Freetown Complex; historical artisanal production of about 5,255 troy ounces (1929-1949) indicates substantial untapped primary and alluvial reserves.
- **Commercial Potential:** Alluvial recovery potential of 500-1,000 troy ounces annually with value potential of \$500,000-1.2 million; and primary deposit exploration to characterize deeper resources.

3. Chromite (Chromium Ore)

- **Strategic Imperative:** High-grade chromite is essential for specialty steel alloys used in wind turbines, transmission infrastructure, and renewable energy systems; renewed global demand driven by clean energy transition.
- **Sierra Leone Endowment:** World-class deposits in the Kambui Hills and Eastern Region with historical ore grades of 43-44% chromium oxide (Cr_2O_3)—among the world's highest. Mining operations existed between 1937-1962 with production of about 330,900 tonnes before cessation due to international market conditions.
- **Commercial Potential:** Resumption potential of 20,000-50,000 tonnes annually of raw ore (\$30-75 million annually).

4. Rare Earth Elements (REEs), including Monazite

- **Strategic Imperative:** REEs are indispensable for high-performance permanent magnets in wind turbines, electric motors, advanced electronics, and telecommunications. Global REE demand projected to increase 3-fold by 2035. China's 80% control of global REE processing creates strategic vulnerability and opportunity.
- **Sierra Leone Endowment:** REE-bearing minerals (primarily monazite, xenotime, allanite, bastnaesite) in alluvial, lateritic, and primary deposits throughout Sierra Leone. Historical monazite assay results show concentrations of 40-42%—among the world's highest.
- **Commercial Potential:** Resource potential of 50,000-100,000 tonnes monazite ore.

1.3.2 Secondary Tier: Significant Commercial and Strategic Value

5. Bauxite (Aluminum Ore)

- **Geographic Distribution:** Moyamba District (Mokanji-Gbonge belt extending 50 km), Port Loko District, Pujehun District, Karene District, and Koinadugu District.

- **Current Development:** Three large-scale mining companies currently operate commercial bauxite mining with substantial annual production and expansion plans.
- **Strategic Significance:** Rising global aluminum demand driven by construction, transport electrification, and renewable energy infrastructure. Renewable energy-powered aluminum production emerging as competitive advantage.
- **Commercial Potential:** Current production 1-2 million tonnes annually expanding to 15 million tonnes by 2031; value potential \$200-350 million raw bauxite.

6. Rutile (Titanium Dioxide)

- **Geographic Distribution:** Alluvial placer deposits in Gbangbama, Sembahun, Rotifunk, and Kambia deposits, associated with heavy minerals concentration.
- **Current Development:** Sierra Rutile Limited operates world-class mining assets with innovative dry mining techniques advancing environmental sustainability.
- **Strategic Significance:** Essential for aerospace pigments/coatings, welding materials, advanced ceramics, composites, and renewable energy infrastructure. Sierra Leone's natural rutile deposits rank among the world's highest quality.
- **Commercial Potential:** Current production 100,000-200,000 tonnes annually, expansion to 500,000 tonnes; value potential \$200-500 million annually.

7. Iron Ore

- **Geographic Distribution:** Substantial deposits in Tonkolili District (world-class Tier-1 operation potential) and Port Loko District at Marampa.
- **Strategic Significance:** Global steel demand remains strong. Green steel production using renewable energy and hydrogen emerging as competitive advantage. Essential for renewable energy infrastructure, electric vehicle manufacturing, and construction.
- **Commercial Potential:** Production potential 25 million-40 million tonnes annually, depending on market conditions and mine-development; and value potential \$3-6 billion at current market prices.

8. Columbite-Tantalite (Coltan)

- **Current Status:** Artisanal production exceeding 600 metric tonnes annually.
- **Strategic Significance:** Essential for electronics, capacitors, renewable energy components, and advanced manufacturing; and high value-per-unit commodity.
- **Development Pathway:** Formalization of artisanal mining, quality improvement, and integration into formal supply chains.

9. Cassiterite (Tin Ore)

- **Geographic Distribution:** Loko Hills region deposits.
- **Ore Characteristics:** 40-60% tin content potential.
- **Strategic Significance:** Essential for electronics, solar cells, solder, advanced manufacturing, and precision applications.
- **Development Pathway:** Exploration and commercial viability assessment.

1.3.3 Tertiary Tier: Strategic Potential and Emerging Demand

10. Ilmenite (Iron Titanium Oxide)

- **Occurrence:** Heavy mineral sands concentrate associated with rutile deposits.
- **Applications:** Titanium production, welding materials, pigments.
- **Commercial Potential:** Combined value of ilmenite and associated minerals estimated at \$50-100 million annually.

11. Zircon

- **Occurrence:** Heavy mineral sands concentrate in placer deposits.
- **Applications:** Refractory materials, ceramics, nuclear applications, zirconium metal production.
- **Strategic Significance:** Growing demand in advanced ceramics and nuclear technologies.
- **Commercial Potential:** Combined value of zircon and associated minerals estimated at \$30-70 million annually.

12. Garnet

- **Occurrence:** Heavy mineral sands concentrate in placer deposits.
- **Applications:** Industrial abrasives, water jet cutting, specialty applications.
- **Commercial Potential:** Included in combined heavy mineral value potential.

13. Gold

- **Current Status:** Historical artisanal production and two ongoing large-scale mining development.
- **Geographic Scope:** Distributed throughout Sierra Leone in alluvial and primary deposits.
- **Strategic Significance:** Premium precious metal with sustained global demand and strong pricing.
- **Development Pathway:** Regulated artisanal mining, formalization, and commercial mining development.
- **Commercial Potential:** The two large-scale mining operations (by FG Gold in Baomahum and Gold Lion in Komahun) are expected to commence commercial production in early 2027, with annual production of 5-10 tonnes in 2028 and 10-20 tonnes from 2029 with estimated values (January 2026's price of about \$4,990 per troy ounce) at \$1.6-3.2 billion annually.

14. Nickel

- **Geographic Distribution:** Greenstone belt formations in Kambui Hills, Kangari Hills, Sula Mountains.

- **Strategic Significance:** Essential for battery cathodes and stainless-steel applications; growing demand driven by electric vehicle production. Global nickel demand projected to increase 3-fold by 2035.
- **Development Pathway:** Exploration and resource characterization.

15. Copper

- **Geographic Distribution:** Greenstone belt formations.
- **Strategic Significance:** Essential for efficient transmission of renewable electricity across electrical grids; growing demand in electrical infrastructure and renewable energy systems.
- **Development Pathway:** Early exploration and mineral occurrence assessment and characterisation.

16. Manganese

- **Geographic Distribution:** Greenstone belt formations.
- **Strategic Significance:** Essential component of battery cathodes (lithium manganese oxide); growing demand driven by electric vehicle and battery energy storage markets.
- **Development Pathway:** Exploration and mineral occurrence assessment and characterisation.

17. Graphite

- **Current Status:** Emerging deposits with growth potential.
- **Strategic Significance:** Essential for anodes and advanced thermal management applications; growing demand driven by electric vehicle and renewable energy storage markets.
- **Development Pathway:** Exploration and mineral occurrence assessment and characterisation.



1.4 Technical Perspective: Why These Minerals Are Critical

1.4.1 Geological Endowment and Commercial Viability

Sierra Leone's designation of these seventeen minerals as critical is grounded in **rigorous technical and economic assessment** of Sierra Leone's geological formations:

1. **Mineral Occurrence and Resource Characterization** - Each designated mineral occurs in Sierra Leone in **potentially and/or commercially viable concentrations** supported by geological evidence (historical production, current mining operations, verified exploration results, or peer-reviewed geoscientific assessment, etc.).
2. **Ore Grade Competitiveness** - Sierra Leone's mineral deposits are globally competitive in terms of ore grade and metallurgical characteristics. For example:
 - Chromite ore grades of 43-44% Cr₂O₃ rank among the world's highest.
 - Monazite REE concentrations of 40-42% represent world-class deposits.
 - Rutile (natural) quality from Sierra Rutile Limited operations meets and exceeds world standards.
 - Spodumene ore grades competitive with major global deposits.
3. **Production Scalability** - The designated minerals potentially support **commercial-scale extraction and processing**. Sierra Leone currently operates Tier-2 mining operations (e.g., Kingho Mining Company at Tonkolili Iron Ore Deposit, Sierra Rutile Ltd at Area 1 and Sembehun Deposits) and has commenced large-scale lithium mine development in Bombali District, demonstrating technical feasibility and capital availability.
4. **Processing and Beneficiation Potential** - Each designated mineral can be processed or potentially processed within Sierra Leone to capture substantially greater value than raw ore export, with established processing technologies and emerging opportunities for downstream manufacturing.

1.4.2 Demand-Driven Classification

The seventeen minerals designated as critical are those for which **global demand is structurally increasing** due to:

- **Energy Transition Imperatives:** The worldwide commitment to limiting global warming to 1.5°C requires complete transformation of energy systems from fossil fuels to renewables. This transformation depends fundamentally on critical minerals:
 - Lithium for battery storage enabling renewable energy grid integration.
 - Copper for efficient transmission of renewable electricity.
 - Rare earth elements for permanent magnets in wind turbines.
 - Chromium for structural steel in renewable energy infrastructure.
 - Nickel and manganese for battery systems.
- **Transportation Electrification:** The global transition to electric vehicles (projected to reach 80% of new vehicle sales by 2050) creates explosive growth in demand for

lithium, cobalt, nickel, manganese, and cobalt for battery systems, plus copper for electrical systems, aluminum for vehicle bodies.

- **Digital Transformation:** Advanced electronics, telecommunications infrastructure (5G), artificial intelligence systems, and Internet of Things (IoT) applications require rare earth elements for permanent magnets, processors, and advanced materials.
- **Clean Technology Manufacturing:** Renewable energy equipment manufacturing (e.g., wind turbines, solar panels, etc.), hydrogen fuel cell systems, and advanced manufacturing all require critical minerals.

1.4.3 Vulnerability and Opportunity Framework

The minerals designated as critical are those where **supply chains face recognized vulnerabilities** that create strategic opportunity for Sierra Leone:

- **Geographic Concentration Risk:** Many critical minerals are sourced from few producing nations—cobalt (70% from Democratic Republic of Congo), rare earth elements (80% processing from China), lithium (dominated by Australia, Chile, Argentina, China). This concentration creates supply vulnerability that major consumer economies are actively addressing through supply diversification.
- **Geopolitical Risk:** Major sources of critical minerals are in geopolitically unstable regions or non-democratic nations, creating supply security concerns for Western economies and technology leaders.
- **Single-Supplier Dependency:** Nations with 80%+ market share in processing (China with REEs) create strategic vulnerability for consuming nations.
- **Supply Chain Resilience Imperative:** The United States (\$5 billion investment in domestic critical minerals processing), European Union (Critical Raw Materials Act 2023), Japan, South Korea, and other technology leaders are actively pursuing supply chain diversification to stable, democratic nations with strong governance and ESG standards.

Sierra Leone's Strategic Advantage: By developing critical minerals sectors with world-class ESG standards, transparent institutions, and commitment to responsible development, Sierra Leone is **strategically positioned as a preferred supplier** to technology-leading nations seeking supply chain diversification.

1.5 Dynamic Definition: Evolving Mineral Criticality

1.5.1 Recognition of Changing Criticality

It is imperative to recognize that **mineral criticality is not static**. The profile and criticality of minerals designated as critical may change over time due to:

1. **Technological Development** - Advancement in technology may reduce dependence on currently critical minerals (e.g., solid-state batteries potentially reducing lithium demand) or create new demand for previously non-critical minerals.
2. **Supply and Demand Dynamics** - Changes in global supply (new deposits discovered, supply disruptions resolved, substitutes developed) and demand

(technological shifts, consumer preference changes, economic growth patterns) alter mineral criticality rankings.

3. **Green Energy Transition Acceleration** - Faster or slower progress in renewable energy adoption, electric vehicle deployment, and clean technology diffusion will affect demand trajectories for specific minerals.
4. **Shifting Societal Needs** - Emerging priorities (water scarcity mitigation, circular economy, waste reduction, pharmaceutical development, advanced materials) may create new criticality for minerals currently considered secondary.
5. **Substitution and Materials Science** - Development of substitute materials or recycling technologies may reduce or eliminate demand for specific critical minerals.
6. **Market and Economic Conditions** - Commodity price cycles, economic recessions, geopolitical disruptions, and investment patterns affect mineral demand and supply.

1.5.2 No Global Definition Consensus

There is **no internationally agreed-upon definition of critical minerals** because:

- **Definitions vary by organization:** The USA Critical Minerals List (USA CML) differs from the EU Critical Raw Materials Act List (EU CRMAL) and African Union designation priorities.
- **Definitions vary by country:** Each nation identifies minerals critical to its specific economic and strategic priorities.
- **Definitions vary by context:** Industrial applications, defence/security, clean energy transition, and technology advancement create different criticality assessments.
- **Definitions are periodically updated:** As global circumstances change, assessments of criticality are revised (EU its updated CRMAL in 2023, and the USA updated its CML in 2021 and continues updating).

1.6 Sierra Leone's Adaptive Critical Minerals Framework

Recognizing this dynamic context, **Sierra Leone's designation of critical minerals will be reviewed and updated periodically** (minimum every three years, or when significant market/technological changes occur) to:

- Incorporate emerging geoscientific data on mineral potential.
- Respond to shifting global demand patterns.
- Adapt to technological developments affecting mineral demand.
- Align with evolving international standards and classifications.
- Adjust policy responses to changes in mineral prices, supply, and market conditions.
- Integrate new scientific understanding of mineral applications and criticality.

This adaptive approach ensures that this **Strategy remains relevant and responsive** to rapidly changing global geopolitics and circumstances while maintaining continuity in long-term development planning.

1.6.1 Policy Implications: Why Critical Minerals Demand National Strategy

The designation of specific minerals as critical within Sierra Leone needs **comprehensive national strategy** because critical minerals are:

1.6.1.1 Susceptible to Unsustainable Exploitation

Without deliberate governance and management, the extraction of critical minerals can:

- Degrade environmental conditions through mine-related deforestation, water pollution, soil contamination, and ecosystem destruction.
- Create social disruption through inadequate community benefit-sharing, land conflicts, and exploitation of workers.
- Concentrate wealth among foreign corporations and political elites while leaving Sierra Leonean mining communities impoverished.
- Deplete non-renewable resources without creating sustainable economic alternatives.

Strategic Response: Deliberate governance framework, environmental and social safeguards exceeding international norms, transparent revenue management, community benefit-sharing, and sustainable transition planning.

1.6.1.2 Subject to Supply Chain Disruption

Critical minerals' supply chains face:

- Concentration risk (single-country dominance creating vulnerability).
- Geopolitical disruption (trade wars, sanctions, regional conflicts affecting supplies).
- Technological disruption (substitutes, new applications, demand shifts).
- Market volatility (commodity price cycles, economic shocks).
- Infrastructure fragility (port disruptions, transport challenges)

Strategic Response: Deliberate supply chain development, value chain advancement toward processing and manufacturing, strategic partnerships ensuring market access, and infrastructure resilience.

1.6.1.3. Characterized by Volatile Commodity Prices

Critical minerals' markets are subject to:

- Short-term price volatility responding to supply shocks and demand fluctuations.
- Long-term price appreciation driven by structural demand growth.
- Commodity price cycles creating revenue volatility for governments dependent on mining.

Strategic Response: Revenue stabilization mechanisms, diversified mineral portfolio reducing exposure to single-commodity price swings, processing and value addition reducing commodity price exposure, strategic reserve funds smoothing revenues over time.

1.6.1.4. Time-Bound Opportunity

The window for prompt action is narrowing: Other African nations (e.g., Democratic Republic of Congo, Zambia, Tanzania, Zimbabwe, Botswana, Angola) are actively developing critical minerals sectors. Nations moving decisively and responsibly now will:

- Capture market share in emerging global supply chains.
- Attract substantial foreign direct investment.
- Secure long-term supply partnerships at premium pricing.
- Build processing and manufacturing capacity.
- Create sustained employment opportunities.

Nations that delay risk: Entrenchment as raw material suppliers with minimal value capture, commodity price volatility exposure, limited multiplier effects for development, and diminished competitive positioning.

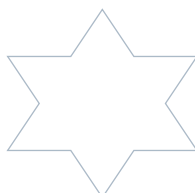
Strategic Response: Rapid, deliberate implementation of this Strategy positioning Sierra Leone as first-mover in responsible development.

1.6.2 Critical Minerals as Development Strategy

Within this Strategy, **critical minerals are far more than geological commodities.** They are **tools for inclusive and sustainable socio-economic transformation**, if developed according to the principles of:

- **Transformation** - Moving from raw exports toward value-added processing and manufacturing.
- **Stewardship** - Managing resources accountably with environmental protection and community benefit.
- **Inclusivity** - Ensuring benefits reach all Sierra Leoneans through local content, skills development, and equitable revenue-sharing.
- **Transparency** - Operating with complete openness in governance, revenue management, and community engagement.
- **Strategic Partnership** - Building international relationships ensuring market access and technology transfer.

The seventeen designated critical minerals—from spodumene lithium ore powering global electric vehicle revolution to platinum group metals enabling hydrogen economy to rare earth elements essential for renewable energy infrastructure—represent Sierra Leone's pathway to **sustainable prosperity and global recognition as a responsible mineral supplier.**



1.7 Global Critical Minerals Landscape and Demand Drivers

1.7.1 Market Dynamics and Price Trends

Critical mineral prices demonstrate strong long-term appreciation driven by demand growth:

Mineral	2020 Price	2022 Peak	2024–2025 Price	Growth Trajectory
Lithium carbonate	\$3,000/tonnes	\$60,000/tonnes	\$20,000–30,000/tonnes	+567% (2020–2024)
Cobalt	\$10/lb	\$25/lb	\$20–30/lb	+150% (2020–2024)
Nickel	\$7/lb	\$12/lb	\$10–12/lb	+43% (2020–2024)
Rare earth elements	Index 100	Index 150	Index 280–320	+180% (2020–2024)
Platinum	\$900/oz	\$1,150/oz	\$1,000–1,200/oz	Stable, premium
Chromium	\$8–10/lb	\$12–15/lb	\$10–14/lb	+25% (2020–2024)

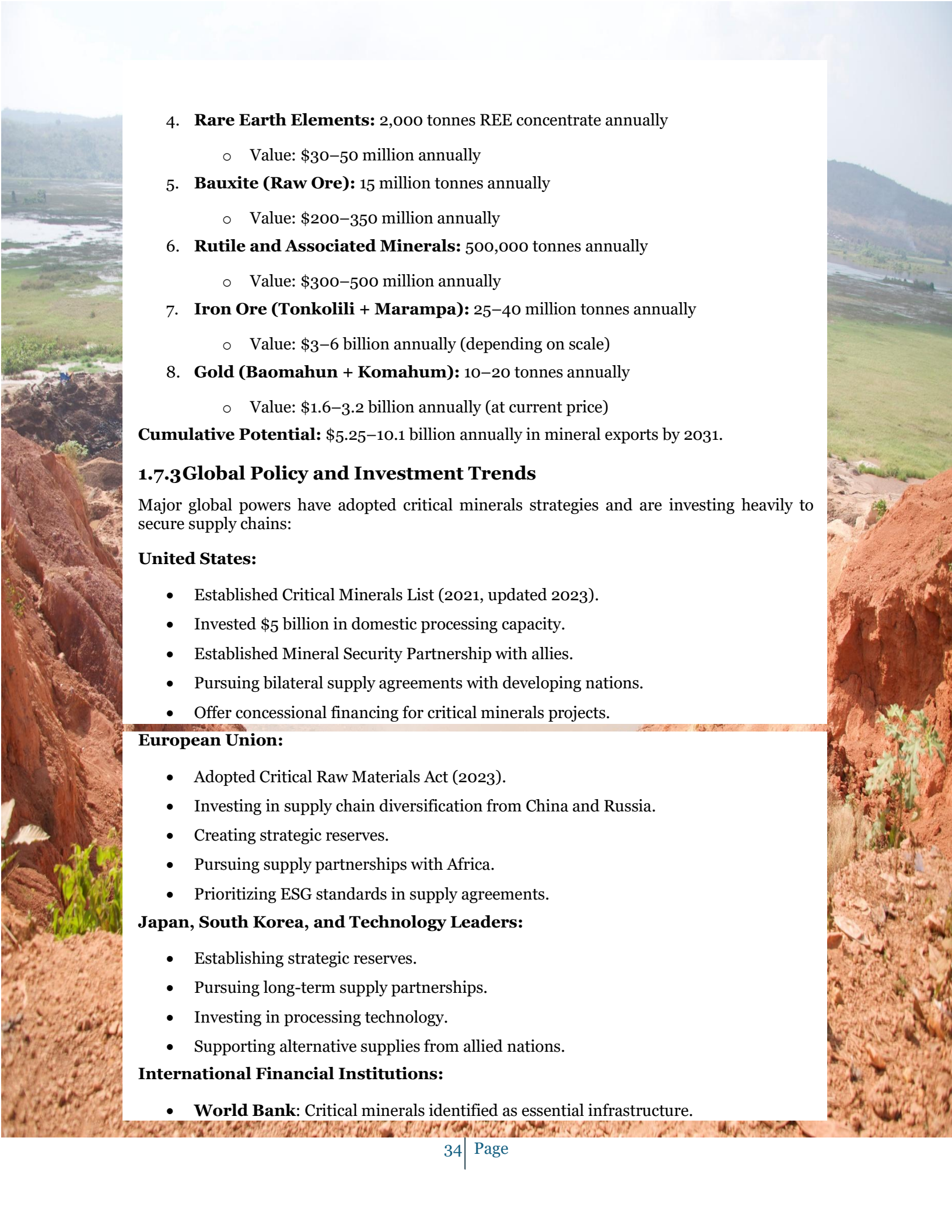
Table 2: Critical mineral global price trends

Price Volatility and Cycles: While prices are volatile in the short term (responding to supply disruptions, demand swings, geopolitical events), the long-term trend is strongly upward, driven by structural demand growth. This supports strategic development of the critical minerals sectors.

1.7.2 Revenue Potential for Sierra Leone

Illustrative revenue scenarios for Sierra Leone operations:

- Lithium (Spodumene Processing):** 5,000 - 10,000 tonnes annually.
 - Raw spodumene export: \$50–150 million annually.
- Platinum Group Metals:** 1,000 troy ounces annually
 - Value: \$1–1.2 million annually (alluvial recovery initial phase)
- Chromite (Raw Ore):** 50,000 tonnes annually
 - Value: \$50–75 million annually

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4. **Rare Earth Elements:** 2,000 tonnes REE concentrate annually
 - Value: \$30–50 million annually
 5. **Bauxite (Raw Ore):** 15 million tonnes annually
 - Value: \$200–350 million annually
 6. **Rutile and Associated Minerals:** 500,000 tonnes annually
 - Value: \$300–500 million annually
 7. **Iron Ore (Tonkolili + Marampa):** 25–40 million tonnes annually
 - Value: \$3–6 billion annually (depending on scale)
 8. **Gold (Baomahun + Komahum):** 10–20 tonnes annually
 - Value: \$1.6–3.2 billion annually (at current price)

Cumulative Potential: \$5.25–10.1 billion annually in mineral exports by 2031.

1.7.3 Global Policy and Investment Trends

Major global powers have adopted critical minerals strategies and are investing heavily to secure supply chains:

United States:

- Established Critical Minerals List (2021, updated 2023).
- Invested \$5 billion in domestic processing capacity.
- Established Mineral Security Partnership with allies.
- Pursuing bilateral supply agreements with developing nations.
- Offer concessional financing for critical minerals projects.

European Union:

- Adopted Critical Raw Materials Act (2023).
- Investing in supply chain diversification from China and Russia.
- Creating strategic reserves.
- Pursuing supply partnerships with Africa.
- Prioritizing ESG standards in supply agreements.

Japan, South Korea, and Technology Leaders:

- Establishing strategic reserves.
- Pursuing long-term supply partnerships.
- Investing in processing technology.
- Supporting alternative supplies from allied nations.

International Financial Institutions:

- **World Bank:** Critical minerals identified as essential infrastructure.

- **African Development Bank:** Concessional financing for responsible mining projects.
- **International Monetary Fund:** Recognizing critical minerals development as development priority.
- **Multilateral development banks:** Pledging \$10+ billion in concessional finance for critical minerals projects.

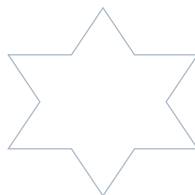
This creates favourable financing conditions and partnership opportunities for countries developing critical minerals sectors responsibly.

1.8 Geopolitical Significance and Supply Chain Dynamics

1.8.1 Strategic Positioning

Sierra Leone's critical minerals endowment positions the nation within several converging geopolitical dynamics:

1. **Supply Chain Resilience:** Western economies and allies are actively diversifying mineral supplies away from concentrated suppliers (particularly China, Russia, DRC) toward stable, democratic nations with strong institutions. Sierra Leone's positioning as a stable democracy with transparent governance creates strategic value.
2. **Democratic Alignment:** Supply chain security discussions emphasize sourcing minerals from democracies with rule of law. This positioning creates premium valuation for Sierra Leone minerals among Western buyers.
3. **ESG Premium:** Global institutional investors representing trillions in capital have committed to sourcing minerals only from operations meeting rigorous environmental, social, and governance standards. Sierra Leone's commitment to exceeding international standards supports premium pricing and market access.
4. **Technology and Consumer Nation Relationships:** Nations leading in renewable energy, electric vehicles, and battery manufacturing (Germany, South Korea, Japan, USA, Scandinavia) are actively seeking long-term supply partnerships. Sierra Leone minerals can power their transitions while generating mutual benefit.



1.8.2 Competitive Landscape

Other African nations are developing critical minerals sectors:

Nation	Key Minerals	Development Status	Competitive Position
Democratic Republic of Congo	Cobalt, copper	Advanced; dominant cobalt	Supply concentration risk creates vulnerability
Zambia	Copper, nickel, cobalt	Developing strategic focus	Direct competitor for investment and market share
Tanzania	Tanzanite, graphite, nickel	Early stage; strategic potential	Emerging competitor
Zimbabwe	Platinum, lithium, rare earths	Early stage; substantial potential	Geopolitical positioning uncertain; governance challenges
Botswana	Diamonds, rare earths	Traditional focus shifting	Stable governance, attractive for investment
Angola	Diamonds, rare earths	Early-stage development	Governance and financing challenges

Table 3: Critical minerals competitive landscape

Strategic Imperative: Sierra Leone must move decisively now to establish first-mover advantages in processing, beneficiation, and manufacturing—areas where relative capital requirements are lower than primary mining, but value capture is exponentially higher.



2.0 PART II: STRATEGIC VISION AND FRAMEWORK

2.1 Vision Statement and Strategic Goal

2.1.1 Vision Statement

To become a globally recognized, responsible leader in critical minerals production and processing, powering the world's energy transition while catalyzing inclusive economic transformation, environmental stewardship, and shared prosperity for all Sierra Leoneans.

This vision embodies several transformational aspirations:

1. **Global Recognition:** Sierra Leone is known worldwide as a responsible, reliable, and valued critical minerals supplier.
2. **Responsible Leadership:** Our mining sector operates according to the highest environmental, social, and governance standards, exemplifying best practices globally.
3. **Energy Transition Enablement:** Our minerals power the renewable energy systems that are transforming the global economy.
4. **Inclusive Transformation:** Our mineral wealth catalyzes economic transformation that reaches every community and every citizen.
5. **Environmental Stewardship:** Our mining operations restore and enhance environmental conditions, creating net-positive environmental impact.
6. **Shared Prosperity:** All Sierra Leoneans—from urban professionals to rural communities—participate in and benefit from mineral wealth.

2.1.2 Strategic Goal

To develop and responsibly manage Sierra Leone's critical minerals resources to drive sustainable industrialization, create dignified employment, generate revenue for national development, and position the nation as a trusted, sustainable supplier within global green supply chains.

This goal operationalizes the vision through specific and measurable objectives:

1. **Sustainable Development:** Mining creates jobs and revenues for development without compromising environmental or social conditions.
2. **Industrial Development:** Processing, beneficiation, and manufacturing create industrial capacity and economic diversification.
3. **Employment and Dignity:** Mining creates dignified work at skill levels from labourers to engineers, with career pathways and skills development.
4. **Revenue Generation:** Government revenue from mining funds education, health, infrastructure, and social services.
5. **Global Positioning:** Sierra Leone is recognized as a trusted, responsible supplier positioned favourably in global supply chains.

2.2 Guiding Principles

This Strategy is grounded in foundational principles that will guide all implementation:

1. Transformation

Moving deliberately and steadily from **raw material extraction** toward **value-added processing, beneficiation, and domestic manufacturing**. The overwhelming value in mineral supply chains accrues to countries that process, refine, and manufacture end-products. This Strategy commits to capturing exponentially greater value for Sierra Leone by progressing along the value chain, creating industrial capacity and employment.

2. Stewardship

Managing mineral resources with **accountability to present and future generations**, with **rigorous environmental and social safeguards**. Our mineral wealth is intergenerational; we must manage it such that future generations inherit environmental integrity, social stability, and economic opportunity equal to or greater than today.

3. Inclusivity

Ensuring that **benefits of mineral development are equitably distributed** and that **all Sierra Leoneans have meaningful opportunities to participate and prosper**. This means local content requirements, workforce development, community development agreements, and infrastructure investment reaching all regions.

4. Transparency

Operating with **complete openness in governance, revenue management, licensing decisions, and community engagement**. Transparency builds investor confidence, community support, and government accountability. We commit to EITI compliance, public revenue disclosure, and independent oversight.

5. Responsibility

Maintaining the **highest standards of environmental protection, occupational safety, human rights, and community respect**. Mining must not compromise the health or livelihoods of Sierra Leoneans. ESG standards will exceed international norms, not meet minimum requirements.

6. Strategic Partnership

Building **collaborative relationships with global partners based on mutual benefit, shared values, and respect for national sovereignty**. Sierra Leone will engage confidently with technology leaders, global companies, development institutions, and allied governments as equals, negotiating partnerships that create shared value.

7. Institutional Excellence

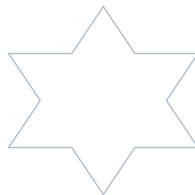
Strengthening **government institutions to manage the sector effectively, transparently, and with technical competence**. Mining is technically complex; our institutions must develop capacity to regulate effectively, enforce standards, and manage revenues responsibly.

2.3 Strategic Framework: Four Transformational Themes

The Strategy is organized around **four integrated transformational themes** that together address the full spectrum of critical minerals development, from extraction through processing to manufacturing, from primary extraction to global supply chains, from operational performance to societal benefit.

Theme	Strategic Objective	Key Result Areas	Expected Impact 2026–2031
I: Empowering Transformation	Move from raw mineral exports to value-added processing, beneficiation, and manufacturing	Geological mapping; mineral processing infrastructure; downstream industries; innovation and R&D	3–5 processing facilities; \$1.5B+ annual value-added exports; 5,000–8,000 processing jobs
II: Advancing Stewardship	Ensure environmental sustainability, social responsibility, and excellent governance	Regulatory harmonization; ESG standards; community engagement; transparent governance; ASM formalization	ESG recognition; EITI compliance; 60–70% ASM formalization; zero significant violations; visible community benefit
III: Catalyzing Shared Prosperity	Create equitable distribution of benefits and inclusive economic growth	Local content requirements; workforce development; community development; infrastructure; youth/women empowerment	45,000+ jobs created; 15,000+ skilled workers trained; 20–30% local procurement; visible infrastructure and community development
IV: Securing Strategic Partnerships	Build international relationships and partnerships necessary for success	Bilateral agreements; regional integration; strategic partnerships; global financing; international forums	\$2.5B investment attracted; long-term offtake agreements; technology transfer partnerships; global recognition

Table 4: Integrated transformational themes



3.0 PART III: FOUR TRANSFORMATIONAL THEMES

THEME I: EMPOWERING TRANSFORMATION

3.1 Unlocking Value Through Beneficiation, Industrialization, and Innovation

Objective: *Transform Sierra Leone's critical minerals from raw commodities exported for minimal value into processed, beneficiated, and manufactured products that capture exponentially greater economic value while driving industrial development.*

Strategic Rationale

The overwhelming value in mineral supply chains accrues to countries that process, refine, and manufacture end-products, not to countries that simply extract raw ore.

- Raw lithium ore: \$5,000–10,000 value per tonne.
- Processed lithium carbonate: \$20,000–40,000 value per tonne.
- Battery-grade lithium hydroxide: \$100,000+ value per tonne.
- Lithium-ion battery manufacturing: \$200,000–500,000 value per tonne.

This progression demonstrates the exponential **value multiplication** possible through value addition. Sierra Leone's strategy is to deliberately move along this value chain, beginning with extraction but progressing to processing, beneficiation, and eventually, manufacturing of downstream products.



Strategic Interventions

3.1.1 Intervention 1.1: Geological Mapping and Mineral Resource Characterization

Objective: Develop world-class understanding of Sierra Leone's critical mineral deposits to inform investment decisions and policy.

Specific actions:

1. Conduct detailed geological mapping of all critical mineral deposits, including resource estimation, grade assessment, and commercial viability analysis.
2. Establish a centralized, publicly accessible national geoscience database integrating geological surveys, mineral data, and exploration results.
3. Engage international geoscience partnerships (USGS, British Geological Survey, UNECA) to validate resource estimates and provide technical expertise.
4. Invest in advanced mapping technologies, including GIS systems, satellite imagery analysis, airborne geophysical surveys, and geochemical characterization.
5. Develop district-level geological profiles highlighting mineral potential and supporting decentralized investment.

Expected outcomes:

- Complete geological inventory of critical mineral deposits by end 2027.
- Enhanced investor confidence through validated resource estimates.
- Informed policy decisions based on comprehensive resource understanding.
- Democratized access to geological information supporting inclusive participation.

3.1.2 Intervention 1.2: Mineral Processing and Beneficiation Infrastructure

Objective: Establish facilities within Sierra Leone to process raw minerals into higher-value intermediate and final products.

Specific actions:

1. **Heavy minerals sand beneficiation:** Deploy heavy minerals separation plants (MSP) to increase heavy mineral content from run-of-mine sand using gravity, magnetic, and electrostatic separation, creating high-grade concentrates.
2. **Lithium processing:** Establish lithium hydroxide/carbonate processing facilities converting raw spodumene into battery-grade lithium products (5–10x value multiplication).
3. **Rare earth elements:** Develop monazite processing capacity to separate, concentrate, and purify rare earth elements for magnet and electronics manufacturing.
4. **Platinum group metals:** Create alluvial PGM concentration and recovery facilities leveraging existing artisanal mining expertise.

5. **Coltan and cassiterite:** Establish artisanal mining formalization programs supporting community-based mineral concentration and quality improvement.
6. **Bauxite beneficiation:** Develop alumina refining capacity, capturing greater value than raw bauxite export.

Infrastructure requirements:

- Dedicated industrial sites within special economic zones with reliable power, water, and waste management.
- Power generation capacity (renewable energy preferred): 50–100 MW for initial processing facilities.
- Water treatment and recycling systems, ensuring zero liquid discharge
- Waste management infrastructure, including tailings storage and rehabilitation facilities.
- Transportation infrastructure (roads, ports) enabling efficient export of processed products.

Expected outcomes by 2031:

- **3–5 processing/beneficiation facilities operational**
- **Value capture increase** of 200–500% compared to raw mineral export
- **Direct employment:** 2,000–5,000 in processing facilities
- **Indirect employment:** 5,000–10,000 in supporting services

3.1.3 Intervention 1.3: Downstream Industries and Special Economic Zones

Objective: Create ecosystem for battery manufacturing, renewable energy components, and advanced mineral-based manufacturing.

Specific actions:

1. Establish Critical Minerals Special Economic Zone (CMSEZ) with dedicated infrastructure, tax incentives, and regulatory support for processing and manufacturing.
2. Facilitate battery assembly and manufacturing partnerships with global battery manufacturers.
3. Support development of mineral-based downstream industries (magnets, alloys, electronics components).
4. Create favourable regulatory and financial conditions attracting original equipment manufacturers (OEMs) and component suppliers.
5. Develop industrial zones near ports for export efficiency.

Expected outcomes:

- Attraction of battery manufacturing partnerships
- Downstream industrial development creating 10,000+ jobs
- Export of manufactured products worth \$500 million+ annually by 2031

3.1.4 Intervention 1.4: Technology Transfer and Innovation Partnerships

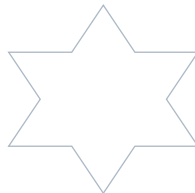
Objective: Secure technology transfer, develop local innovation capacity, and position Sierra Leone as manufacturing hub.

Specific actions:

1. Negotiate strategic partnerships with technology leaders (battery manufacturers, renewable companies, etc.), including technology transfer provisions.
2. Establish Centres of Excellence in mineral processing and advanced manufacturing affiliated with universities.
3. Support private sector R&D investments through tax incentives and matching grants.
4. Participate in international innovation networks and technology forums.
5. Facilitate access to international technical expertise through partnerships and capacity building programs.

Expected outcomes:

- Advanced processing technologies adopted within Sierra Leone
- Local innovation ecosystem emerging in mining and minerals sectors
- Knowledge and expertise transferred to Sierra Leonean institutions and workforce



THEME II: ADVANCING STEWARDSHIP

3.2 Environmental Sustainability, Governance, and Community Engagement

Objective: Ensure environmental sustainability, social responsibility, and excellent governance, positioning Sierra Leone as a responsible supplier preferred by global partners.

Strategic Rationale

Global investors, consumers, and governments increasingly demand minerals sourced from countries with strong environmental, social, and governance (ESG) standards. By exceeding international norms in environmental protection and restoration, community engagement and benefit-sharing, transparent and accountable governance, human rights protection, and occupational safety and health, Sierra Leone can command premium pricing, secure long-term partnerships, and build social license to operate.

Strategic Interventions

3.2.1 Intervention 2.1: Harmonized Regulatory and Policy Frameworks

Objective: Establish clear, predictable, internationally aligned regulatory frameworks that enable responsible mining and protect public interest.

Specific actions:

1. Align Sierra Leone's mining regulations with international best practices (ICMM standards, Global Industry Standard on Tailings Management).
2. Harmonize environmental regulations across mining, energy, and environmental sectors to create consistency.
3. Establish clear, transparent licensing procedures with defined timelines and criteria.
4. Create specialized mining courts or tribunals for rapid dispute resolution.
5. Regular review and update of mining regulations as technologies and international standards evolve.
6. Strengthen enforcement capacity of regulatory agencies.

Expected outcomes:

- Regulatory framework aligned with African Green Minerals Strategy and international standards.
- Enhanced investor confidence through regulatory clarity.
- Improved compliance and reduced violations.

3.2.2 Intervention 2.2: ESG Standards Exceeding International Norms

Objective: Establish standards ensuring environmental protection, community benefit, and transparent governance.

Specific actions:

1. Mandate Environmental and Social Impact Assessments (ESIA) for all mining projects exceeding minimum international standards.
2. Require biodiversity impact assessments and no-net-loss biodiversity commitments.
3. Establish mandatory environmental bonds/financial assurances covering full site restoration and closure costs.
4. Require independent third-party audits of environmental and social performance.
5. Implement mandatory greenhouse gas emissions reduction targets across mining operations.
6. Establish worker safety standards exceeding International Labour Organisation (ILO) conventions with independent monitoring.
7. Require gender equality and inclusion programs in all mining operations.
8. Mandate transparent disclosure of beneficial ownership, tax payments, and community payments.

Expected outcomes:

- Sierra Leone recognized as high-ESG mining jurisdiction.
- Premium pricing for Sierra Leone minerals from ESG-conscious buyers.
- Attraction of responsible investors and companies.



3.2.3 Intervention 2.3: Community Engagement and Benefit-Sharing Mechanisms

Objective: Ensure mining-affected communities participate in decision-making and share equitably in benefits.

Specific actions:

1. Establish Community Development Agreements (CDAs) as mandatory for all mining projects, developed through free, prior, and informed consent processes.
2. Require local procurement (minimum 20–30% local content in mining operations).
3. Establish community benefit funds providing education, health, and infrastructure improvements.
4. Support community-led development planning in mining regions.
5. Establish grievance mechanisms accessible to all community members.
6. Ensure meaningful consultation with Indigenous Peoples and traditional authorities regarding land use.
7. Support community capacity building and local leadership development.

Expected outcomes:

- Mining communities participate in decision-making and share benefits.
- Improved social license to operate, reducing conflict and project delays.
- Visible improvement in mining community welfare.

3.2.4 Intervention 2.4: Transparent Revenue Management and Governance

Objective: Ensure mining revenues benefit Sierra Leone and are managed transparently and accountably.

Specific actions:

1. Adopt EITI principles with full participation and compliance.
2. Establish transparent, publicly disclosed mining contracts and licensing terms.
3. Implement comprehensive revenue tracking system disclosing all government revenues from mining.
4. Publish annual Mining Revenue Reports (MRR) with sector-by-sector breakdown.
5. Establish independent audit of mining sector revenues and spending.
6. Allocate mining revenues to clearly defined development priorities (education, health, infrastructure).

7. Establish Critical Minerals Fund (CMF) managing portions of mining revenues for long-term development and future generations.
8. Combat corruption through independent commission and strong prosecution.

Expected outcomes:

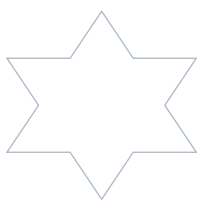
- EITI full compliance by 2029.
- Enhanced governance reputation and international investor confidence.
- Mining revenues transparently managed and benefiting all citizens.
- Reduced corruption in mining sector.

3.2.5 Intervention 2.5: Formalization of Artisanal and Small-Scale Mining (ASM)

Objective: Transform ASM from informal, exploitative activities into legal, safe, profitable livelihoods.

Specific actions:

1. Establish accessible licensing pathway enabling artisanal miners to formalize operations.
2. Provide training, equipment, and market linkages supporting professionalization of ASM.
3. Establish safety standards and occupational health programs for ASM.
4. Support cooperative formations enabling economies of scale and stronger market position.
5. Link ASM into formal mineral supply chains with premium pricing for certified responsible production.
6. Eliminate child labour and exploitative labour practices through enforcement and support programs.
7. Provide social protection (healthcare, accident insurance) for ASM workers.
8. Support transition to sustainable alternative livelihoods for miners in areas of depleted deposits.



Expected outcomes:

- 60–70% of ASM formalized by 2031.
- Improved safety and income for artisanal miners.
- Elimination of exploitative labour practices.
- Increased tax revenue from formalized ASM.



THEME III: CATALYZING SHARED PROSPERITY

3.3 Local Content, Workforce Development, and Inclusive Growth

Objective: Create equitable distribution of mining benefits and inclusive economic growth, ensuring all Sierra Leoneans participate in prosperity.

Strategic Rationale

Mining can either concentrate wealth or catalyze broad-based development. This Strategy commits to inclusive development where local businesses supply mining operations and benefit from procurement opportunities, young people develop skills and secure dignified employment, women participate fully in mining and related industries, communities hosting mining operations experience visible development, and government revenues from mining fund national development.

Strategic Interventions

3.3.1 Intervention 3.1: Local Content Requirements and Procurement Policies

Objective: Ensure Sierra Leone-based businesses and workers benefit directly from mining development.

Specific actions:

1. Establish mandatory local content requirements (minimum 20–30% initially, increasing to 40–50% by 2031) for all mining operations.
2. Define local content broadly: local employment, local procurement, local services, local manufacturing.
3. Establish local procurement targets for goods, services, and infrastructure support.
4. Support development of Sierra Leonean suppliers through supplier development programs.
5. Facilitate partnerships between mining companies and local contractors/suppliers.
6. Track and publicly report local content compliance by mining operation.
7. Provide preferential financing and tax incentives for local suppliers meeting quality/price standards.

Expected outcomes:

- **Local businesses** benefit from mining supply chains.
- **Multiplier effects:** mining spending circulates through local economy.
- **SME development:** local suppliers grow and diversify.
- **Value capture:** more of mining value remains in Sierra Leone.

3.3. Intervention 3.2: Workforce Development and Skills Training

Objective: Develop Sierra Leonean workforce with skills demanded by mining and related industries.

Specific actions:

1. Map workforce needs mining operations and supply chains (2026).
2. Align secondary and tertiary education curricula with mining industry requirements, Science, Technology, Engineering and Mathematics (STEM) emphasis.
3. Establish mining-focused vocational training centres in mining regions providing practical skills.
4. Support university programs in mining engineering, geology, and mineral processing.
5. Mandate mining companies to invest percentage of revenues in workforce development.
6. Establish scholarship programs for Sierra Leoneans to study mining-related fields internationally.
7. Support apprenticeship and on-the-job training programs.
8. Establish career pathways that enable progression from entry-level to management positions.
9. Promote women's participation in mining skills training (target 25–30% participation).
10. Support youth in mining regions with entrepreneurship and skills development programs.



Expected outcomes by 2031:

- **15,000+ skilled workers** trained in mining and mineral processing.
- **Majority of mining workforce** Sierra Leonean.
- **Reduced youth unemployment:** sustained employment opportunities.
- **Skills development:** portable, valued in multiple sectors.

3.3.3 Intervention 3.3: Community Development and Infrastructure Investment

Objective: Ensure mining-adjacent communities experience visible development and improved quality of life.

Specific actions:

1. Establish mandatory CDAs committing mining companies to community improvements.
2. Target CDA investments in education (schools, scholarships), health (clinics, equipment), infrastructure (roads, water, electricity), economic development.
3. Establish Community Development Funds (CDF) managed by communities with independent oversight.
4. Connect mining infrastructure (roads, electricity, water) to benefit surrounding communities.
5. Support community-led development planning processes.
6. Ensure CDAs include provisions for post-mining economic alternatives.
7. Mandate environmental remediation and site restoration benefiting communities.

Expected outcomes:

- Mining communities experience tangible improvements in quality of life.
- Access to quality education and healthcare improved.
- Local infrastructure development catalyzed by mining.
- Community satisfaction and social license to operate secured.

3.3.4 Intervention 3.4: Women's Economic Empowerment and Gender Inclusion

Objective: Ensure women participate fully in mining benefits and decision-making.

Specific actions:

1. Mandate gender equality programs in all mining operations (equal pay, equal opportunity, safe workplaces).

2. Establish targets for women's participation in mining employment (minimum 30% of positions).
3. Support women's entrepreneurship in mining-related services and procurement.
4. Ensure women participate in community development decision-making.
5. Provide childcare and family support enabling women's workforce participation.
6. Combat gender-based violence and sexual harassment through zero-tolerance policies and prosecution.
7. Support women leaders in mining communities.
8. Ensure equal voice in community development agreements and benefit-sharing.

Expected outcomes:

- Women's incomes and economic security improved.
- Women's participation in decision-making increased.
- Gender equity in mining sector advanced.
- Household poverty reduced through women's income.



3.3.5 Intervention 3.5: Youth Empowerment and Economic Opportunity

Objective: Provide youth meaningful employment and entrepreneurship opportunities from mining development.

Specific actions:

1. Establish mining sector career pathways for young people (entry-level to management).
2. Support youth entrepreneurship in mining-related services and supply chains.
3. Provide business development services and access to finance for youth entrepreneurs.
4. Establish vocational training programs aligned with youth learning preferences.
5. Create apprenticeship and mentorship programs connecting youth with experienced professionals.
6. Support youth in mining communities with economic opportunities beyond mining.
7. Engage young people in decision-making regarding mining development.

Expected outcomes:

- Youth unemployment reduced through mining-related opportunities.
- Youth incomes and prospects improved.
- Youth participation in decision-making and community development.
- Youth-led businesses in mining value chains.



THEME IV: SECURING STRATEGIC PARTNERSHIPS

3.4 International Relationships and Global Value Chain Integration

Objective: Build international relationships and partnerships necessary for investment, technology transfer, market access, and development finance.

Strategic Rationale

Critical minerals development requires access to international capital and project finance, advanced technology and technical expertise, global markets for minerals and processed products, knowledge and experience from leading mining nations, and bilateral relationships with consumer nations ensuring offtake agreements. Strategic partnerships enable Sierra Leone to leverage these global resources while maintaining sovereign control of mineral resources and pursuing national development priorities.

Strategic Interventions

3.4.1 Intervention 4.1: Bilateral Strategic Partnerships

Objective: Establish bilateral relationships with key technology-leading and consumer nations ensuring market access and preferential partnership terms.

Specific actions:

1. Negotiate bilateral minerals agreements with major consumer nations (USA, EU, Russia, China, Japan, India, South Korea, etc.).
2. Secure long-term offtake agreements guaranteeing markets for processed minerals.
3. Establish technology transfer partnerships with multinational companies.
4. Negotiate preferential trade terms and market access with developed economies.
5. Engage with strategic partners on joint value chain development (processing, manufacturing).
6. Establish diplomatic channels focused on minerals and critical minerals positioning.
7. Participate in bilateral development financing discussions securing concessional finance.

Expected outcomes:

- Secure long-term markets for Sierra Leone's minerals.
- Premium pricing from preferred supplier relationships.
- Technology and expertise transfer.
- Preferential investment and trade terms.

3.4.2 Intervention 4.2: Regional Integration and African Value Chains

Objective: Position Sierra Leone within regional and continental mineral value chains, leveraging AfCFTA and ECOWAS.

Specific actions:

1. Integrate Sierra Leone's critical minerals strategy with African Green Minerals Strategy.
2. Leverage AfCFTA to create integrated West African mineral processing and manufacturing zones.
3. Establish regional partnerships with Guinea, Mali, Liberia and Nigeria for coordinated mineral development.
4. Support West African processing hub development (leveraging Sierra Leone's mineral endowment).
5. Participate in ECOWAS initiatives on critical minerals and industrialization.
6. Engage with African Development Bank and African Minerals Development Centre.
7. Support regional technical cooperation in mining governance and standards.

Expected outcomes:

- West African mineral processing and manufacturing hub development.
- Regional value chain development benefiting multiple nations.
- Enhanced regional competitiveness in global markets.
- Integrated African approach to minerals development.

3.4.3 Intervention 4.3: Strategic Partnership with Private Sector Leaders

Objective: Attract responsible multinational mining and manufacturing companies as long-term partners.

Specific actions:

1. Identify multinational companies operating at world-class ESG standards.
2. Establish partnership frameworks enabling long-term collaboration on mineral development.
3. Secure commitment to local content, community investment, and skills development.
4. Negotiate technology transfer and local capability development.
5. Establish joint ventures and partnerships rather than concessional licensing.
6. Support private sector investment in processing, beneficiation, and manufacturing.
7. Facilitate partnerships between multinational companies and Sierra Leonean firms.

Expected outcomes:

- Long-term multinational partnerships ensuring sustained investment.
- Technology and expertise access.
- Global market linkages.
- Responsible development practices embedded in operations.

3.4.4 Intervention 4.4: Development Finance and International Partnerships

Objective: *Secure access to concessional finance from development finance institutions.*

Specific actions:

1. Engage World Bank (WB), African Development Bank (AfDB), and bilateral donors on minerals financing.
2. Secure concessional finance for infrastructure supporting minerals development.
3. Access expertise from international institutions on governance and standards.
4. Participate in development partnerships supporting skills development and institutional building.
5. Leverage Overseas Development Assistance (ODA) financing for regulatory strengthening and capacity building.
6. Establish partnerships with development finance institutions on green minerals financing.

Expected outcomes:

- Concessional finance for critical infrastructure.
- Technical assistance in governance and management.
- Institutional capacity strengthening.
- Access to global knowledge and experience.

3.4.5 Intervention 4.5: Participation in Global Minerals Governance and Forums

Objective: *Position Sierra Leone as active participant in global minerals governance.*

Specific actions:

1. Establish high-level representation in international minerals governance forums.
2. Participate in UN and multilateral discussions on critical minerals and energy transition.

3. Engage with International Council on Mining and Metals (ICMM) and international mining standards organizations.
4. Support Africa's positioning in global minerals discussions.
5. Advocate for equitable benefit-sharing and technology transfer in minerals development.
6. Participate in knowledge-sharing and best practice exchange with peer nations.

Expected outcomes:

- Sierra Leone voice heard in global minerals discussions.
- Leadership positioning in African critical minerals movement.
- Access to international expertise and knowledge.
- Advocacy for equitable minerals governance.



4.0 PART IV: GOVERNANCE AND IMPLEMENTATION

4.1 Governance and Institutional Arrangements

4.1.1 Lead Ministry and Coordinating Body

The **Ministry of Mines and Mineral Resources** and **National Minerals Agency** will serve as lead institutions, with the Minister providing political and Cabinet coordination.

A **Critical Minerals Excellence Centre (CEMEC)** will be established to:

- Coordinate implementation across government and stakeholders.
- Provide technical secretariat to Cabinet on minerals issues.
- Facilitate public-private dialogue and partnership development.
- Monitor implementation and track progress against targets.
- Engage international partners and secure development finance.
- Support regional and bilateral minerals relationships.

4.1.2 Inter-Ministerial Coordination

Strategic minerals development requires coordination across multiple ministries:

- **Ministry of Energy** — energy for mining operations, renewable energy integration.
- **Ministry of Finance** — revenue management, taxation, fiscal policy.
- **Ministry of Environment and Climate Change** — environmental compliance.
- **Ministry of Technical and Higher Education** — skills development and workforce readiness.
- **Ministry of Trade and Industry** — local content and industrialization.
- **Ministry of Local Government and Community Affairs** — community engagement and development planning.

An **Inter-Ministerial Steering Committee** will coordinate across these entities with quarterly meetings and annual Strategy reviews.

4.2 Implementation Pathway: A National Strategic Plan

This high-level Strategy will be operationalized through a **National Strategic Plan for Critical Minerals (2026-2031)** that provides:

- Specific operational targets and timelines for each theme.
- Detailed resource requirements and financing mechanisms.
- Institutional roles and responsibilities.
- Monitoring, evaluation, and learning frameworks.
- Provisions for periodic review as markets and technologies evolve.

4.3 Monitoring, Evaluation, and Review

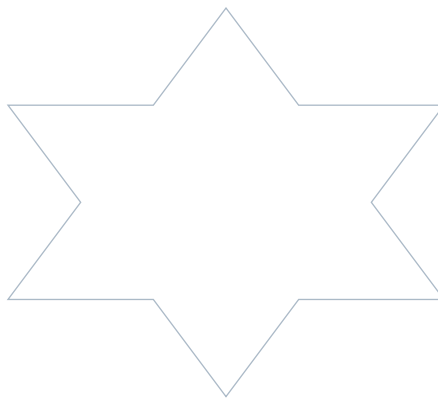
Success will be tracked through:

4.3.1 Key Performance Indicators (KPIs):

- Exploration and mining investment attracted (\$2.5 billion target).
- Processing/beneficiation facilities operational (3–5 target).
- Direct and indirect jobs created (45,000+ target).
- Skilled workers trained (15,000+ target).
- Annual government revenues from mining (\$300 million+ target).
- Export value of processed minerals (\$1.5 billion+ target).
- Progress on ESG standards and community development.
- Gender participation in mining (25–30% women target).
- ASM formalization (60–70% target).

4.3.2 Review and Learning:

- Annual progress reports to Parliament.
- Biennial independent evaluations.
- Public stakeholder consultations on strategy implementation.
- Periodic updates to strategy as technologies and markets evolve.



5.0 CONCLUSION

5.1 A Vision for Transformation

Sierra Leone stands at a historic inflection point. Our critical minerals are essential to global decarbonization and energy transition. Global demand for these minerals is unprecedented and growing rapidly. The window for early-moving nations to capture competitive advantage in critical minerals supply chains is open—but narrowing.

This Strategy represents Sierra Leone's commitment to:

1. **Empowering Transformation** — moving from raw material exports to value-added processing and manufacturing.
2. **Advancing Stewardship** — managing mineral resources with accountability to present and future generations.
3. **Catalyzing Shared Prosperity** — ensuring benefits are equitably distributed to all Sierra Leoneans.
4. **Securing Strategic Partnerships** — building the global relationships necessary for success.

5.2 Imagining 2031

Imagine Sierra Leone in 2031—and beyond:

Our critical minerals are being extracted responsibly with world-class environmental safeguards. Processing facilities within our borders are transforming raw minerals into value-added products. Our young people, thousands of them—have meaningful, dignified employment with opportunities for advancement. Communities hosting mining operations are visibly more prosperous: children are in school, healthcare is accessible, roads are reliable, electricity is available.

Government revenues from minerals are funding quality education, healthcare, infrastructure, and social programs benefiting all Sierra Leoneans. Our nation is recognized globally as a leader in responsible mining and green industrialization. International partnerships are bringing technology, investment, and knowledge that strengthen our entire economy.

This vision is not fantasy. It is achievable if we implement this Strategy with vision, integrity, passion, discipline, commitment, and determination. The resources are here. The global demand is here. The technology is available. What is required now is our choice—to seize this moment and build the prosperous, inclusive Sierra Leone we envision.

5.3 A Call to Action

This Strategy is not a government document sitting on shelves. It is a **call to action to:**

- **Private sector** invests responsibly, create quality jobs, support local suppliers, and contribute to community development.
- **Civil society** to hold government and companies accountable, ensure community voices are heard, and verify that benefits are shared equitably.

- **Development partners** to provide financing, technical expertise, and political support.
- **Communities** to engage fully, hold leadership accountable, and seize opportunities to participate in prosperity.
- **All Sierra Leoneans** to understand that minerals development can be a vehicle for transformation and to claim your share in that transformation.

The time to act is now. The future belongs to those who move decisively. Sierra Leone will move decisively, responsibly, and together.

This Strategy represents the commitment of the Government of Sierra Leone to transforming mineral resources into sustainable, inclusive national development. Implementation will require sustained efforts **to develop and implement a National Strategic Plan for Critical Minerals in Sierra Leone**, but the vision—a prosperous, industrialized Sierra Leone contributing to global sustainability—is compelling and achievable.



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