



2023

Sustainability Report

Sustainability is at the heart of all we do



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MML Overview (as of 31 December, 2023)

<p>2.87m</p> <p>Dry metric tonnes produced in 2023 (up 40% YoY)</p>	<p>3.75m</p> <p>Dry metric tonnes per annum production capacity commissioning expected in early 2024</p>
<p>70</p> <p>Hectare regenerative farm project on site</p>	<p>3,658</p> <p>Employees (direct and indirect) up 40% YoY</p>
<hr/>	
Climate	
<p>44%</p> <p>Short-term Physical intensity (tCO₂e/tIO) reduction target for Scope 1 emissions by 2030</p>	<p>79%</p> <p>Long-term Physical intensity (tCO₂e/tIO) reduction target for Scope 1 emissions by 2050¹</p>
<hr/>	
Health & Safety	
<p>244</p> <p>Work-related incidents in 2023 (down 20% YoY)</p>	<p>0.35</p> <p>LTIR (well below the annual target of 0.8 for 2023)</p>
<hr/>	
<p>\$13.61m</p> <p>USD paid to public sector stakeholders in 2023 (up 33.2% YoY)</p>	<p>34%</p> <p>Female direct employees</p>
<hr/>	
<p>40%</p> <p>Growth in employment YoY</p>	<p>13,490</p> <p>Hours of training for staff in 2023</p>
<hr/>	
Community and Economic Development	
<p>\$2.28m</p> <p>USD for MML’s Community Development Fund due in 2024 for FY23 (1% of free-on-board revenue)</p>	<p>23</p> <p>Community meetings held in 2023 (up from 12 in 2022)</p>

References to Marampa Blue™ and ‘iron ore’ indicate iron ore concentrate. All production statistics are in dry metric tonnes.
 1 MML’s long-term GHG Scope 1 reduction goal on a physical intensity basis corresponds with a 61% absolute reduction compared to our 2021 baseline by 2050.

A subsidiary of Gerald Group, Marampa Mines Limited (MML) is engaged in the exploration, development and production of high-grade iron ore concentrate, branded Marampa Blue™, in the Port Loko district of Sierra Leone. Gerald Group is investing in MML to build a resilient and long-life iron ore mine by integrating mining, processing and export logistics. MML creates in-country value and plays an integral role in the economic development and social stability of the region and country as a whole.

About this Report

MML’s sustainability objectives are aligned with and contribute to the United Nations Sustainable Development Goals (SDGs), which were adopted in 2015 and are intended to be achieved by 2030. MML is committed to this global partnership. We link our material topics covered in this reporting to the SDGs.

Reporting Framework

This Sustainability Report was prepared in reference to the Global Reporting Initiative (GRI) Sustainability Reporting Standards. A content index outlining our disclosures can be found in the [2023 Gerald Group Sustainability Report](#).

Our carbon emissions reporting, methodology and statistics were developed with the GHG Protocol Corporate Standard² and the GHG Corporate Value Chain (Scope 3) Standard³. Following guidance on Global Warming Potentials (GWPs) from the Intergovernmental Panel on Climate Change’s Fourth Assessment Report, we consolidate all applicable GHG categories into a carbon dioxide equivalent (CO₂e) metric.

New for this reporting period is the inclusion of disclosures for Climate Risks and Opportunities (CROs) as per the recommendations of the Task Force on Climate-related

Financial Disclosures (TCFD). The TCFD was established by the Financial Stability Board in 2015 to “improve and increase reporting of climate-related financial information.” The TCFD exercise allows us to better incorporate climate-related risks and opportunities into our decision-making process. MML’s disclosures in accordance with this mandate are found on page 13.

Starting with the 2024 reporting period, MML will prepare its disclosures in reference to new standards coming into effect: the International Financial Reporting Standards (IFRS) Foundation’s S1⁴ and S2⁵. IFRS S1 and S2 both fully incorporate the TCFD framework. MML’s disclosures under IFRS S1 and S2 will be made on a voluntary basis, which reflects our commitment to, and approval of, these newly consolidated standards under the IFRS.

Report Boundaries and Scope

Data presented in this report is for fiscal year 2023 (FY23) reporting period (1 January to 31 December 2023), unless otherwise specified. The 2022 reporting period established MML’s baseline/benchmark, except for carbon emissions data, for which 2021 is our baseline. All excluded Scope 3 categories are immaterial to our operations and would not affect the carbon footprint of the business, if included.

United Nations Sustainable Development Goals (SDGs)



2 GHG Protocol Corporate Standard
 3 GHG Corporate Value Chain (Scope 3) Standard
 4 IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information
 5 IFRS S2 Climate-related Disclosures

MML Chief Operating Officer Statement



2023 at MML was a year focused on growth. Our investment in MML reflects Gerald Group's confidence in Sierra Leone and its people. With a life of mine of 100+ years, we are keen to continue expanding as economic conditions allow and our sustainability efforts will be the key to unlocking success for decades to come.

2023 at MML was a year focused on growth. In early 2024, we expect to commission our expansion to 3.75 million tonnes of concentrate per annum production capacity, but the foundations to achieve this milestone were laid in 2023. This complex investment programme included the delivery of a new SAG Mill, which was the largest single consignment of mining equipment to ever arrive in Sierra Leone. Our investment in MML reflects Gerald Group's firm confidence in Sierra Leone and its people. With a life of mine of 100+ years, we are keen to continue expanding as economic conditions allow and our sustainability efforts will be the key to unlocking success for decades to come.

Tailings management is a demanding technical challenge for all mining companies, and I am extremely proud of the new direction MML took in 2023 with respect to our tailings storage facility (TSF). As we considered our options for tailings deposition and engaged various experts on the topic, we opted to move away from conventional open spigot tailing deposition to pursue a hydrocyclone deposition strategy, a relatively new method that allows for dry stacking of tailings. MML is the first mining company in Sierra Leone to successfully deploy this technique. This new approach not only drastically improves the dam's factor of safety, but it is also more environmentally sustainable than conventional deposition methods, in part because it allows for easier rehabilitation of the land once mining operations have ceased. My sincere thanks to MML's dedicated staff and experts who made this major upgrade a success.

Another promising development in 2023 enabled by cutting-edge technology was the launch of MML's biodiversity programme. Going forward, MML's environmental monitoring will include sampling for environmental DNA (eDNA), which detects trace amounts of genetic material left in the environment from the plants and animals present. Sequencing eDNA taken from sample points across the concession will allow us to understand our impact on biodiversity over time and take measures

to intervene accordingly. This data will inform MML's biodiversity offset plan, our approach to nature-based and nature-climate solutions and help see the company become a corporate leader in achieving nature-positive outcomes.

MML's contribution to our primary host communities, Port Loko District and Sierra Leone, is growing significantly. As we have grown into one of the largest employers in the country, 2023 saw us surpass our ambitious target of reaching 30% female participation in the workforce (direct employees) – earlier than expected. It is difficult to overstate the virtuous impact that bringing women into the workforce has on an economy, particularly a developing one like Sierra Leone's, so we are not stopping at 30%. As we progress further towards gender parity, we are investing in local content by contracting in-country suppliers as much as possible and through workforce development and staff training. Our Community Development Action Plan projects benefited students in small villages and in Lunsar, and helped people who received free testing for HIV or who attended agricultural workshops. Our contribution to the Community Development Fund will add another USD 2.28 million to the previous USD 1.74 million based on increased production, showing how MML's expansion increasingly benefits our primary host communities.

Although MML only restarted operations in 2021, we have already built a positive legacy of development and progress for Sierra Leone. The coming years will see MML create even more stakeholder value and tangible progress. I want to thank all my colleagues at MML and Gerald Group who have made our achievements to date possible.

Sincerely,

Frederic Lotti
Chief Operating Officer, MML
(SVP, Global Head of Investments, Gerald Group)

Governance and MML’s Approach to Sustainability

Sustainability drives progress for MML by integrating the mine site’s separate functional areas with structured collaboration and strategy. MML embraces the mentality that ‘the whole is greater than the sum of its parts’, which speaks to sustainability as a value-creation proposition. Just as with the Group’s trading business, the components of ESG are criteria of MML’s broader sustainability programme.

Marampa Mines Limited is governed by its Board of Directors, which guides the direction of operations and stakeholder management.

The Board is chaired by Gerald Group’s CEO, Craig Dean. Of the Board’s five members, four are Sierra Leone nationals and three are women. MML also has a steering committee that advises the Board of Directors and coordinates between Heads of Departments (HoDs) to maintain continuity through daily operations.

MML’s corporate policies provide structure for the operation and are available online at marampamines.com/policies.

MML’s Sustainability Department

2023 was a banner year for the build out of MML’s sustainability team with the hire of three positions:

- > Sustainability Manager (Head of Department)
- > ESG Manager
- > Biodiversity Supervisor

With these hires, MML now has a robust sustainability department – a significant milestone for the company. This new and enhanced department is supported by the Group’s corporate sustainability team and ensures all consequential planning and decisions across MML operations and departments integrate sustainability considerations. The department leads specific cross-organisational efforts, such as resettlement activities and leads the development of cross-departmental management plans. For example, the sustainability department initiated the development of a rainy season risk-mitigation plan as part of the ESG working group’s activities.

ESG Working Group

MML’s steering committee approved the formation of the ESG working group in early 2022, shortly after Gerald Group’s sustainability team was formed. The working group is comprised of the sustainability department and MML HoDs. The working group coordinates cross-organisational initiatives, and its structured, regular meetings allow for efficient data collection, collaboration and communication between the many moving pieces that come together under the banner of sustainability on the mine site.

MML Farm Produce






MML's Sustainability Framework


MML's sustainability framework is comprised of five pillars and demonstrates the cross-disciplinary nature of the mine site's sustainability programme. It reflects the mining operation's material topics, the key performance indicators (KPIs) this document reports on and is aligned with Gerald Group's sustainability policy.


Materiality Assessment

As previously mentioned, MML's materiality assessment was carried out separately from Gerald Group's trading operations, ensuring elements specific to the mining operation were fully accounted for. MML's assessment focused on the impacts, positive and negative, the operation has in terms of the environment, the climate, communities and the economic impact on primary host communities and Sierra Leone as a whole. MML revisits and adjusts its materiality assessments for each reporting period as economic, social and geopolitical conditions change. For 2023, we expanded human rights into its own material topic. We also added new KPIs for Health and Safety, Community Relations & Development (CR&D) and the company's programmes under the Community Development Action Plan (CDAP).

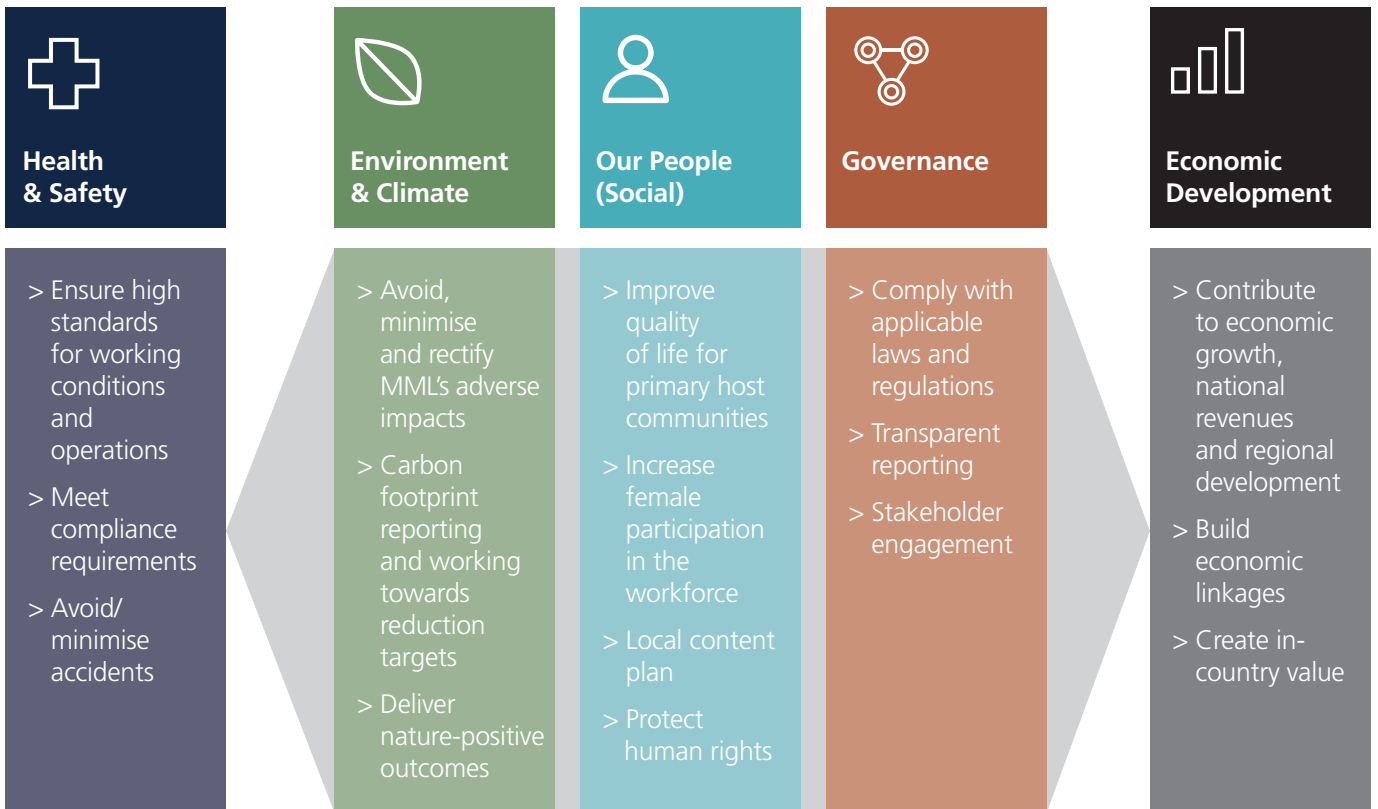
Material Topics

 **Environment:** MML seeks to be a responsible steward of natural resources in and around our mining concession area. We strive to avoid negative outcomes by restoring or rehabilitating land we have affected and offset or, failing that, compensate for any environmental impacts resulting from our operations. Activities include: water management, biodiversity monitoring, air quality (particulate matter) monitoring, noise-level monitoring, land use and nature-based solutions. MML's Environment Management System (EMS) tracks our performance with the aim of delivering nature-positive outcomes in every instance possible.

 **Climate:** MML accounts for its carbon footprint and works to achieve our goals for GHG emissions reduction. We acknowledge the important role iron ore plays in facilitating the energy transition and decarbonising the steelmaking process, which itself is a crucial challenge to overcome in combating climate change. We are committed to reducing the carbon footprint of our operation while helping the steel industry to do the same.

 **Health and Safety:** MML's Health and Safety Occupational Management Programme is the framework of standard operating procedures by which we operate a safe and healthy work environment with minimal incidents. The health and safety of our entire workforce is MML's top priority. As such, we work hard to maintain the highest safety standards while minimising workplace hazards and risks to prevent/eliminate accidents. We provide high-quality medical care, for our employees with on-site facilities, and for their dependents across

MML's Sustainability Framework



the country through insurance or retainer services. We monitor and contribute to the medical needs of our primary host communities and promote their overall wellness.

Our People (Social): MML is a major employer in the Port Loko district of Sierra Leone. This material topic covers our employees and contractors only. We are actively increasing female participation in our workforce, and we support all our employees with professional development opportunities and training. We are proud to provide jobs and growth opportunities to those in our primary host communities and across the country. Our presence in Sierra Leone is a major contributor to economic and social development.

Human Rights: MML takes extreme care to uphold and respect the highest standards of human rights. This includes the labour rights of our employees and contractors, the rights of our primary host communities within and around our concession area, and in how MML security teams protect the site, as per the Voluntary Principles on Security and Human Rights. In addition, MML is fully committed to the UN's Guiding Principles of Business and Human Rights and the Universal Declaration of Human Rights.

Community and Economic Development: MML is committed to the advancement of our primary host communities and is dedicating a level of resources to Community Relations & Development that is unprecedented for a mining company in Sierra Leone. The project contributes to the national economy, government revenues and regional stability. We aim to foster economic growth and development for the region and the country. One of our main focuses for developing and diversifying the local economy is creating linkages by contracting locally owned small and medium-size enterprises to meet our procurement needs.



Compliance with Sierra Leonean Law

MML is subject to a range of Sierra Leonean laws, policies, regulations⁶ and institutional frameworks that cover environmental management and resource development, namely:

- > The Mines and Minerals Development Act, 2023
- > The National Development-Inducted Resettlement Act, 2023
- > Environment Protection Agency Act, 2022
- > The National Minerals Agency Act, 2012
- > National Land Policy and Land Commission Act, 2004
- > The National Environmental Policy (NEP), 1990, revised in 1994

MML operates under a Large-Scale Mining Licence (MLA) awarded by the Ministry of Mines and Mineral Resources (MMR) of the Government of Sierra Leone (GoSL) and an annually renewed Environmental Impact Assessment (EIA) licence, furnished by the Environment Protection Agency of Sierra Leone (EPA-SL). MML's compliance hierarchy is in the descending order as follows:

- > Compliance requirements obligatory under the Sierra Leone regulatory framework (including international conventions Sierra Leone is a signatory of)
- > International Finance Corporation (IFC) Performance Standards, as applicable
- > MML Corporate Policies (which fully adhere to all superseding frameworks named above)

Transparency

We are committed to transparency and the highest standards of conduct. In addition to our sustainability reporting, MML makes our corporate policies available on its website, which are the vehicle to deliver on this commitment.

GoSL has a 10% equity stake in MML – a structure that ensures a mutually beneficial partnership.

To enhance our commitment to transparency, MML actively participates in the Sierra Leone Extractive Industries Transparency Initiative (SLEITI) reporting and validation process as a member of the Multi-Stakeholder Group (MSG) and the technical committee via the Chamber of Mines by attending quarterly meetings. The SLEITI MSG works to promote the use of natural resource wealth for sustainable growth and development in Sierra Leone through a transparent, accountable and effective system of governance of the extractive sector. MSG participants include GoSL, civil society organisations and other mining companies operating in-country. SLEITI makes detailed reporting on the sector's activities publicly available. MML is proud to be a member of the SLEITI MSG because maintaining close ties to our stakeholders is central to MML's longevity as a project and for building trust amongst all stakeholders.

In addition to SLEITI participation, we elect to independently publish our payments to public sector entities in our annual Sustainability Report for each reporting period. MML's payments to public sector stakeholders for 2023 are up 33.2% year on year.



⁶ Laws cited are not exhaustive of all GoSL laws affecting MML's operation.



Community Development and Engagement Framework

MML's licensing requires the implementation of mandatory community engagement activities.

The frameworks for this are the Community Development Agreement (CDA) and Community Development Action Plan (CDAP). MML's CR&D Department works to deliver positive social outcomes above and beyond the requirements of our licensing.

Please see 'Community and Economic Development' on page 23 for full reporting on our activities in this area.

Payments made to Public Sector Stakeholders in 2023

Category	USD
National Revenue Authority (NRA)	8,691,654
Community Development Fund contribution ⁷	2,278,680
Ministry of Mines and Mineral Resources	575,361
Environment Protection Agency (EPA-SL)	536,426
Land Lease Payments	503,160
National Social Security and Insurance Trust (NASSIT)	420,242
Sierra Leone Port Authority (SLPA)	240,000
Other Non-mining Licences	229,855
GoSL Cargo Tracking Note Fee for Export	96,099
Water Permitting and Use	42,853
Total	\$13,614,330

⁷ MML designates 1% of free-on-board export revenues for community-driven development projects. These monies are collected into the Community Development Fund (CDF), which is payable at the beginning of the next financial year, based on the previous year's production output. For more information, refer to page 23.

Marampa Mines Key Performance Indicators Climate



As an iron ore producer, MML plays a central role in the value chain of the world’s most carbon-intensive industrial material – steel⁸. High-grade iron ore reduces the end-to-end emission factor of the steel it is used to produce because less ore is needed to fabricate the same amount of steel, compared to lower-grade ores. Marampa Blue™ is 65% Fe – among the highest grades available. MML’s climate objective is to minimise the carbon output of our iron ore production to the greatest extent possible and to deliver a product that minimises downstream emissions. MML is pursuing decarbonisation by implementing a range of short-, medium- and long-term interventions.

Our Approach

MML’s carbon accounting was performed separately from Gerald Group’s trading operations. Figures displayed are for MML only. MML’s climate action contributes to SDG 13: Climate Action and SDG 12: Responsible Consumption and Production. SDG 12 is particularly salient because it speaks to reconfiguring our production processes as a requirement for intervention. The identified interventions for reducing MML’s carbon output are promising, but many, particularly production reconfiguration plans, will take many years to study and then execute, if they are indeed feasible. Others are readily achievable and imminent. We take a long-term view in our approach to building a world-class iron ore mine – one that will shift and adapt to new technologies as they evolve and become commercially viable.

Addressing Scope 1 Emissions

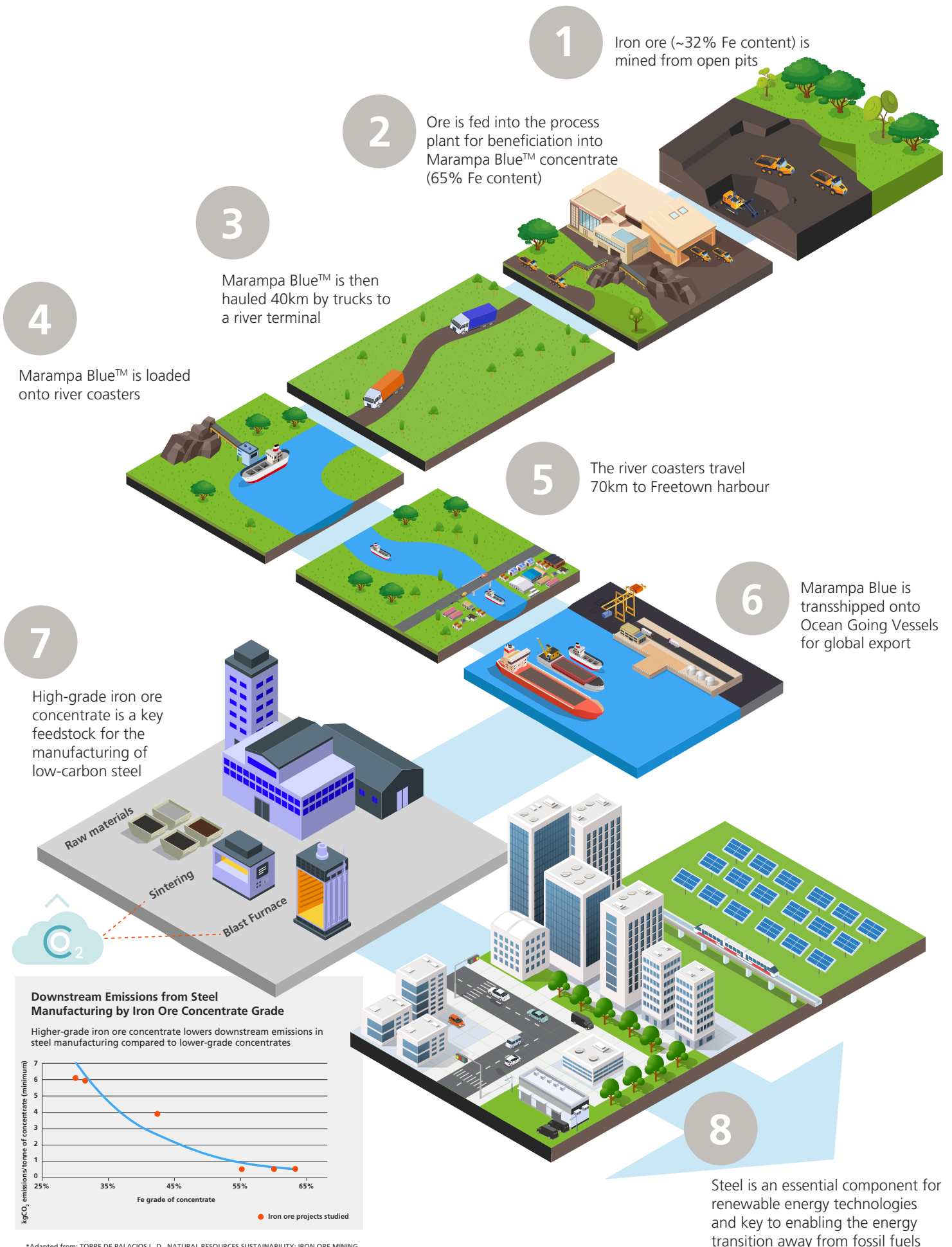
MML is committed to securing renewable energy to power our operation. We expect to sign a contract by the end of 2024 to deploy solar PV generation on the mine site. This system will be modular, meaning it can be expanded as MML’s production rate and other requirements evolve over time. This will allow us to continuously improve upon the ratio of renewable to fossil fuel-generated energy consumed on site, even as we continue to evaluate other options for sourcing electricity as they unfold. Alternatives that may come into play going forward are sourcing from a new regional power pool, converting our diesel generators to run on Liquid Natural Gas, or signing an offtake agreement to secure supply from new domestic capacity as it becomes available.

In the medium term, drawing power from the regional power pool is an alternative to generating our own power on site. Sierra Leone has existing and planned hydroelectric generation projects that are reducing the country’s reliance on fossil fuels for electricity.

MML’s transportation logistics are another compelling opportunity for optimisation. Current operations are supported by a fleet of seven river coasters and one transshipper, to transport iron ore concentrate to port for transshipment onto Ocean-Going Vessels (OGVs). MML would benefit from securing access to existing rail and port facilities that would move Marampa Blue™ to market much more efficiently.

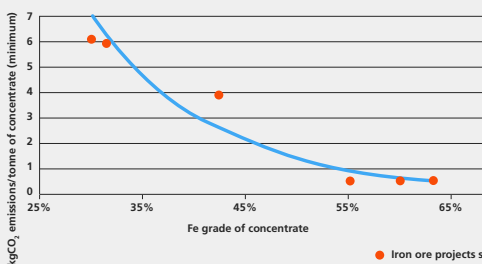
⁸ Bloomberg: [What It Would Take to Make Steelmaking Greener](#)

Marampa Blue™ from Mine to Market in the Steel Value Chain



Downstream Emissions from Steel Manufacturing by Iron Ore Concentrate Grade

Higher-grade iron ore concentrate lowers downstream emissions in steel manufacturing compared to lower-grade concentrates



*Adapted from: TORRE DE PALACIOS L. D. NATURAL RESOURCES SUSTAINABILITY: IRON ORE MINING. Dyna [Internet]. 2011;78(170):227-234.

Marampa Mines Key Performance Indicators Climate

Addressing Scope 3 Emissions

Scope 3 emissions account for 98.85% of MML's total carbon footprint, which makes interventions to address them integral to reducing MML's overall footprint. Such interventions would require significant investment to reconfigure the mine site's production methods over the long-term, any action on which is a matter of considering how many external commercial forces unfold over the coming years. Although MML has no immediate plans for process reconfiguration, we will consider this on an ongoing basis, as we are highly aware that doing so can contribute to downstream emissions reductions in steel production.

Category 10: Processing Sold Products is MML's largest Scope 3 category at 75.6%. Selling Marampa Blue™ to steel manufacturers that use less carbon-intensive smelting technologies such as direct reduced iron (DRI) and electric arc furnaces (EAFs)⁹, compared to blast furnaces, is a viable Scope 3 emissions-reduction intervention for the steel value chain, but the penetration rate of those technologies is an unpredictable variable. Although the convergence of commercial strategy and emissions-reductions pathways in the steel industry is becoming increasingly clear, it remains difficult to model or predict to what extent low-carbon technologies will be adopted in coming years. That said, if demand for low-carbon steel rises sharply, MML will be responsive to those market signals.

Another opportunity for Scope 3 emissions reduction for MML is Category 9: Downstream Transportation, which is a function of average shipping distance and the blend of fuel consumed by ocean-going vessels carrying Marampa Blue™.

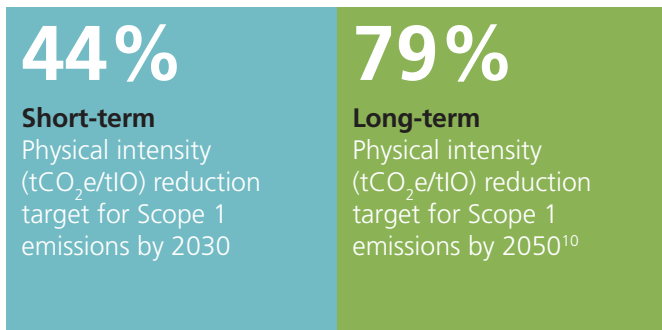
MML is committed to transparent reporting on the status of planned and in-process interventions for our carbon emissions. Future reporting will keep our stakeholders informed of the conclusions of our feasibility studies, projects, and the technological developments that affect our climate strategy.

Energy Use

In 2023, MML and our contractors consumed 33,536,750 litres of fuel (consolidating stationary diesel, marine gasoil and petrol), or 1,274,396,500 megajoules. Our stationary diesel powerhouse generated 53,813 MWh.

MML's power consumption falls under two categories: stationary consumption for the site's powerhouse and mobile consumption for the mine fleet, road trucks, river coasters and transshipper that haul iron ore concentrate to OGVs. All power generation is currently derived from fossil fuels, but we are actively working to secure renewable/low-carbon energy for stationary power generation.

In 2023, MML significantly increased the efficiency of our powerhouse through improved power management and process plant stability. MML is now testing newly installed higher-efficiency diesel genset units for the site's powerhouse. We expect to observe further gains over the course of 2024 as a result.



Scope 3 emissions
5,276,932 tCO₂e

Our Results
2023 Total emissions
5,337,657 tCO₂e

Scope 1 emissions
60,725 tCO₂e

Scope 2 emissions
0 tCO₂e

MML did not purchase electricity for delivery via third party in 2023.



Figures displayed are for MML's operations only.

⁹ European Commission: Prospective Scenarios on Energy Efficiency and CO₂ Emissions in the EU Iron & Steel Industry

¹⁰ MML's long-term GHG Scope 1 reduction goal on a physical intensity basis corresponds with a 61% absolute reduction compared to our 2021 baseline by 2050.

TCFD Disclosures for Marampa Mines Limited

MML's TCFD-aligned disclosures are made with the oversight of Gerald Group's ESG Committee (of the Group's Board of Directors) as the top overseeing authority for conducting the exercise, as required by applicable UK regulations¹¹ which require the disclosures to cover all Group subsidiaries and activities. By situating this responsibility at the Board level, processes for identifying, assessing and managing MML's climate-related risks and opportunities are highly integrated into the Group's overall risk management controls.

Just as MML revisits our sustainability material topics via a materiality assessment with each reporting period to take stock of, and incorporate, internal and external changes, our TCFD disclosures will be restated on an annual basis (following this inaugural disclosure) to do the same.

To make these TCFD-aligned disclosures, Gerald Group's sustainability team engaged an outside project consultant on MML's behalf to identify, assess, prioritise and model climate risks and opportunities (CROs), which include forward-looking scenarios and value-at-stake assessments. The analysis extended to implications for MML's business model as we seek to mitigate the risks and capitalise on the opportunities identified. From six CROs identified for MML, we elected to fully model three, based on these criteria:

- > **Financial and operational materiality** – the importance of the input/service/sale to the Group's business with a focus on value chains and operations.
- > **Modelling feasibility** – availability of data and the ability to glean insights from it.
- > **Adaptability** – feasibility of substitution for suppliers/customers/inputs for those exposed to disruptions from physical¹² or transition¹³ climate risks, with a focus on cases that are the most challenging to adapt to.

Leveraging data from World Resources Institute¹⁴ and Climate Analytics¹⁵, the three forward-looking climate scenarios built into our CRO modelling are:

- > **High Temperature Scenario (HTS):** a ~4°C global average temperature increase by 2050, representing a lack of successful climate change mitigation and a marked increase in the frequency and intensity of extreme weather events.

- > **Current Policy Scenario (CPS):** a ~3°C global average temperature increase by 2050, representing semi-successful implementation of current climate change mitigation policies (eg: the Paris Accord, which seeks to limit warming to less than 2°C).

- > **Net Zero Scenario (NZS)¹⁶:** a ~1.5°C global average temperature increase by 2050, representing the successful implementation of climate change mitigation and decarbonisation of the global economy.

Of the six CROs assessed, the three modelled for value-at-stake for MML are:

1. Flood Risks

The most material physical risk to MML's operations is the risk of flooding and other disruptions from extreme rain events. Although MML proactively prepares for operational challenges presented by heavy rainfall, extreme weather events have the potential to affect our rate of production, export logistics and the availability of consumables.

MML's location in Lunsar in Sierra Leone's Port Loko District witnessed 2,732 millimetres of rainfall in 2023, on par with the historical annual average of 2,654 millimetres for the country¹⁷. The climate is characterised by two seasons: a dry season from December to May/June, and a wet season with varying intensity of rainfall throughout the rest of the year. The effects of climate change are intensifying the frequency and intensity of extreme rain events in the region, even as the annual rainfall level average is expected to decrease slightly. For MML, more intense bursts of rainfall equate to higher risks of flooding.

Under the CPS, flood impacts and costs could increase by 25% by 2030. Flood risks increased significantly under the HTS, with an estimated 28% increase in costs associated with flooding at MML by 2030. Flood was less severe under the NZS, with an estimated 22% increase in flood impacts and costs by 2030. We will update our flood risk modelling as doing so allows us to be better prepared to mitigate its negative impacts. While some interventions provide quick wins, longer-term adaptation will require considerable investment to ensure MML's resilience in the face of this risk. The KPIs that MML uses to assess our progress in guarding against flood risks are: damage incurred (actuals in USD terms) and measured rainfall volume and intensity for the period in question.

¹¹ Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022 and the Limited Liability Partnerships (Climate-related Financial Disclosure) Regulations 2022

¹² Physical climate risks include potential losses from extreme weather events such as flooding, drought, wildfire, hurricanes, etc. Physical risk also includes long-term trends stemming from climate change that disrupt 'business as usual,' such as the loss of biodiversity and its associated ecosystem services.

Transition risks are those associated with the pace and extent at which an organisation manages and adapts to the internal and external pace of change to reduce greenhouse gas emissions and transition away from fossil fuels.

¹³ Transition risks are those associated with the pace and extent at which an organisation manages and adapts to the internal and external pace of change to reduce greenhouse gas emissions and transition away from fossil fuels.

¹⁴ World Resources Institute: [Aqueduct Water Risk Atlas](#) (2024)

¹⁵ Climate Analytics: [Climate Impact Explorer](#), Sierra Leone, Annual Expected Damages from River Floods (2024)

¹⁶ Each scenario and flood risk assessment leveraged the top 97.5 percentile from the Representative Concentration Pathway (RCP) 8.5, 4.5 and 2.6 respectively. The RCP pathways are greenhouse gas concentration pathways assessed by the IPCC in its fifth assessment report (AR5). Relying on the upper bound of scenario data allowed us to understand the potential worst-case scenario for flooding risks under each scenario.

¹⁷ World Bank Climate Change Knowledge Portal

Although MML's primary physical risk is flooding, we also acknowledge that rainfall and flooding events fluctuate over the short-term (due to annual seasonal rainfall changes) and medium term (climatic cycles associated with El Nino and La Nina). Therefore, while preparing for flood risks, we will not ignore risks associated with possible water shortages during Sierra Leone's dry season.

2. The Effect of the EU's Carbon Border Adjustment Mechanism (CBAM)

MML does not currently sell Marampa Blue™ into the EU and therefore will not be affected by CBAM if this remains the case. However, in the interest of maintaining the largest possible addressable market, we opted to account for CBAM's effect on our product in the EU market on a forward-looking basis. Although MML is not an EU-registered importer, potential EU buyers of Marampa Blue™ will be compelled to discount its value as a result of CBAM if its carbon intensity remains at current levels. CBAM stipulates that starting in 2026, high-emission materials will be subject to its adjustment designed to price embedded carbon at the prevailing EU Emissions Trading System (ETS) weekly average auction rate.

Fortunately, MML is already taking action to mitigate the risk of CBAM as a transition risk for MML, which is to continue pursuing our Scope 1 emissions reduction pathway, established in 2022 with the company's commitment to reduce our emissions physical intensity (tCO₂e/tIO) by 44% by 2030, compared to our 2021 baseline. Our actions for the reporting period are captured in the 'Addressing Scope 1 Emissions' subsection, above. The KPI to measure our progress against avoiding financial risks associated with CBAM is the extent to which we achieve our Scope 1 emission reduction goals in the near term by 2026 when the rule's transition phase ends and its adjustment comes into effect.

3. Increasing Demand for Low-carbon Steel

As the steel industry decarbonises, iron ore concentrate producers will need to adapt to ensure their product remains suitable for use as input requirements change, depending on the steelmaking technology in question. For example, DRI processes use green hydrogen as the reducing agent, rather than metallurgical coal, which is a major lever of decarbonisation. Although not yet widely deployed, DRI-EAF technology is already in use, but it requires DR-grade iron ore concentrate of at least 67% Fe. As of August 2022, DR-grade iron ore made up only about 4% of global iron ore supply¹⁸. This dynamic – decarbonisation technology only being able to deploy as the availability of sufficiently high-grade input material allows – sets up a strategy decision that iron ore concentrate producers will need to make. They can elect to invest in the needed production process reconfigurations to position their product for a decarbonising steel industry, or they can elect not to and instead cater to the blast furnace steelmaking market that will remain.

Making informed decisions as to the viability of actively pursuing opportunities in the market for low-carbon steel, still in its infancy, requires extensive cost/benefit analysis and modelling. There is also substantial ambiguity as to how the uptake of low-carbon steelmaking technology will unfold. For MML, our approach will be addressed and formalised as we evaluate the potential to continue growing our production capacity beyond 3.75 million tonnes of concentrate per annum. We will report on future actions taken and decisions made, accordingly. The KPI to measure our progress against our objectives in this CRO category will be defined in future reporting periods.

The three remaining CROs for MML assessed without modelling for value-at-risk were:

- > Carbon pricing (outside of CBAM) risks
- > Carbon offset market risks
- > Drought risks

Taking the above CROs into consideration, MML's Board of Directors is confident in the enterprise's overall resilience under the different climate-related scenarios modelled. It is important to consider that like most organisations, MML's approach to managing climate-related risks and opportunities necessarily evolves over years, not months. We are confident in the durability of our modelling but acknowledge that we have areas for improvement because this was MML's first year making TCFD-aligned disclosures. As such, we are proactively working to build organisational awareness of climate risks and opportunities to ensure they are fully incorporated into decision-making processes.



Environment



Part of the broader Health, Safety and Environment (HSE) department, the environment team implements MML’s Environmental Management Programme (EMP) and monitoring, land remediation, and biodiversity management on the mine site. The term ‘monitoring’ refers to field work, physical sampling and data preparation. Data insights help avoid and/or minimise adverse environmental impacts. The environment team also monitors fuel consumption and chemicals’ management at the mine site. MML monitors many sites in and around our concession, including at the Thofayim River Terminal (TRT).

In working to mitigate the impact of mining activities, MML utilises nature-based (NbS) and nature-climate (NCS) solutions to the greatest extent possible. Nature-based solutions “address societal challenges through actions to protect, sustainably manage, and restore natural and modified ecosystems, benefiting people and nature at the same time,” as per the IUCN¹⁹. Nature-climate solutions refer to interventions that restore nature while mitigating GHG emissions.

Water Stewardship

MML proactively manages water resources to minimise detrimental impacts on quality and availability in our concession area and downstream. This includes monitoring surface and groundwater, treatment processes for potable water consumption, effluent treatment for camp sewage, and management of discharge and runoff from the tailings storage facility (TSF).

Raw water is drawn from the Rokel river and from Batabana Creek for use on the mine site. Less than 1% of extracted water is treated for potability, while the remainder is used in the process plant. Apart from non-

toxic and water-soluble fluctuant, there is no chemical process in the beneficiation of iron ore concentrate, so there is no need for treatment of post-process water as effluent after water is used in the process plant.

In 2023, we installed a recycling system to capture water used in the process plant for reuse, such that our need to extract surface water significantly decreases. This system is already installed, and we will report on its impact on extraction volumes in the next reporting period for 2024. Its use is already reducing MML’s impact on local water systems, helping revert the Batabana Creek to a less silted and more natural state, and contributing to MML’s overall circularity programme.

MML provides potable water for our employees and contractors at four access points. Providing potable water reduces plastic waste from bottled water supplies. MML conducts daily water quality analysis and contracts a third-party testing service for assurance purposes to ensure all potable water access points meet World Health Organization (WHO) guidelines for safe drinking water.

MML monitors key bodies of surface water directly and indirectly related to the mine’s operations. Doing so is best practice to detect any adverse impact of our activities. See Addendum: Tables 1 and 2 for detailed water quality reporting.

Finally, groundwater is monitored at three protected wells that are key water sources for primary host communities surrounding the mine site. MML works with a contractor to purify these ground water wells via chlorination. This intervention will improve the public health of the communities that rely on them.

Although MML does not extract groundwater apart from very small quantities at TRT, our operations still affect the concession area’s aquifer system(s). Excavation during mining removes native vegetation, reducing water’s ability to infiltrate and recharge aquifers. In addition, impermeabilisation of surfaces also decreases aquifer recharge rates. Building on existing hydrogeological

Water Extraction and Use at MML in 2023 (all figures cubic meters)

	Katic – Rokel (surface water)	Valley B (Batabana Creek surface water)	TRT Borehole (groundwater)	Total Extraction	Intensity Ratio (m ³ /tIO)	Potable Water Consumption
Q1	1,256,888	531,940	818*	1,788,828	2.467	13,815
Q2	775,753	780,396	818*	1,556,149	2.257	15,099
Q3	676,164	834,722	793	1,511,679	2.035	15,390
Q4	976,586	612,210	843	1,589,639	2.232	17,184
FY23 TOTALS	3,685,391	2,759,268	3,272	6,446,295	2.248 (average)	61,488

¹⁹ IUCN

* Extrapolated figure

Waste Management in 2023 (kg)

	Q1	Q2	Q3	Q4	Total	Disposal Method
Food	9,076	19,355	66,302	31,000	125,733	Compost
Plastics	9,957	17,117	20,343	16,900	64,317	Stored for Recycling
Wood/Timber	85,583*	7,371	4,518	7,200	104,672	Stockpiled
Paper/Cardboard	12,178	28,513	18,682	15,800	75,173	Incinerated
Glass/Bottles	12,120	9,717	5,974	12,900	40,711	Stored for Recycling
Cans/Tins	15,017	10,120	4,788	4,900	34,825	Stored for Recycling
General	19,030	52,069	42,653	19,500	133,253	Incinerated
Medical	2,065	2,461	3,620	2,050	10,196	Incinerated
Oil Rags and Filters	736	15,338	5,352	2,250	23,676	Incinerated
Aluminium Foil	5,550	8,601	11,570	5,600	31,321	Stored for Recycling
Ash	34,480	12,977	-	2,000	49,456	Stockpiled
Metal**	21,871	21,871	21,871	21,871	87,484	Stored for Recycling
TOTAL					780,817	

* Anomaly due to one-off construction activity.

** Figures normalised over the full year.

maps and studies, MML will pursue a more granular understanding of our hydrogeological impacts and assess the need for interventions going forward.

MML's primary water management risk is surface water and systems being compromised due to sediment runoff. Runoff causes siltation of water bodies and if unmitigated, can damage ecosystems. Runoff management is a core pillar of MML's EMS and is a recurring maintenance routine of the highest importance for the TSF, process plant, mining waste sites and pits.

Noise

Noise measurements are regularly collected to ensure the noise levels workers are exposed to daily fall within an acceptable range. We also closely monitor noise levels in villages directly adjacent to ensure the mine's activities are not untenably disruptive. Observational assessments are also carried out to determine whether appropriate mitigation measures are being implemented to minimise any potentially harmful effects of exposure. See Addendum: Table 3 for detailed noise-level reporting.

Air Quality

Elevated levels of particulate matter in and around mine sites present a health and safety challenge that requires vigilant attention. At MML, dust is primarily the result of freight trucks travelling along the haulage road in and out of the mine site. Excess particulate matter negatively affects the health of MML's workers and those in adjacent villages, so we deploy a water-soluble suppressant that is sprayed on the road. We also strictly enforce the haulage road's speed limit, which controls the amount of dust kicked up into the air. See Addendum: Table 4 for detailed air quality reporting.

Circularity

MML runs a disciplined waste management system by which recyclable materials are separated from non-recyclable ones, collected from designated waste disposal points and moved to the waste management centre for final disposal as per best practice. This includes selling scrap metal to a Sierra Leonean firm with a valid export scrap metals permit from GoSL. Although MML did not have any scrap metal sales in 2023, we expect this to recommence in 2024.

MML is developing a Circularity Plan to operationalise the opportunities we have to create value through repurposing waste materials like tailings, consumer waste, and overburden that will be utilised for land-remediation efforts. Iron ore tailings have high potential as an input for concrete mix that can be used to pave roads or to form bricks suitable for building material. MML's projects department tested concrete mix made out of tailings material in 2023 and was happy with the preliminary results.

Sierra Leone faces a major circularity challenge with an absence of recycling facilities in-country, which means recyclable materials need to be exported for processing. Since the start of operations in 2021, MML has stockpiled the recyclable waste generated on site as the company sought a permanent solution to this dilemma. In 2023, MML identified a vendor in Makeni that is currently under consideration to become the country's first government-permitted recycling facility for plastics, rubber (including tyres), aluminium and glass. Working closely with this vendor and the government, MML is positioned to be one of the first customers of this new facility once it starts operations, signalling our commitment to do our part in developing circularity infrastructure within Sierra Leone.

Although waste generated in 2023 increased year on year by 328%, this increase was due to the major production capacity expansion programme underway with its associated construction waste and a 40% increase of personnel on site. Most of the increased volume was disposed of in environmentally beneficial ways. For example, our composting volume for food waste increased 574% year on year.

Biodiversity Management and Offsetting

MML's concession area spans 116.2km² and is a transition zone between the woodland and grassland ecosystems of the Sudan-Guinea Savannah Biome and the closed forest systems of the Guinea-Congo Forest Biome. The concession's terrestrial habitats consist of secondary forest/farmbrush mosaic, rice wetlands, lowland forests, flooded natural grassland and secondary savannah, while aquatic habitats include seasonal valley head wetlands, seasonal mid-slope wetlands, seasonal upper foothill streams and perennial lower foothill rivers. The largest terrestrial habitat is the secondary forest/farmbrush. The largest aquatic habitat and feature of the concession area is the Rokel river, which also demarcates its southern border.

MML's 2021 and 2023 Environmental, Social, and Health Impact Assessments (ESHIA), which are comprehensive risk and mitigation analyses and plans prepared for and submitted to the EPA-SL as a licensing requirement, conducted biodiversity rapid assessments to examine the biodiversity and biophysical entities in our concession area.

In early 2024, MML will start sample collection for eDNA – trace amounts of genetic material from species present in a given area – to determine the species present, and the density of those species at each monitoring area. These results will be MML's biodiversity baseline. This new, cutting-edge technology and type of environmental monitoring will allow MML to track and report on its biodiversity conservation performance, starting with our baseline report for 2024 and to be updated on an annual basis with two sampling periods per year: one in the dry season and one in the wet season.

Changes observed in the presence and/or absence of the concession area's native (and invasive) plants and animals across dozens of sampling sites will inform our biodiversity offsetting and land remediation activities, which will serve as the company's levers to meet our net-positive biodiversity goals for the concession area. MML adheres to the guidance of the International Union for Conservation of Nature (IUCN) for the use of biodiversity offsets, which are defined as measurable conservation outcomes designed to compensate for adverse and unavoidable impacts of projects. As per IUCN guidance, MML will ensure that biodiversity offsetting is pursued in accordance with the Mitigation Hierarchy²⁰.



The hierarchy establishes best practice for prioritising the avoidance and minimisation of negative impacts, followed by conservation measures designed to attain no net loss or a net gain in biodiversity outcomes.

Also aligned with the Mitigation Hierarchy, MML's Biodiversity Policy guides the company's mining, environmental monitoring, and mitigation strategies to limit negative impact on biodiversity. The company's methodology is aligned with Sierra Leonean²¹ and international biodiversity conservation standards, namely the International Finance Corporation's Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (IFC PS 6)²² and the Global Biodiversity Framework (GBF)²³.

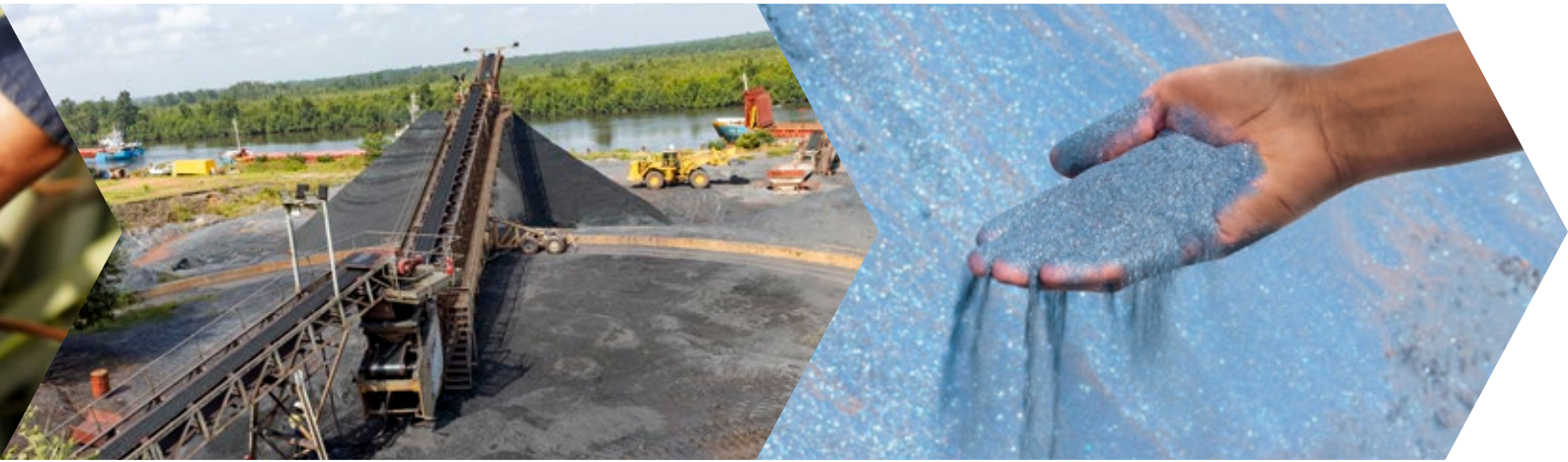
Putting biodiversity conservation into practice, in November 2023, the HSE department successfully relocated 18 green monkeys (*Chlorocebus sabaeus*) away from an abandoned structure slated for demolition in an active mining area they were nesting in. The team conducted this activity without the use of sedatives, cages, or other forceful means. Instead, considering the species' compatibility with the presence of humans and MML's mining activities, the relocation allowed the animals to choose where they would resettle with ease. The exercise succeeded in keeping the monkeys local to their former home within our concession area, which has an abundance of fruit trees, making for ideal monkey range. We continue to monitor the monkeys to ensure their resettlement requires no further interventions.

²⁰ IUCN

²¹ Sierra Leone's Second National Biodiversity Strategy and Action Plan

²² IFC PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

²³ Kunming-Montreal Global Biodiversity Framework



Land Remediation Programme

Over the course of 2023, MML laid the foundations for operationalising in-house capacity and infrastructure needed to pilot these activities. This included establishing nurseries for growing seedlings of native plants and trees and reconfiguring portions of our on-site farm (see section below) to support land-remediation activities. Land remediation will be conducted in designated areas throughout 2024 before broader scaling up of the programme.

Mine Rehabilitation and Closure Plan

In October 2023, MML submitted the company's Mine Rehabilitation and Closure Plan (MRCP) to EPA-SL in accordance with our licensing requirement. Far from just a regulatory exercise, MML is committed to going above and beyond expectations in undertaking progressive rehabilitation of the site in preparation for mine closure. However, because MML's life of mine is 90+ years, progressive land rehabilitation will be performed with a greater focus on biodiversity offsetting for nature-positive outcomes than mine closure planning.

MML's mine closure and land-remediation activities overlap extensively with the company's biodiversity programme. Biodiversity restoration is both the means and desired outcome of land rehabilitation. MML's goal for land remediation is to return mined-out and disused areas to a state of long-term stability and ecosystem resilience, including as a habitat for animals.

Conservation

MML is studying opportunities for establishing protected designated conservation area(s) within our concession area. Doing so will afford us dedicated land to conduct nature-based and climate-based solutions including carbon insetting, replacing natural assets lost to expanded mining areas, relocating animals as needed to allow mining to proceed in other areas, and generating ancillary

benefits for our primary host communities. Establishing a conservation programme will allow the company to achieve no net loss of nature as mining areas expand and demonstrates MML's commitment to the long-term stewardship of our concession area and nature-positive outcomes.

Between remediation of disused areas and progressive expansion of conservation areas as mine sequencing allows, MML's Biodiversity Offset Programme seeks to ensure a 1:1 replacement ratio or better, such that our activities create natural capital over the long-term.

MML Farm

MML is developing a 70-hectare on-site farm to produce fruit, vegetables and livestock that will meet the daily needs of our large workforce. The operation will encompass four production systems: fish, chickens, cattle and fruit/vegetables – all built on nature-based solutions and regenerative/integrated agriculture practices. We are performing extensive work to improve soil composition, which started with low organic content, low water holding capacity and low nutrient availability. Once soil preparation is complete, livestock rotation prepares pastures and vegetable production areas while naturally controlling parasites. Vegetable production waste is in turn used to feed livestock, creating a positive feedback loop that improves fertility while using one production system's waste as a free input for another.

In 2023, despite procurement challenges, the farm expanded from one to five cultivated hectares, and started work on a nursery that MML is building to support in-house cultivation of native plants and trees for our land-rehabilitation activities. Livestock systems are expected to come online throughout 2024 and the farm is expected to be fully operational by the end of the year.

The farm project is emblematic of MML’s integrated approach to sustainability. It is accelerating progress in moving towards circular systems (repurposing materials, reduced landfill waste, increased composting and drastically reduced reliance on imported foods) that will improve our sustainability performance overall. It is a value-adding proposition for our Community Relations & Development (CR&D) Department, which has, and will continue to, hire people from adjacent primary host communities for the project, contributing to MML’s local content plan goals.



Nature-based Solutions (NbS) for Nature-positive Outcomes at MML

As per the International Union for Conservation of Nature (IUCN), NbS “address societal challenges through actions to protect, sustainably manage, and restore natural and modified ecosystems, benefiting people and nature at the same time”. At MML, NbS are the means to achieve land remediation and biodiversity offsetting.



Biodiversity Offsetting and Land Remediation

Between remediation of disused areas and progressive expansion of conservation areas as mine sequencing allows, MML’s biodiversity offset programme seeks to ensure a 1:1 replacement ratio or better, such that our activities create, not destroy, natural capital over the long-term.

Our People



MML's diverse workforce is highly collaborative and productive, and our employees are the key to building a resilient and sustainable iron ore project in Sierra Leone. MML's many departments are united by shared goals and the attitude that every employee plays an essential role in achieving them. Our objective is to foster a supportive organisational culture and a sense of community based on open dialogue, collaboration and respect. Our hiring, staff development and training methods reiterate the importance of diversity in our operations. We do not tolerate any form of discrimination that would undermine those efforts. Our HR and recruiting efforts contribute to achieving SDGs 5: Gender Equality, 8: Decent Work and Economic Growth, and 10: Reduced Inequalities.

Increasing Female Participation in the Workforce

MML makes a concerted effort to recruit and increase the overall participation rate of women in our workforce because we embrace the business case for gender diversity. Gender diversity brings a more complete range of perspectives to issues that affect our operation, resulting in higher-quality decision making. Increasing female workforce participation is a demonstrated economic development strategy benefiting the women we hire, our primary host communities and the company.

We are pleased to report that we exceeded our goal of 30% female workforce participation among our direct employees for 2023 by ending the year with a 33.8% female directly employed workforce. MML will continue to work towards gender parity with a coordinated human resources strategy across recruiting, internal advancement, training and professional development initiatives.

Workforce Metrics

At the end of 2023, MML employed 3,658 people across all job classifications – an increase of 40% year on year. Our recruiting operations contribute to our Local Content Plan objective to give first consideration to Sierra Leonean nationals whenever possible and we are proud that our workforce is 92% Sierra Leonean nationals. 55% of eligible direct employees were covered by the collective bargaining agreement of the United Mine Workers of Sierra Leone at year end 2023.

Staff Development and Training

MML proudly invests in the professional development of our staff. Upskilling is central to building a high-quality workforce, optimising operations and improving the project's overall performance. Our longer-term goal – one that contributes to overall social and economic development – is to upskill our employees to help develop

MML Workforce (as of 31 Dec 2023)					
CLASSIFICATION	MALE	% MALE	FEMALE	% FEMALE	TOTAL
Direct/Permanent (Nationals)	915	65.9%	474	34.1%	1,389
Direct/Permanent (Expatriates)	76	69.7%	33	30.3%	109
Casual Staff (Nationals)	293	82.5%	62	17.5%	355
Interns (Nationals)	1	50.0%	1	50.0%	2
Consultants (Expatriates)	28	80.0%	7	20.0%	35
Contractors (Nationals)	1,302	80.3%	319	19.7%	1,621
Contractors (Expatriates)	144	98.0%	3	2.0%	147
TOTAL	2,759	75.4%	899	24.6%	3,658
All Staff (Nationals)	2,511	69.7%	856	30.3%	3,367
All Staff (Expatriates)	248	82.6%	43	17.4%	291



human capital within Sierra Leone for global mobility. We conducted 13,490 hours of training for our staff in 2023. See Addendum: Table 5 for detailed staff training reporting.

As part of our commitment to champion human rights, MML conducted mandatory training on the Voluntary Principles on Security and Human Rights for security staff over the course of 2023. We are happy to report that 95% of all frontline security staff²⁴ received this training for a total of 400 hours. The remaining 5% were on leave at the time of training and will receive it in the first half of 2024.

Looking ahead, to enhance our professional development offerings, MML is evaluating the potential to create a dedicated training department that coordinates with Human Resources as opposed to being a function of it. A dedicated training department would be empowered to execute on both MML's goals for staff development and, potentially in collaboration with NGO or Government partners, help create a talent pipeline for the company, to the benefit of the whole country.

Internship Programme

In 2023, MML's primary avenue of engagement with young people in the name of workforce development was via our Internship Programme. The objectives of the programme are:

- > Talent Acquisition: identify and recruit top-performing recent graduates with diverse skills and perspectives.
- > Professional Development: provide a structured pathway for young professionals to develop their skills and knowledge.

- > Retention and Engagement: foster a positive work environment encouraging retention and engagement among young talent.

To engage an intern, requests are initiated by a HoD, or a formal request for internship slots is received from the University. The intern(s) selected undergo:

- > Rotational placements in different departments where applicable.
- > Hands-on experience for a holistic understanding of the business.
- > Mentorship from experienced professionals.
- > Customised training programmes for technical and soft skills.
- > Monthly performance reviews and collaborative projects with cross-functional teams.

The 2023 Internship Programme yielded promising results for both MML and the interns themselves. The cohort consisted of 58 programme participants, 49 (84.5%) of whom were female. The company is proud that we retained 35 (all but one female) as permanent employees. This gender profile reflects MML's aggressive posture to reach our goal of gender parity for direct employees, but does not indicate future opportunities for males will be limited. Instead, it is a recognition of the company's objective to deliberately recruit women into a traditionally male-dominated industry.

²⁴ 'Frontline' security staff means all security staff that interact with non MML-employed primary host community members.

Health and Safety



Ensuring the health and safety of everyone present on site is MML’s top priority and we follow best practices to achieve this goal. We aim to minimise physical and health-related incidents by instilling health and safety as a culture and by maintaining high standards for our facilities. MML’s health and safety standards work to address SDGs 3: Good Health and Well-Being, and 8: Decent Work and Economic Growth.

Incident Reporting

MML maintains detailed incident reporting. Mine site personnel must report all near-misses and accidents resulting in personal injury to the Health and Safety department. Health and safety incident rates reveal patterns and guide management’s strategy to keep MML’s staff safe on site. An incident register is maintained by the Health and Safety department for gap analysis to ensure continuous safety improvement. MML implemented industry standard KPIs at the start of 2023 to track our safety performance over time (see KPIs chart, below). These lagging indicators allow management to keep close tabs on the company’s performance. We exceeded our targets for the year and look forward to further improving our performance.

MML’s ‘Zero Harm Drive’ is our on-site campaign to continuously instil a culture of safety and caring among our staff via a series of management walkdowns, toolbox talks, emergency drills, safety audits, and filed safety observations. Safety observations play a critical role in helping to identify and control risk exposures, positively reinforce safe behaviours, and foster a ‘speak up’ culture that reduces employee injuries.

MML had a total of 244 work-related incidents in 2023, a 20% decrease compared to 2022. These are excellent results considering the total number of staff on site increased by 40% in the same period. Motor vehicle and equipment incidents remain one of the main challenges.

In 2024, we will improve our safety performance by implementing software for managing safety observations, inspections and incident reporting. This solution is expected to significantly improve the efficiency and productivity of the HSE department’s safety operations, freeing up time otherwise spent on generating reports to be out in the field. In addition, hundreds of MML staff will be newly empowered to submit safety observations and reports via mobile devices while out in the field. This software will give management much more data to work with and further MML’s ‘Zero Harm Drive’ culture of safety for the benefit of all our staff.

Health Clinic Operations and Diseases Monitoring

MML’s on-site clinic is a well-equipped facility that onboards new employees with pre-employment medical exams and provides care to personnel for general medical needs and treatment for endemic diseases. The clinic collects data to monitor the public health conditions of the mine site and is prepared to treat minor to moderate work-related accidents and non work-related illnesses. The facility comprises an emergency room, pharmacy, laboratory, and a five-bed inpatient observation capacity with two ambulances. Severe injuries or illnesses are referred to secondary and tertiary-level facilities if needed.

Clinic staff conducted 3,201 pre-employment medical examinations and 6,658 general consultations in 2023.

SAFETY KEY PERFORMANCE INDICATORS	TARGET	2023 ACTUAL
LTIFR (Lost Time Injury Frequency Rate)	< 0.8	0.35
TRIFR (Total Recordable Incident Frequency Rate)	< 3.18	2.60
AIFR (All Injury Frequency Rate)	< 11.0	7.69

Community and Economic Development



MML's Community Relations & Development (CR&D) Department serves as a bridge between MML and our primary host communities, which include the town of Lunsar as well as villages within and adjacent to the mine concession. CR&D's mission is to build and maintain trust between MML and our primary host communities through continuous engagement – ensuring that project-affected persons' needs, aspirations and concerns are valued and reflected in our actions. CR&D also works to keep primary host communities informed of MML's activities on the mine site and operates a Community Information Centre in Lunsar to interface directly with the public.

CR&D is a focal point of MML's sustainability initiatives because its activities are a critical mechanism for achieving our social and economic development goals. Our aspiration in this area is to leverage financial resources generated by our mining activities to produce positive social and economic outcomes for Port Loko District and Sierra Leone as a whole.

Resettlement Activities

As MML's physical footprint and production capacity expands, we anticipate there will be instances in which the need for resettlement of people and structures will be unavoidable. Although the company has not yet²⁵ started the physical relocation of people and structures, we take our responsibility to communicate clearly about how we will conduct resettlement activities very seriously. MML will always conduct resettlement activities in a manner that respects affected individuals and communities, and their cultures.

MML's approach and execution of resettlement activities will be guided by the company's MLA, Sierra Leone's National Development-Induced Resettlement Act, 2023 (NDIRA) plus other applicable laws and the International Finance Corporation (IFC) Performance Standard 5 (PS 5)²⁶, which together form the standard operating procedures of our Resettlement Policy.

Beyond solely adhering to international best practices and national laws, MML will seek to leverage resettlement activities to further the goals of the company's sustainability programme, namely improving quality of life for our primary host communities. Sierra Leone is the first country in the West African sub-region to pass a law that not only codifies a 'proper' approach to resettlement activities, but also conceives of resettlement as the means to an end for advancing human development. MML is aligned with this approach and considers unavoidable resettlement activities to be both a profound responsibility

to do right by our primary host communities and an exciting opportunity for their advancement.

MML's resettlement activities will consist of these key elements:

1. Extensive **Stakeholder Engagement** with affected communities and other relevant stakeholders before physical relocation of people and structures takes place.
2. Development of a **Resettlement Management Plan** for each distinct resettlement scope of work; as required by IFC PS 5, NDIRA and MML's Resettlement Policy.
3. Provision of comprehensive **Development Support** to affected communities throughout the resettlement process.
4. Continuous **Monitoring of Resettlement Impacts** and grievances received.

MML's resettlement activities will be conducted with the oversight of the company's Board of Directors and executive management and implemented by the Sustainability, CR&D and Projects teams. We are dedicated to ensuring that resettlement activities are conducted in a transparent and participatory manner such that affected individuals are fully supported throughout the process. MML will work to foster open communication and trust between our primary host communities and the company by addressing and resolving all grievances presented throughout the resettlement process.

Community Development Agreement and Fund

As per the Mines and Minerals Development Act (2022) of Sierra Leone, MML is required under our licensing to implement a framework for community engagement and development. MML's Community Development Agreement (CDA) is that framework and was ratified on 17 June 2021 after an extensive stakeholder engagement and assessment process.

MML designates 1% of free-on-board export revenues for community-driven development projects. These monies are collected into the Community Development Fund (CDF), which is payable at the beginning of the next financial year, based on the previous year's production output. 2023 was a milestone for MML and our primary host communities in that the CDF (operating under the terms of reference of the CDA) was inaugurated with its first tranche of funds (for FY22), which was celebrated with a ceremony in April 2023. The CDF's tranche for FY22 was USD 1.7 million, which broke the record in Sierra Leone for the largest payment ever made via a mining company's CDA.

²⁵ As of 31 December 2023

²⁶ IFC Performance Standard 5



MML’s contribution to the CDF is increasing to USD 2.28 million for FY23 due to higher export volume, showing how our expansion directly benefits our primary host communities. Funded project categories under the CDF will include education, infrastructure (water and electricity), and agricultural/food security.

The Community Development Agreement (CDA) establishes the Community Development Committee (CDC), which is charged with project management for all development projects and activities funded by the CDF. It is comprised of 25 positions, including Paramount Chiefs, Port Loko District Council representatives, Members of Parliament, landowners, religious leaders, and MML representatives, among others.

The CDA’s governance structure also creates a Steering Committee (of the CDA), which is the top governing body of the CDA. The Committee manages the CDF itself and evaluates development project proposals for selection and funding. Once selected, the Steering Committee puts contracts out to bid and awards them. The Steering Committee of the CDA is comprised of the following 14 positions:

- > Chairman
- > Deputy Chairman
- > Secretary
- > Three representatives from the Port Loko District Council:
 - o Deputy Procurement Officer
 - o Environmental Officer
 - o Council Engineer
- > Two representatives each from Marampa and Maforki Chiefdoms (four representatives in total)
- > Four representatives from MML

By separating project management from selection and bidding, the two committees check and balance each other and prevent misappropriation of funds.

Community Development Action Plan (CDAP)

Sierra Leone’s Environmental Protection Act (2008) requires MML to implement a Community Development Action Plan (CDAP). As agreed with the EPA, CDAP is a series of six project categories designed to reduce adverse impacts of MML’s operations while maximising benefits for project-affected persons. Each project has a fixed budget per licence year (see table below) totalling USD 60,000. As of the end of 2023, MML is in its third licence year of CDAP, which means the total available budget across all categories stands at USD 180,000.

CDAP is implemented to manage the occurrence of social issues and impacts associated with the MML operations within the Marampa and Maforki Chiefdoms. Each project is designed to advance these goals:

- > Catalyse social and economic development for MML’s primary host communities.
- > Deploy targeted interventions to address adverse socio-economic issues and impacts from MML’s operations.
- > Build mutually beneficial linkages between the affected people and other developments; and initiate sustainable developments in the district and region.



CDAP PROJECT CATEGORY	ANNUAL BUDGET (USD)	TOTAL DIRECT BENEFICIARIES (number of people) as of 31 Dec 2023
Support for Education and Infrastructure	\$18,000	6,587 students across 21 primary schools
HIV/AIDS and STDs Support	\$2,000	925 tested; 22 referred for treatment
Support for Technical Vocation Skills Development	\$10,000	442 students
Youth and Women Empowerment	\$10,000	306 students (all female)
Improvements in Community Infrastructure	\$10,000	Project construction ongoing
Improved Agricultural Trainings	\$10,000	110 workshop participants (plus 220 additional participants through to June 2024)
Total	\$60,000	8,370 direct beneficiaries

Support for Education

A total of 21 primary schools (nine in Maforki Chiefdom and 12 in Marampa) were selected to receive support from MML's CDAP programme following a needs-based assessment of dozens of schools within our concession area. MML found that learning materials and furniture were a common need and proceeded with the schools found to be in greatest need. The programme delivered learning materials, furniture, and sanitary containers to the 21 selected schools. The total student population of 6,587 (and their 95 teachers) across all 21 schools in grade levels 1 to 6 benefited directly from this intervention.

MML delivered: 1,050 backpacks, 1,050 sets of benches and desks, 84 chairs and tables, 84 water storage containers, buckets, cups, kettles for use in latrines/toilets and 42 tins of renovator and boxes of chalks.

On December 9th, 2023, MML held a distribution ceremony in the presence of school officials, local leaders, head teachers and parents at the parish hall in Lunsar. Delivery of all materials was completed on March 11, 2024.

HIV/AIDS and Sexually Transmitted Diseases (STDs) Support

Designed to combat HIV, spread awareness, advocate for testing, fight stigma, and educate our primary host communities, this project category was the health component of CDAP and implemented to promote health and social wellbeing of the residents of Marampa and Maforki Chiefdoms. It was rolled out in 53 communities within an outreach period from April to August 2023. It was done in collaboration with the HIV/AIDS unit of Saint John of God Hospital, Lunsar & Port Loko Government Hospital.

The project provided HIV/STIs testing/screening for the targeted populations, specifically the less privileged surrounding communities, and referred those who tested positive for HIV to appropriate services for further treatment. A total of 925 people (54% female and 46% male) were tested at a cost of less than USD 2,000. For the 22 people who tested positive and were referred for treatment, this intervention directly preserved their health and quality of life. MML is extremely proud of these results.

Support for Technical Vocational Skills Development

In partnership with St. Joseph's Technical Institute (SJT) in Lunsar, this project category saw MML supply the school with tools and equipment valued at nearly USD 20,000. The Institute specified the products and equipment of highest need and selected a local vendor to contract. Over 200 individual items were delivered, including: welding equipment, electricity generators, drills and concrete mixers. MML's Sustainability and CR&D teams liaised with the supplier to ensure delivery of all procured items in time for the start of the new school year in September.

A handing-over ceremony took place on Friday, 20th October 2023 at the school's premises with the participation of the Community Development Committee Chairman, MML staff, the Principal, representatives of National Minerals Agency, and the teachers and students of the school. During the event, students were encouraged

to utilise the new tools and materials to learn skills that will lead to a promising future of higher education and/or employment. SJTI's entire student body of 442 children benefited directly from the donation of these materials.

Youth and Women Empowerment

In collaboration with Maria Ines Vocational Institute of Management and Technology for Girls in Lunsar, MML procured learning materials and building improvement provisions valued at nearly USD 20,000 based on what the school needed most. MML liaised with local suppliers and delivered the items right before the school year started in September. Items donated were: two colour printers, a commercial-grade gas cooktop, three laptops, one projector, 50 computer chairs and 30 long steel desks/tables, and one tailoring table.

In addition, MML delivered building supplies such as new windows and tiling for upgrades to the school's computer lab.



Maria Ines and MML held a ceremony for the handover of the supplied equipment and furniture on Friday, 20th October 2023 at the school's premises with participation of Lunsar's Community Development Committee Chairman, the Principal, teachers, representatives from the National Minerals Agency, and students. MML staff addressed the students to encourage them to be tenacious in pursuing relevant skills and higher education that will position them to be hired by MML or other companies in the area. MML staff emphasised that employment opportunities are abundant for young women on the mine site. This CDAP project directly benefited the 306 female students enrolled at Maria Ines plus the school's 27 teachers.

Improvements in Community Infrastructure – Water, Sanitation and Hygiene (WASH) Projects

Under this project category, two ventilated improved pit (VIP) latrines and two hand-pumped water wells are being constructed by a local contractor for the project across two separate sites in Lunsar. Work commenced in September 2023 after successful completion of community and stakeholders' engagements at the two locations and is slated for completion by May 2024. The community engagement proceedings for the two locations were signed by the Paramount Chief (PC) of Marampa Chiefdom and Chief

Administrator (CA) of Port Loko district including committee members who will be responsible for maintenance of the facilities after completion. By funding the construction of these facilities, MML is contributing to sanitation and providing sorely needed public amenities in Lunsar.

Improved Agricultural Trainings

MML provides agricultural training workshops as part of CDAP. Two sets of cohorts’ workshops were rolled out on 19th and 21st December 2023. Training was done in two locations attended by 110 participants (55 per event) at each training centre (one in Chaindata and the other at Maforiki village). The participants’ selection was done in consultation with the headmen or town chiefs who nominated farmers that needed capacity building in improving their cultivation practices. Some 53% of the participants were female whilst 47% were male. The workshops were held in collaboration with RESEED, a non-governmental organisation working with farmers in the Port Loko district.

Participants received training on compost making to encourage farmers to develop and utilise organic nutrients while discouraging the use of inorganic fertilisers. After completion of the training at each centre, all participants received agricultural-related handouts consisting of 15 fruit tree seedlings and three bundles of vitamin A potato vines. The workshops encouraged beneficiaries to practice and adopt the new and improved methods of agricultural practices they have been trained on. The remaining four workshops (hosting 55 participants each) will be carried out in 2024 with continuation into future license years under consideration pending participant feedback.

Local Content Plan: Creating Economic Linkages

MML is proud to give first consideration to Sierra Leonean goods and service providers to meet the procurement needs of the company and we always seek to hire and train talented Sierra Leone nationals before looking abroad. At the end of 2023, MML’s workforce was 92.04% Sierra Leonean. By prioritising local hiring, procurement and training programmes for both entry-level and management roles, MML is actively contributing to the growth and development of Sierra Leone’s economy.

Procurement is a primary lever MML has at its disposal to direct money into Sierra Leone’s economy. We are proud to report that well over half of the total financial value of our procurement contracts went to domestic suppliers in 2023.

MML is working with a local consultant in Lunsar to formalise an expanded Local Content Plan, expected to be complete in the first half of 2024. The plan will include a programme to link our primary host communities with work skills to help them get hired at MML (see the ‘Upskilling and Workforce Development’ section, below), support for youth and women’s groups, and a succession plan to ensure Sierra Leone nationals move into management roles as a way of prioritising locals over expats.

Upskilling and Workforce Development

MML seeks to make a positive contribution to our primary host communities by looking outside our concession borders to improve the lives of others. While the ‘Staff Development and Training’ section on page 20 refers to our employees, this section pertains to those not employed by MML. To date, our upskilling and workforce development initiatives have focused on reaching youths/ recent graduates (especially young women), but the company is not ruling out expanding our efforts in this area to a broader age demographic as we continue to invest in this area.

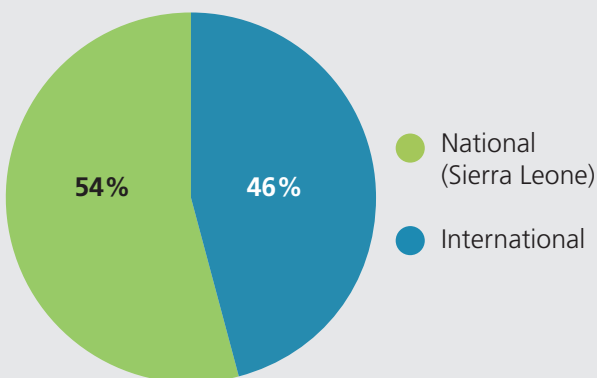
MML continues to evaluate the establishment of a formal, youth-focused, skills development programme. This ‘Skills for Employment’ programme would aim to cultivate a pool of well-trained young people with skills aligned with MML’s needs that are not currently satisfied by the local labour market. The young people we train would benefit from higher earning power while the overall economic potential of our primary host communities grows. MML plans on leveraging partnerships with local educational institutions to build programmes that benefit our trainees, our primary host communities and MML’s recruiting efforts.

Grievance Redress Mechanism

The Grievance Redress Mechanism (GRM) is a formal process by which any project-affected person can make a complaint or a suggestion about the way MML’s activities impact the community or themselves as an individual. Identifying and responding to grievances supports the development of positive relationships between MML, affected communities and other stakeholders. Grievances can be made by individuals, households or groups, including villages.

CR&D works to ensure the GRM’s purpose is communicated to all project-affected persons and made accessible to them, so that they are aware of the process, their right to submit their grievances and their right to receive a response. CR&D staff are trained on the Grievance Redress Mechanism, conflict management and resolution, and interest-based negotiation.

MML Procurement Total Contracts Value in 2023



Figures represent operating expenses only

Our Agenda for 2024 and Beyond

2023 was a year of impressive growth and project development for MML as we approach commissioning of 3.75 million dry metric tonnes of concentrate production capacity. Concentrate production and MML's total employee headcount both grew by 40% year on year. With increasing production, the company's annual contribution to the CDF is growing. MML's sustainability goals coincide with our commercial goals more than ever before, which is to say that we cannot meet one set without the other. As one of Sierra Leone's largest private employers, we are proud to continue expanding our commitment to the country and its people. In 2024, we will:

Scale up our Nature-based Solutions Strategy

With our biodiversity management/offsetting and land remediation programmes now in place, MML's sustainability team will work to operationalise these interventions at full scale over the concession area over the course of 2024 and beyond. This includes carbon insetting (a nature-climate solution) via reforestation and potentially partnering with outside entities to do so.

As discussed at length above, biodiversity offsetting and land remediation are the means to the end of nature positive outcomes for MML such that our mining operations create, not destroy, natural capital over the long-term.

Establish Conservation Area(s)

Establishing a conservation programme across one or more zones within MML's concession area will allow the company to achieve no net loss of nature as mining areas expand and demonstrates MML's commitment to the long-term stewardship of our concession area and nature-positive outcomes. We will include detailed reporting on this effort as part of the Sustainability Report for 2024.

Continue to advance Community and Economic Development

MML already plays a catalyst role for advancing social and economic development for our primary host communities, the Port Loko District and Sierra Leone at large. Now in our fourth year of operations, we are aiming for new heights in creating a legacy of positive contributions for Lunsar and its surrounding villages. To do so, MML is investing in youth workforce development, upskilling our employees and deploying targeted malaria interventions to reduce its local prevalence.

Energy Strategy and Decarbonisation

MML will continue to advance our commitment to decarbonise our operations as we maintain the consistently high grade of Marampa Blue™. By the end of 2024, we expect to have a signed contract to install a modular solar PV system. We will continue to explore avenues to draw electricity from the new regional power pool as a means to decarbonise, among other low-carbon alternatives.

We take our role to help the global economy transition away from fossil fuels and address climate change very seriously. Overcoming the challenges of climate change will not be easy, but doing so is the only path forward, and we embrace it.

Improvement of Environmental Management

MML is dedicated to continuous improvement in managing the environmental impacts of our operations. Almost all activity on site is conducted with the objective of improving our environmental management capacity, including upskilling our existing staff. We are investing in new technology and equipment to better manage our overall footprint, such as eDNA for biodiversity offsetting. Furthermore, we are working to optimise our environmental monitoring design and sampling protocols. In 2024, we will develop and implement a biodiversity offset programme.

Realise Efficiency Gains

As part of our production capacity expansion and investment programme, MML is anticipating realising efficiency gains in 2024 year on year against 2023. We are working to optimise our production efficiency and will benefit from reduced fossil fuel use as a result of adding solar PV generation. Apart from energy, we are moving to more circular systems in virtually everything we do: reuse of tailings for productive uses such as paving roads and recycling water to meet the need of the process plant.

The future is bright for MML. Many thanks to our stakeholders – our people. We look forward to expanding the positive impact we bring to the social and economic development of our primary host communities, Port Loko District and Sierra Leone as a whole.

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Addendum

Table 1: Surface Water Monitoring in 2023

Analyte	Unit	Rokel River	Batabana Creek (upstream)	Batabana Creek (downstream)	Port Loko Creek at TRT (upstream)	Port Loko Creek at TRT (downstream)	Valley B TSF Penstock (effluent)	IFC Guidelines for Effluents ¹	Sierra Leone Effluent Discharge Standard ²
pH		7.15	7.2	7.2	7.25	7.2	7.35	6.0-9.0	6.5-9.0
Conductivity	µS/cm	16	16.5	16.3	111	114	120	n/a	<450
Total Dissolved Solids Dried at 180°C	mg/L	8	8.25	7.15	55.5	57	60	n/a	<2500
Turbidity	NTU	0	2	2	4	5	10	n/a	<75
Free Chlorine	mg/L	0	0	3.9	0	0	0	n/a	<0.1
Total Hardness	mg/L	15	5	5	20	38.21	15	n/a	<100
Manganese	mg/L	0.002	0.002	0.002	0.002	0.02	0.005	n/a	<1
Magnesium	mg/L	4	1	1	8	21.97	9	n/a	<100
Ammonia Nitrogen	mg/L	0.71	0.15	0	3.2	3.4	3.1	0	<10
Nitrates	mg/L	1.7	1.5	1.3	1.66	1.68	7.2	0	<20
Nitrite	mg/L	0.01	0.02	0.02	0.01	0.02	0.12	0	<1
Aluminium	mg/L	0.02	0.02	0.02	0.03	0.03	0.04	n/a	<0.04
Fluoride	mg/L	0.28	0.53	0.51	1.01	1.1	0.84	0	<1
Sulphates	mg/L	132	4	4	89	91	18	0	<500
Sulphide	mg/L	0.02	0.02	0.02	0.03	0.04	0.04	0	<1
Sulphite	mg/L	1.78	1.3	1.1	2.5	2.7	9.3	0	<0
Phosphates	mg/L	0.35	0.02	0.02	0.59	0.63	0.18	0	<5
Potassium	mg/L	1.5	18	16	3.9	3.7	19	n/a	<0
Iron	mg/L	0.02	0.02	0.01	0.07	0.08	0.03	2	<2
Copper	mg/L	0.02	0.01	0.02	0.02	0.02	0.1	0.3	<1
Zinc	mg/L	0.12	0.19	0.17	0.25	0.27	0.16	0.5	<5
Chromium	mg/L	0.08	0.9	0.17	0.11	0.11	0.08	0.1	<0.05
Chloride	mg/L	76	78	76	315	310	110	n/a	<500
E-Coli	CFU	0	1	3	0	0	1	n/a	<100
Faecal coliform	CFU	1	0	5	5	1	4	n/a	<100

Surface water monitoring locations are consolidated into five categories from 12 individual sites. The values for the parameters tracked are subject to the activities of non-company residential settlements surrounding the bodies of water studied. Values presented above are consolidated annual averages generated from sample data collected on a weekly basis.

¹ IFC Environment, Safety and Health Guidelines - Mining Effluent Guidelines

² Sierra Leone Water Resources Management Agency (Water Pollution Control) Regulations, 2021

Addendum

Table 2: Groundwater Monitoring in 2023

Analyte	Unit	WHO Drinking Water Guidelines ³	Rogbaneh	Chaindata	Gbom Limba	Maforki	Thofayim Borehole
			Mine site Residential				TRT
pH		6.5 - 8.5	7.1	7.05	6.95	7	7.1
Conductivity	µS/cm	<450	61	41	31	73	105
Total Dissolved Solids Dried at 180°C	mg/L	<284	30.5	20.5	15.5	36.5	51
Turbidity	NTU	<5.0	0	0	0	0	0
Total Hardness	mg/L	<500	15	15	11	25	65
Manganese	mg/L	<0.1	0.003	0.003	0.03	0.002	0.002
Magnesium	mg/L	<200	6	0	3	10	15
Nitrates Nitrogen	mg/L	<10	2	3.8	4.2	6.8	0.79
Nitrite Nitrogen	mg/L	<3.0	0.01	0	0.02	0.08	0
Aluminium	mg/L	<0.2	0.01	0.05	0.07	0.14	0.33
Fluoride	mg/L	<1.5	0.94	1.39	1.52	0.98	1.01
Sulphates	mg/L	<400	44	68	8	37	22
Sulphide	mg/L	<0.5	0.02	0.02	0.04	0.07	0.05
Phosphates	mg/L	<20	0.15	0.07	0.09	0.46	3.4
Potassium	mg/L	<6.0	11	2.5	5.5	12	7.3
Iron	mg/L	<0.3	0.03	0.05	0.05	0.06	0.02
Copper	mg/L	<1.0	0.02	0.03	0.02	0.04	0.06
Zinc	mg/L	<5.0	0.18	0.14	0.19	0.18	0.15
Chromium	mg/L	<0.05	0.07	0.07	0.4	0.09	0.03
Chloride	mg/L	<250	115	180	195	190	25

Values presented above are consolidated annual averages generated from sample data collected on a weekly basis.

Table 3: Noise Monitoring data for MML 2023

	Average Noise Levels				IFC EHS Upper Limits Guidance (dBA) ⁴
	Q1	Q2	Q3	Q4	
Mine Site Industrial	58	60	61	58	70
Mine Site Residential	49	52	48	40	55
TRT Industrial	45	61	61	55	70
TRT Residential	50	44	36	30	55
Lunsar Monitoring Point Reference	55	53	53	49	55

Noise level data is consolidated from a total of 32 monitoring points, including the Lunsar Monitoring Point, which is a reference for in-town noise levels that MML does not control.

³ World Health Organization Guidelines for Drinking-water Quality, 4th Edition

⁴ IFC General Environmental, Health, and Safety (EHS) Guidelines

Table 4: Ambient Air Quality Monitoring in 2023

	Annual Mean ($\mu\text{g}/\text{m}^3$)			
	SO ₂ ⁵	NO ₂	PM10	PM2.5
Mine Site Residential	3.1	2.1	12.1	7
TRT Residential	1.5	0.59	17	8.0
Mine Site Industrial	3.3	1.20	14	5.8
TRT Industrial	2.6	0.51	18.7	12.6
Haulage Route	2.14	3.04	7.2	7.2
Lunsar Monitoring Point (reference)	0.07	0.36	11.9	6.9

Sierra Leone Environment Protection (Mines and Minerals) Regulations, 2013 Air Quality Guidelines⁶

Parameter	Unit	Limit at any moment
Nitrogen Dioxide (NO ₂)	$\mu\text{g}/\text{m}^3$	6
Particulate Matter (interior nuisance dust)	$\mu\text{g}/\text{m}^3$	10
Sulphur Dioxide Emission Limit/day	271-300 days	135

WHO Recommended Air Quality Guidelines Levels⁷

Pollutant	Averaging Period	Interim Target ($\mu\text{g}/\text{m}^3$)				Guideline Value ($\mu\text{g}/\text{m}^3$)
		1	2	3	4	
Sulphur Dioxide (SO ₂)	24 hour	125	50	-	-	40
Nitrogen Dioxide (NO ₂)	1 year	40	30	20	-	10
Particulate Matter PM10	1 year	70	50	30	20	15
Particulate Matter PM2.5	1 year	35	25	15	10	5

Interim targets serve as incremental steps in the progressive rehabilitation of air pollution towards the air quality guideline levels and are intended for use in areas where air pollution is high. This is to say that interim targets can be levels that are higher than the air quality guideline levels, but which authorities in highly polluted areas can use to develop pollution reduction policies that are achievable within realistic time frames. The interim targets should be regarded as an incremental step towards achieving air quality guideline levels, not end targets in themselves.

5 Extrapolated from 275 days of sample data

6 [Sierra Leone Environment Protection \(Mines and Minerals\) Regulations, 2013](#)

7 [WHO Global Air Quality Guidelines: Particulate Matter \(PM2.5 and PM10\), Ozone, Nitrogen Dioxide, Sulphur Dioxide and Carbon Monoxide, 2021](#)

Table 5: Staff Training in 2023

Training Topic	Total Attendance	Duration (hours)	Total Hours
Voluntary Principles on Security & Human Rights	200	2	400
Shop Steward Training	16	8	128
Light Vehicle Training	9	27	243
Hazard Identification & Risk Assessment	200	2	400
Workplace Etiquette	4	2	8
Fatigue Management	92	2	184
Safety Induction	3,224	2	6,448
Driver's Permit Induction	962	2	1,924
Time Management	73	2	146
Basic Fire Fighting	45	3	135
Workplace Communication & Confidentiality	83	2	166
Basic First Aid	700	2	1,400
Hazard Identification & Risk Assessment	2	2	4
Job Safety Analysis	350	2	700
Team Building in the Workplace	44	2	88
Conveyor Belt Safety	53	2	106
LEAD RIGHT: The Art of Effective Supervision	77	2	154
Primary Crusher & Stockpile	137	2	274
Basic Radiation Safety	10	15	150
The Basics of Housekeeping	25	2	50
Sag Mill Crusher	76	2	152
Lockout & Tagout	13	2	26
Computer & Software	102	2	204
TOTAL HOURS			13,490