Lundin Mining Corporation is a diversified Canadian base metals mining company with operations in Brazil, Chile, Portugal, Sweden and the USA, primarily producing copper, zinc and nickel.

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| Lundin Mining Corporation joined the United Nations Global Compact in 2016, supports the Ten Principles on human rights, labour standards, environment and anti-corruption, and promotes the UNGC’s 17 Sustainable Development Goals. The results of our 2019 activities are presented in our annual Communication on Progress, located in the Appendix section of this report. | 68 |
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Message from the President and CEO

2019 proved to be another successful year for Lundin Mining. Throughout the year we continued to demonstrate strong business and sustainability performance across our operations. There were several milestones celebrated and many lessons learned as we continued our journey as responsible stewards of the natural resources in the regions where we work. In recognition of our company Mission to responsibly mine base metals vital to society, creating meaningful value for our stakeholders, I am pleased to introduce our 2019 Sustainability Report.

Our Mission and Values form the foundation of our approach to responsible mining. We seek to create enduring relationships and meaningful shared value with our local communities and our stakeholders, doing so through our Values of Safety, Respect, Integrity and Excellence. Our role as a good corporate citizen is central to how we do business and vital to the long-term economic success and sustainability of our operations.

Securing additional assets within our portfolio provides long-term viability of the business and allows us to extend the employment and economic benefits of our operations to new host communities. In July 2019, we were excited to welcome the Chapada mine in Brazil to complement and strengthen our world-class operations. The integration of Chapada progressed extremely well and we are happy to present the data collected since its acquisition in this current report.

Throughout 2019 we celebrated many production successes. Following Eagle East was mined ahead of schedule and under budget. The rejuvenated exploration program at Zinkgruvan continued and the Båby mining concession was granted in July. We delivered a key milestone with the handover of the Candelaria South Sector underground mine to the operations team. Neves-Corvo significantly improved copper production, while the Zinc Expansion Project (ZEP) continued to make meaningful progress.

During 2020 momentum was expected to continue with increased tonnages from Candelaria, completion of the Candelaria Mill Optimization Project and ramp-up of the Neves-Corvo ZEP. However, with the development of the global COVID-19 pandemic, it became necessary for us to adjust project plans, including the temporary suspension of the ZEP activities. As we prepare for what may be a sustained period of change, Lundin Mining will continue to support relief efforts while taking the measures necessary to ensure the health and well-being of our employees, contractors and communities.

Since joining the United Nations Global Compact (UNGC) in 2016, Lundin Mining continues to commit to the initiative, documenting our support of the UNGC Principles on human rights, labour standards, environment and anti-corruption, and the 17 Sustainable Development Goals (SDGs), through an annual Communication on Progress (COP). We have demonstrated sustainable improvements in our safety, environmental, social and operating performance over the past several years, and with focused disclosure in our Sustainability Report, Lundin Mining’s goal of strengthening our approach to sustainability will continue to drive our progress.

Our overall safety performance resulted in an overall slight improvement in total recordable injuries compared to 2018, attributed to the addition of a new mine, increased work hours, activities associated with improvement projects, and several significant, planned maintenance shutdowns. While the overall Total Recordable Injury Frequency (TRIF) rate in 2019 did not meet our target of 0.60, there was a slight improvement over 2018. Health and safety challenges encountered in the year were addressed with immediate implementation of Health and Safety Action Plans. I am proud of each of our operations for actively developing and implementing creative initiatives to support our Zero Harm objective.

Effective environmental management is integral to the success of our operations. We are fully committed to the management of our water resources. We continued our comprehensive monitoring of environmental parameters to confirm the effectiveness of our protection measures, and followed strict protocols for management of hazardous materials and wastes. We classify incidents on a significance scale with Level 3 or above reported to our Board of Directors. While there were two Level 3 incidents reported in 2019, environmental impact was minimized through a swift site response and corrective actions. We continue to strive for zero Level 3 incidents at any of our operations in 2020.

Lundin Mining recognizes the need for effective approaches to fulfilling climate-related responsibilities. We annually publish our CDP climate change report, which is aligned with the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations. Since our first submission in 2010, we have steadily improved our scoring and received a B rating in 2019, which we consider to be a great achievement. Linked to our increasing focus on emerging climate-related risks, a corporate climate change adaptation and mitigation planning toolkit was developed in 2019. This initiative will enhance the climate change resilience of our operations following its roll out over the next two years.

In recognition of the increasing importance of operational excellence, asset management and supply chain practices, Lundin Mining established a corporate function to create a global framework and deliver a strategic roadmap of process improvements, operational efficiencies and governance at all operations.

Commitment to our core Values guides all aspects of our business, including community relations and social performance. In 2019, we finalized three key management standards and commenced workshop training at several of our sites. These standards guide sites in understanding and assessing social risks, current and potential impacts, stakeholder engagement and Lundin Mining social investment priorities, which are highlighted in case studies throughout this report.

Our social performance teams continued to refine and implement site-level, five-year social performance strategic plans. These plans anchor decisions and ensure the best allocation of resources in a systematic and consistent approach when engaging with communities, employees and other stakeholders. The team has been working to assess our practices related to Human Rights and identify opportunities to enhance our commitment to the Universal Declaration of Human Rights. With social challenges such as the recent civil unrest in Chile and the global pandemic in early 2020, we are focused on maintaining the safety and security of our employees as well as the environment and our facilities.

Embracing diversity and inclusion at Lundin Mining is representative of our core Values, particularly respect. In 2020, we will continue to create an inclusive work environment and have zero-tolerance for discrimination or harassment in our workplaces. Our Diversity and Inclusion policy was approved and communicated globally in 2019. Global benchmarking occurred at all sites to further increase gender parity and diversity at all levels of the organization. We continued with multiple women in mining initiatives, internships and new graduate-hire programs.

Lundin Mining has been reporting on our sustainability performance in a comprehensive, standalone document since 2011. I am proud to introduce this report as President, CEO and Director and am already fully focused on driving us forward toward achieving our sustainability goals for 2020. I believe you will find our 2019 Sustainability Report a comprehensive disclosure of our past performance, commitments and strategy for the future.

Marie Inkster
President and CEO
Lundin Mining Corporation has published an annual sustainability report since 2011, providing updates on the economic, safety, environmental and social issues that are of greatest interest to communities near our operations, our employees, our investors and other stakeholders. Detailed information regarding our nature of ownership, legal form, financial and operational results for the reporting period can be found in our Annual Information Form (AIF), 2019 Annual Management’s Discussion and Analysis (MD&A) and Financial Statements and the Management Information Circular.

REPORT SCOPE
- Significant change to scope and material topic boundaries, compared to 2018 Sustainability Report:
  - Inclusion of data for the Chapada mine, Brazil, acquired by Lundin Mining on July 5, 2019.
  - Key focus on operating mines, majority-owned and managed by Lundin Mining through its subsidiaries:
    - Candelaria Complex, Chile (80% interest)
    - Chapada mine, Brazil (newly acquired in July 2019)
    - Eagle Mine, USA
    - Neves-Corvo mine, Portugal
    - Zinkgruvan mine, Sweden
  - Inclusion of selected health and safety and employment data for additional areas of our business:
    - Corporate headquarters in Toronto, Canada
    - Exploration projects in the vicinity of all our operating mines
    - Amauta exploration site in Peru
  - Exclusion of Freeport Cobalt Oy business, Kokkola, Finland, operated by Freeport-McMoRan. On December 2, 2019, Lundin Mining and Freeport divested the cobalt refinery business. Freeport Cobalt continues to operate a smaller fine powders, chemicals, catalyst, jewelry, pigments and pigments business.

About Lundin Mining
Lundin Mining Corporation is a diversified Canadian base metals mining company with headquarters in Toronto, Canada and operations in Brazil, Chile, Portugal, Sweden and the United States of America. Greenfield exploration activities are also being conducted in Peru. A new mine was added to our portfolio of operations with the acquisition of the Chapada mine in Brazil on July 5, 2019. The Company’s principal products and sources of sales are copper, zinc and nickel concentrates, with the copper concentrates from Candelaria and Chapada containing significant gold content. The Company holds a 24% (non-operating) equity interest in Freeport Cobalt Oy, Kokkola, Finland, operated by Freeport-McMoRan. On December 2, 2019, Lundin Mining and Freeport divested the cobalt refinery business. Freeport Cobalt continues to operate a smaller fine powders, chemicals, catalyst, jewelry, pigments and pigments business.

About This Report
Lundin Mining Corporation has published an annual sustainability report since 2011, providing updates on the economic, safety, environmental and social issues that are of greatest interest to communities near our operations, our employees, our investors and other stakeholders. Detailed information regarding our nature of ownership, legal form, financial and operational results for the reporting period can be found in our Annual Information Form (AIF), 2019 Annual Management’s Discussion and Analysis (MD&A) and Financial Statements and the Management Information Circular. Lundin Mining Corporation has published an annual sustainability report since 2011, providing updates on the economic, safety, environmental and social issues that are of greatest interest to communities near our operations, our employees, our investors and other stakeholders. 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About Lundin Mining

The Company’s Mission and Values updated in 2018 are summarized as follows:

**OUR MISSION**
We responsibly mine base metals vital to society, creating meaningful value for our stakeholders.

**OUR VALUES**

- **SAFETY**
  We hold health and safety as our top priority in everything we do.

- **RESPECT**
  We embrace diversity, inclusion, open dialogue, and collaboration.

- **INTEGRITY**
  We do what is right and honour our commitments.

- **EXCELLENCE**
  We set high standards and challenge ourselves to deliver superior performance.

**OUR APPROACH TO RESPONSIBLE MINING AND SUSTAINABILITY**

At Lundin Mining, our Mission and Values form the foundation of our sustainability approach. Our reputation as a good corporate citizen is central to our Mission and Values and vital to the long-term economic success and sustainability of our business. We seek to create and foster enduring relationships and meaningful shared value with our local communities and our stakeholders with Safety, Respect, Integrity and Excellence.

We are committed to operating in compliance with applicable laws and regulations in all jurisdictions where we operate, and we seek to continuously improve our sustainability performance. We strive to align our policies and procedures with international best practice and guidance for economic, safety, social and environmental performance and to meet our business objectives and targets. Management-level monitoring and review of our performance is conducted regularly.

We have established a Responsible Mining Policy (RMP) that describes our company-wide requirements for responsible mining, which may be viewed on our website. These commitments are further developed and supported by internal company initiatives including:

- Our Responsible Mining Management System (RMMS) standard specifies the company-wide requirements for the management of health, safety, environment, and community (HSEC) aspects of our business and is aligned with the ISO 14001:2015 Environmental Management System standard and the OHSAS 18001 Occupational Health and Safety Management standard and

- Our HSEC technical standards form the basis for continual improvement and enhanced HSEC performance and compliance to both support the RMMS and establish the foundation for continuing development of the company’s Five-Year Sustainability Strategy.

Lundin Mining’s Board of Directors established an HSEC Committee to provide oversight of health, safety, environmental and community issues. Consisting of three standing members, the HSEC Committee meets at least quarterly. Informed by quarterly reports from key departments, the committee is responsible for reviewing the effectiveness of Company HSEC governance, including implementation of the RMMS, ensuring compliance with applicable legal and regulatory requirements, and reviewing performance, leadership, risks and external reporting on HSEC matters.

In 2019, the first third-party RMMS audit program was conducted across our operations to assess HSEC performance and compliance, with the results reported to Lundin Mining management. This process will continue bi-annually under the new program with the next verification cycle in 2021.

In 2016, Lundin Mining joined the United Nations Global Compact (UNGC), promoted as the world’s largest corporate sustainability initiative to address the priority economic, social, environmental and governance challenges. Through this initiative, we joined the global business community in a commitment to sustainable business practices, aligning our strategies with the UNGC’s Ten Principles on human rights, labour, the environment and anti-corruption, the UNGC Sustainable Development Goals (SDGs) and related 2030 SDG targets. Our Mission and Values and Responsible Mining Policy all align with the UNGC Principles and SDGs, and we have undertaken programs at site and corporate levels to advance positive change in these priority areas. The results have been reported annually in our UNGC Communication on Progress (COP), the most recent of which can be found in the Appendix of this report. We have also included a selection of case studies that further demonstrate our overall commitment to advance key-focus SDGs.

In 2018, we initiated the development of our Five-Year Sustainability Strategy to provide strategic sustainability governance throughout the Company and to further advance the integration of the UNGC Principles and SDGs into our business practices. Our sustainability strategy is intended to provide a framework for the identification of sustainability focus areas that will reduce risks, increase opportunities, add long-term value and ensure the ongoing health and competitiveness of our business. Although a formal sustainability strategy was not fully developed in 2019, several initiatives were implemented throughout the year that will complement the full strategy when it is completed in 2020.
Our Operations

Candelaria, Atacama, Chile
COPPER / GOLD
Interest: 100%
Number of Employees: 1,467
Mine Type: Open pit and underground
Current Mine Life: 21 years to 2040
Annual Tonnage: 27.0 mtpa
Candelaria, 1.3 mtpa PAC
Expansion Project: New underground South Sector

Chapada, Goiás, Brazil
COPPER / GOLD
Interest: 100%
Number of Employees: 755
Mine Type: Open pit
Current Mine Life: 31 years to 2050 (open pit and stockpiles)
Annual Tonnage: 24.0 mtpa
Expansion Project: Eagle East

Eagle, Michigan, USA
COPPER
Interest: 100%
Number of Employees: 196
Mine Type: Underground
Current Mine Life: 5 years to 2025
Annual Tonnage: 0.7 mtpa
Expansion Project: Eagle East

Neves-Corvo, Alentejo, Portugal
COPPER / ZINC / LEAD / SILVER
Interest: 100%
Number of Employees: 1,224
Mine Type: Underground
Current Mine Life: Over 10 years
Annual Tonnage: 2.7 mtpa copper, 1.1 mtpa zinc
Expansion Project: Zinc Expansion Project (ZEP)

Zinkgruvan, Örebro County, Sweden
COPPER / ZINC / LED / SILVER
Interest: 100%
Number of Employees: 429
Mine Type: Underground
Current Mine Life: Over 10 years
Annual Tonnage: 1.4 mtpa
Expansion Project: Dalby mineral lease

Exploration Activities
Candelaria (Copper, Gold)
Eagle (concluded 2019)
Zinkgruvan (Zinc, Copper)
Amauta (Copper)
Chapada (Copper)
Number of Employees: 25

More information on our operations may be viewed at www.lundinmining.com
Our Operations

Chapada
- In July 2019, Lundin Mining acquired the Chapada mine, which comprises three open pits providing copper / gold ore to an onsite processing plant.

Eagle Mine
- Eagle Mine is an underground nickel and copper mine that was extended underground to the Eagle East deposit, from which the first ore was produced in 2019. Ore from the mine is transported by truck approximately 106 km to a processing plant at the Humboldt processing facility.

Neves-Corvo
- Neves-Corvo is a copper, zinc and lead underground mine providing ore to two onsite processing plants. Development of the Zinc Expansion Project (ZEP) that, at completion will double the zinc production, continued throughout 2019.

Zinkgruvan
- The Zinkgruvan mine consists of an underground mine that produces zinc, lead, silver and copper ore that is delivered to onsite processing facilities.

Our Exploration and New Business Development Group
- The strategy of the Exploration and New Business Development Group is to support production growth, economic viability and sustainability of Lundin Mining by further developing and expanding mineral resource and mineral reserve potential at existing operations to extend mine life, and to seek new business and discovery potential from advanced stage exploration projects.
- Our total exploration expense for 2019 was $61 million, a decrease of approximately $14.2 million from 2018 levels. The majority of exploration activity for 2019 was directed towards near-mine targets, which continued to be highly successful at Candelaria and Zinkgruvan.

Our Supply Chain
- Lundin Mining relies on an international network of suppliers for the provision of products and services required to support business activities at our mines. The largest categories of suppliers across our operations in 2019 included, in alphabetical order: cement, chemicals, construction, electrical, energy, engineering, equipment and parts, exploration drilling, explosives, fuel, maintenance, mechanical, mining contractors and transportation. In recognition of the increasing importance of supply chain practices, Lundin Mining established a corporate supply chain function to create a global framework and deliver a strategic roadmap of deploying process improvements and governance at all operations. Aligned with our RMMS Standard, Supply Chain focuses on increased service levels to customers, optimizing working capital and delivering on value-add initiatives.
- Supply Chain has implemented standards to govern best practices and to ensure fair and equitable bidding processes, evaluations and awarding of contracts under competitive environments that are managed responsibly.
- Lundin Mining has also established a Collaborative Sourcing Strategy focused on synergies and volume-level benefits across our portfolio of operations that aims to establish ongoing global framework agreements with strategic suppliers and to focus on specific large spend categories for the benefit of multiple operations.

Defining Our Report Content
- Our 2019 Sustainability Report focuses on topics that are most material – of greatest interest – to our business and stakeholders. In our most recent materiality assessment (2017), we undertook a comprehensive update of our materiality approach through an extensive internal and external stakeholder consultation process, in alignment with the GRI Standards framework and the reporting principles of stakeholder inclusiveness, sustainability context, materiality and completeness. This process identified material sustainability topics in terms of the potential economic, environmental and societal impacts of Lundin Mining’s activities, based on their importance to stakeholders, as well as for the minerals sector in general.
- We report on these material topics in significant detail. This report also contains information on topics that were not formally assessed to be material, to present a more comprehensive view of our operations and activities.
- Our material topics have not changed since the last reporting period; we plan to update our materiality assessment in 2021, with the full integration of our Chapada operation. As we continue to advance our efforts to integrate the SDGs into our business strategy, day-to-day operations and organizational culture, we have prioritized the SDGs that are most relevant to our material topics.
**Our Material Topics and Key Focus SDGs**

**OUR PEOPLE**
- Health and Safety 26
  - Workplace health and safety management and performance
  - Emergency and crisis preparedness
- Labour Relations 44
  - Freedom of association and labour relations
  - Child labour, forced labour
  - Employee engagement
- Economic Performance 36
  - Economic value creation
  - Financial performance
- Local Economic Impact 39
  - Local procurement
  - Local employment

**SOCIAL PERFORMANCE**
- Stakeholder Engagement 49
  - Community relations
  - Grievance mechanisms and feedback
- Indigenous Relations 55
  - Engagement
  - Free prior and informed consent
  - Use of traditional knowledge
  - Collaboration agreements
- Community Development 60
  - Community investment
  - Capacity building

**ECONOMIC PERFORMANCE**
- Health and Safety 26
- Labour Relations 44
- Economic Performance 36
- Local Economic Impact 39

**ENVIRONMENT**
- Tailings and Waste Rock Management 73
  - Tailings management
  - Waste rock management
  - Emergency and crisis preparedness
- Water 77
  - Integrated watershed management and sharing of water
  - Water availability
  - Water withdrawal and recycling
  - Water quality (including discharges and unplanned releases)
- Climate Change 85
  - Emergency and crisis preparedness
  - Waste rock management
  - Tailings management
- Rock Management
- Tailings and Waste Rock Management

**Reclamation and Closure 95**
- Mine closure plans (including environmental and social elements)
- Long term water stewardship
- Long term land stewardship
- Social framework for closure
- Financial provisions

**Independent Assurance of Our Report Content**

Our commitment to transparent and credible sustainability reporting is demonstrated by our choice to have selected material disclosures independently assured since 2014. We aim to maximize the value of our sustainability reporting by providing our local communities, investors, and other stakeholders with a greater sense of confidence in our disclosures. Each year, our assurance process includes a representative site visit and data audit at one of our mines, as well as a detailed audit of selected GRI data from our operations used in the development of this report. Due to the COVID-19 outbreak, the assurance visit planned for our Neves-Corvo mine in Portugal in March 2020 was cancelled. Instead, the assurance process was conducted remotely, based on data review and conference calls with corporate staff.

The 2019 independent assurance process was conducted for the following performance indicators for all Lundin Mining operations, according to GRI Standards:

- Safety - Total Recordable Injury Frequency rate (TRIF) and Lost Time Injury Frequency rate (LTIF)
- Water - Total amount of water withdrawn from all sources and total amount of water discharged
- Energy - Total energy consumption within Lundin Mining’s operations, including electricity and liquid and gaseous fuel consumption
- Greenhouse Gas (GHG) Emissions - Scope 1 and Scope 2 (location-based and market-based) emissions
- Stakeholder Engagement - As it relates to the AA1000AS 2008 principles of inclusivity, materiality and responsiveness
- Grievance Mechanism - Grievances filed during the year, including number, description, actions taken and outcome
2019 Performance Highlights

ZERO FATALITIES
RMMS AUDIT IMPLEMENTATION AND INTEGRATION
Modest improvement in Total Recordable Injury Frequency (TRIF) rate over 2018 – 0.66 vs 0.67

Corporate climate change adaptation and mitigation planning toolkit developed

SPONSORSHIP AGREEMENT SIGNED with Coalition for Energy Efficient Commination (CEEC) for the promotion of industry uptake of energy-efficient, lower footprint mining

Total community-investment expenditures of approximately $7.45 million

COMPLETED CRISIS MANAGEMENT TRAINING at all operations and head office

$7.45B
$1.63B (or 94%) OF OUR GOODS AND SERVICES WERE PROCURED LOCALLY (19%) OR NATIONALLY (75%)

$1.63 BILLION (OR 94%) OF OUR GOODS AND SERVICES WERE PROCURED LOCALLY (19%) OR NATIONALLY (75%)

Total fresh surface water withdrawal decreased by 7% compared to 2018

REDUCTION IN ENERGY INTENSITY AND GHG EMISSIONS INTENSITY, PER TONNE ROCK MINED, FROM 2016 TO 2019

2020 Sustainability Goals

GOVERNANCE
Achieve approval of Human Rights Policy.
Continue to maintain balance sheet strength and flexibility to act on compelling growth opportunities.

Health and Safety
Achieve a Total Recordable Injury Frequency (TRIF) rate of 0.60 or better.
Manage efficient, effective operating expenditures ensuring more productive operations and achievement of financial returns.

ECONOMIC PERFORMANCE
Execute Neves-Corvo’s ZEP Project as planned while optimizing sustaining capital expenditures.

OUR PEOPLE
Roll out a global training program on diversity and inclusion awareness.
Implement engagement survey action plans.

ENVIRONMENT
Evaluate climate change risk to operations and communities and develop initiatives or action plan.
No Level 3 incidents.

SOCIAL PERFORMANCE
Advance implementation of the site-level 5-year social performance plans and develop a 5-year strategic social performance plan for Chapada.
Finally a corporate-wide sustainability strategy to supplement and align with long-term environmental strategy.

Our People
Implement the competency model into assessment and development.
Implement job architecture for corporate and applicable site positions.

*The 2020 Sustainability Goals are established during the annual planning cycle. The March 15, 2020 announcement that the Company has temporarily suspended the ZEP Project to mitigate COVID-19 risks will affect the achievement of this goal, although the Company will continue to work to optimize capital expenditures.
Our Performance Against 2019 Targets

**HEALTH AND SAFETY**

- Ensure zero fatalities. | Achieved | There were no fatal injuries.
- Achieve a Total Recordable Injury Frequency (TRIF) rate of 0.60 or better. | Achieved | The 2019 TRIF of 0.66 was a modest improvement over 2018’s TRIF of 0.67.
- Increase Zero Harm weeks over 2018 performance. | Achieved | With the integration of Chapada mid-year, Company-wide Zero Harm weeks were unchanged at 10 compared to 2018, while site Zero Harm weeks increased by 22 over 2018.
- Meet 2019 industrial hygiene sampling plan targets. | Achieved | 2,159 industrial hygiene samples were collected against a plan of 1,205.

**ECONOMIC PERFORMANCE**

- Manage efficient, effective, operating and capital expenditure ensuring more productive operations and achievement of financial returns. | Achieved | Annual production guidance was achieved for all metals at all operations. Candelaria, Chapada, Neves-Corvo and Zinkgruvan achieved annual cash costs in-line with or better than Company guidance. The second half of 2019 saw the realization of benefits from improvements made as a result of our investments. This is reflected in the Company’s published operating and financial results.
- Advance growth through internal expansion and exploration initiatives, maximizing the value of our assets. | Achieved | Pre-production development of the Candelaria Underground South Sector project and first ore from Eagle East were both completed ahead of schedule. Our exploration program contributed to the expansion of our mineral resources and reserves with significant increases achieved at Candelaria. Candelaria’s Mill Optimization Project and Neves-Corvo’s ZEP Project made significant progress.
- Maintain balance sheet strength and flexibility to act on compelling growth opportunities. | Achieved | Our strong balance sheet allowed us to successfully acquire and finance the Chapada mine in July. Post-acquisition, the Company retains the financial flexibility to pursue further growth opportunities.

**GOVERNANCE**

- Roll out the Diversity and Inclusion Policy to all employees and Board members. | Partially Achieved | The Diversity and Inclusion (D&I) Policy, approved in early 2019, was released. The corporate office developed and rolled out a gender diversity plan.
- Support the corporate social team to conduct a Company-wide Human Rights Risk Impact Assessment (HRRIA). | Partially Achieved | An HRRIA was initiated at several of our operations using the frameworks of the UNGPs, Voluntary Principles on Security and Human Rights, UNGC and other codes and standards reflecting international best practice. Candelaria and Chapada assessments are scheduled for 2021.
- Executive Risk Committee to approve updated risk likelihood and impact definitions as part of a broader review and update of Lundin Mining’s Risk Management Statement and Framework. | Partially Achieved | The Risk Management Statement and Framework were updated but approvals were not completed by year end.
- Improve operational risk management understanding and practice through redeployment of the refreshed Risk Management Framework. | Partially Achieved | The Risk Management Framework was reintroduced to all operations, and formal risk reviews were conducted with each operation. The Risk & Uncertainties section of the AIF was materially revised and updated based on a best-in-class benchmark exercise.
- Support development and implementation of Human Rights Policy. | Partially Achieved | The Human Rights Policy was drafted in 2019 and is expected to be adopted in 2020.
- Support the corporate social team to conduct a Company-wide Human Rights Risk Impact Assessment (HRRIA). | Not Achieved | 

**OUR ANNUAL SUSTAINABILITY TARGETS** are aligned with our Responsible Mining Policy and help us achieve continuous performance improvement in priority areas. In establishing our targets, we consider the results of internal risk assessments, stakeholder feedback monitoring and continuous improvement of existing processes and procedures.
### Our Performance Against 2019 Targets

#### 2019 Target | Result | Highlights
---|---|---
**OUR PEOPLE**<br>Measure and monitor employee engagement and develop action plans to address areas of opportunity. | ![Achieved](image) | An employee engagement survey was conducted for corporate and site leadership, with an 89% participation rate achieved. Action plan development was initiated. Our operations also conduct broader surveys with their employees. |
Launch a competency-based performance appraisal framework to develop our future leaders. | ![Achieved](image) | A competency model was designed and will be launched in 2020. |
Launch and implement our Diversity and Inclusion Policy that will formalize our commitment to diverse and inclusive workplaces. | ![Achieved](image) | The Board Diversity Policy and Diversity and Inclusion Policy were approved in February and May 2019, respectively, and communicated globally. Assessments were completed successfully and priority areas for action identified. |
Launch and implement formal Global Mobility Guidelines to ensure transparency and consistency to the management of our global workforce. | ![Partially Achieved](image) | Global Mobility Guidelines covering short-term assignments, long-term assignments and relocations were published and rolled out across the organization. |
**ENVIRONMENT**<br>Complete first environmental conformance audits against the new RMMS across all sites. | ![Achieved](image) | RMMS conformance audits were completed at all our pre-Chapada acquisition sites. The development of action plans to address findings and recommendations was initiated for follow-up in 2020. |
Continue to demonstrate measurable progress on key water, closure and permitting-related initiatives. | ![Partially Achieved](image) | The Company Mine Closure and Water Standards were updated, approved and rolled out to sites. All site project permitting-related initiatives were completed (e.g., ZEP: Eagle East). |
No Level 3 or above environmental incidents. | ![Partially Achieved](image) | Two Level 3 incidents were recorded, both resulting from the rupture of the tailings pipeline at our Neves-Corvo mine. The tailings and any contaminated soils were removed and the section of the pipeline was subsequently replaced. |
**SOCIAL PERFORMANCE**<br>Finalize development and implement our Human Rights Policy. | ![Partially Achieved](image) | The Human Rights Policy was drafted and is expected to be publicly released in early 2020. HRRIA assessments have been completed at Eagle, Zinkgruvan, Neves-Corvo and Peru. HRRIAs are planned for Chapada and Candelaria in 2021. |
Develop local procurement objectives and targets as part of our Company-wide approach to economic development and diversification. | ![Partially Achieved](image) | Given the success of tailored local procurement initiatives across our sites, Lundin Mining has decided not to establish a Company-wide approach at this time. Each site prioritizes and supports local procurement through targeted programs and initiatives, including community investment to support economic development and diversification. |
Focus community investments to support: | ![Achieved](image) | Lundin Mining continued to focus community investments in support of the goals identified, including support for career fairs and funding programs for women entrepreneurs, in-house hiring and recruitment initiatives and a corporate-level mentorship program for women in mining. |
- Economic empowerment of women; | | |
- Increase representation of women in our workforce; and | | |
- Education programs for girls in our host communities. | | |
Develop action plans in response to community-perception survey results for at least two of our sites. | ![Partially Achieved](image) | Eagle and Neves-Corvo incorporated community perception survey results into their respective annual and five-year business plans and strategies to ensure community concerns are integrated into planning and decision-making. |
Develop a gender parity strategy and plan for at least one site. | ![Partially Achieved](image) | Our corporate Diversity and Inclusion Policy was released and a gender diversity plan developed and rolled out. All sites conducted a gap analysis, and Neves-Corvo, with corporate support, initiated the development of a benchmarking tool to assess opportunities to advance gender diversity and inclusion. Global benchmarking was undertaken to inform and further increase gender parity and diversity at all levels of the organization. |

#### 2019 Target Result Highlights

<table>
<thead>
<tr>
<th>2019 Target</th>
<th>Result</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance development and implementation of the Five-Year Sustainability Strategy to provide direction and support to site-level initiatives.</td>
<td><img src="image" alt="Partially Achieved" /></td>
<td>Development of sustainability strategy was advanced, including a Senior Management review of the sustainability approach and agreement on areas of focus. Although not progressed to the point of implementation, the strategy remains an area of focus for 2020.</td>
</tr>
<tr>
<td>Advance Company-wide climate change adaptation planning.</td>
<td><img src="image" alt="Partially Achieved" /></td>
<td>Lundin Mining developed a climate adaptation and mitigation planning toolkit which will be used throughout the Company to assess risks and opportunities related to climate change adaptation and mitigation.</td>
</tr>
</tbody>
</table>

**ENVIRONMENT**

**SOCIAL PERFORMANCE**
OUR APPROACH
Lundin Mining is committed to maintaining high standards of ethics, corporate governance, honesty and accountability, aligned with our Mission and Values, in all aspects of our business by enacting robust corporate governance processes and ensuring our employees understand, and consistently meet, the standards formalized in the Company’s RMMS, RMP and RMF. Lundin Mining values the benefits that diversity can bring to its Board of Directors, members of senior management and employees of the Company and its subsidiaries. This commitment to diversity and inclusion contributes to making our Company a more successful business and an employer of choice. We foster an inclusive and diverse workplace that does not tolerate harassment or discrimination based on gender, age, race, national origin, marital status, sexual orientation, religious beliefs, disability or any other personal characteristics protected by applicable law.

OUR GOVERNANCE
The Board of Directors (the Board) is primarily responsible for the oversight of management, as well as Lundin Mining’s strategy and business affairs. The Board ensures that appropriate governance mechanisms are in place to monitor the Company’s development, and that relevant information and reporting are provided, including progress and continuous improvement efforts concerning its economic, environmental and social performance. The Board has eight members (75% male and 25% female), six of whom are independent, non-executive directors.
Governance

Company, its subsidiaries and respective directors, officers, employees, consultants and contractors are expected to conduct business activities ethically and transparently by following our Code of Conduct, Ethical Values and Anti-Corruption Policy (the Code) in accordance with the standards of Lundin Mining Corporation, relating generally to the conduct of the business and affairs. The Code, available in all our operational languages, articulates definitions and expectations related to the avoidance of situations that may constitute a conflict of interest. Measures are in place to support key employee reviews of the Code annually or during on-hire induction.

The Disclosure and Confidentiality Policy establishes procedures that regulate the disclosure of information about Lundin Mining to the public promptly and ensures that employees have under the law and to the corporation.

Risk Assessment and Management
Lundin Mining has a systematic approach to identify, analyze, evaluate and manage material business risks. Our approach is based on the ISO 31000 Risk Management standard and follows a “plan-do-check-act” model that considers a broad spectrum of stakeholders and risk exposures, both internal and external, intended to identify and leverage potential opportunities that may be identified through the risk assessment process.

At an enterprise level, and as noted in Lundin Mining’s most recent AIF, we focus on proactively managing our most significant risks. These risks include, among others, monitoring commodity price and exchange rate fluctuations; managing the impact of infectious disease and viral outbreaks, including the novel COVID-19 virus; securing environmental and other permits critical to our operations; maintaining our social license and community support; addressing the evolving regulatory landscape; eliminating or controlling environmental risks associated with mining activities; ensuring tailings storage facility integrity; and eliminating, minimizing and controlling key operational and health and safety risks.

At an enterprise level, and as noted in Lundin Mining’s most recent AIF, we focus on proactively managing our most significant risks. These risks include, among others, monitoring commodity price and exchange rate fluctuations; managing the impact of infectious disease and viral outbreaks, including the novel COVID-19 virus; securing environmental and other permits critical to our operations; maintaining our social license and community support; addressing the evolving regulatory landscape; eliminating or controlling environmental risks associated with mining activities; ensuring tailings storage facility integrity; and eliminating, minimizing and controlling key operational and health and safety risks.
Governance

External Commitments
Lundin Mining’s RMP, RMF and our RMMS are aligned with the Government of Canada’s Enhanced Corporate Social Responsibility Strategy and other voluntary national and international initiatives to which we commit, including the following:
• Organization for Economic Cooperation and Development Guidelines for Multi-National Enterprises;
• United Nations Guiding Principles on Business and Human Rights;
• United Nations Global Compact;
• Voluntary Principles on Security and Human Rights;
• International Finance Corporation Performance Standards on Social and Environmental Sustainability;
• Global Reporting Initiative;
• CDP Climate Change, which is aligned with the voluntary
• Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

Memberships and Associations
Involvement with memberships and industry associations enables Lundin Mining to keep current regarding matters of public policy, emerging sector and sustainability trends, regulatory updates, stakeholder interests and the sharing of industry best practices. In 2019, Lundin Mining was a member of, or participant in, associations listed at https://www.lundinmining.com/responsible-mining/lundin-memberships-and-associations/

HUMAN RIGHTS
Our Approach
Lundin Mining conducts its business in alignment with the United Nations Guiding Principles on Business and Human Rights. Respect for human rights is a fundamental commitment, consistent with our Mission and Values, and is stated within our Code and the RMP. As a signatory to the UNGC, Lundin Mining has committed to advancing all Ten Principles of the UNGC, including Principles One and Two: Human rights and respect for human rights, as outlined in the United Nations Universal Declaration of Human Rights. Our Human Rights Policy was drafted in 2019 and is expected to be adopted in 2020 following presentation to and approval by the Board of Directors.

Our Performance
In 2019, we initiated a Company-wide Human Rights Risk and Impact Assessment (HRRA), using the frameworks of the United Nations Guiding Principles (UNGPs), Voluntary Principles on Security and Human Rights, UNGC and our codes and standards reflecting international best practice. A team of independent experts led the assessments, which included site visits and interviews with site personnel and local stakeholders. The assessments are broad in scope, covering areas including:
• impacted communities;
• environmental impacts;
• security arrangements;
• worker arrangements;
• procurement and supply chain management; and
• business relationships (e.g., business partners and host governments).

Assessment reports evaluate the risk of human rights impacts and provide recommendations to address these potential impacts. In 2016, we completed HRRAs at Eagle, Zinkgruvan, Neves-Corvo and Amapá. Peru. Chapada’s and Candelaria’s assessments are scheduled to start in 2021. HRRA findings include positive contributions to the enjoyment of Human Rights and related SDGs in the areas of engagement with local communities (Right to information, consultation and participation), positive impacts on local employment (Right to an adequate standard of living), and confirmation of health and safety as priorities for employees and contractors (Right to safe and healthy working conditions), among others.

Although all sites met local requirements regarding human rights, several opportunities for improvements were identified as a result of comparing local performance and stakeholder perception with international standards, current systems and effective implementation. Where an HRRA was completed in 2019, our sites are working on action plans to address issues and reinforce positive contributions. Examples of the current approach are detailed in the table below.

<table>
<thead>
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<th>Description</th>
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For the second consecutive year, Zinkgruvan co-hosted the Annual Askersund Lakeside Pride festival. Closely aligned with Lundin Mining’s Mission and Values, as well as corporate diversity and inclusion policies, the event aimed to encourage inclusion, collaboration and open dialogue between the community and the operation. Following up on last year’s LGBTIQ+ Pride event in the region, this year’s festival featured drag shows, talk shows, dance, music and dramatic performances, and a movie screening. Zinkgruvan flew its rainbow Pride flag at its main building during the event to demonstrate its commitment to equality, tolerance and inclusion. It also led an educational component at the event, offering diversity and inclusion training to other companies and community members.

Any form of discrimination in the workplace is deemed unacceptable by Lundin Mining. Several human rights related grievances were filed in 2019 through the Company’s grievance mechanism or whistleblower reporting hotline. In each case, management investigated the matter and, where the claim was verified, appropriate management actions were taken.

In 2019, our Candelaria operation was notified by the Chilean National Contact Point of a complaint filed on behalf of a group of people living in the local area alleging a breach of the OECD Guidelines on human rights and associated environmental damage. Factors cited mostly related to dust, blasting impacts or potential impacts associated with waste rock piles. The Company operates in accordance with all permits and legal requirements and therefore disputes the allegations. Nevertheless, Candelaria values constructive dialogue and has actively engaged with the Chilean National Contact Point to provide information and offered a site visit, anticipated to take place following the lifting of COVID-19 travel restrictions.

Candelaria – Employee Meeting

Zinkgruvan’s Second Annual Askersund Lakeside Pride

Our Performance
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Health and safety is a material topic for Lundin Mining because the health, safety and well-being of our workforce is our first value as a Company. We hold health and safety as our top priority in everything we do. We believe that all occupational injuries and work-related illnesses are preventable. Our aim is Zero Harm. We have translated this into an operational objective to send everyone home safe – every shift – every day. This objective applies to our employees, contractors, suppliers and visitors.

OUR APPROACH
At Lundin Mining, we are committed to Zero Harm and to providing our workforce with a safe, healthy and productive work environment wherever we operate. Our Values, Safety, Respect, Integrity and Excellence, were established as the foundation for our approach to health and safety in 2019. Throughout the year, we worked to materially improve our hazard identification and elimination processes; enhance personal safety accountability across all levels of the organization; reduce long-term occupational health risk exposures; and improve our fatality prevention efforts.

While 2019 presented us with a few performance challenges in health and safety, each of our operations was actively involved in implementing creative initiatives to help reduce risks and incidents and to eliminate injuries and illnesses in support of our Zero Harm objective. With Chapada joining Lundin Mining mid-year, we brought another mature and robust safety culture into the business.
Health and Safety

Success Through Collaboration
To achieve our Zero Harm objective and our goal of making Lundin Mining “Safer Every Day,” we depend on the collaboration, teamwork, engagement, commitment and involvement of everyone in our workforce – employees and contractors alike. Our workforce is actively involved in health and safety through our participation in working groups, project teams, business improvement initiatives and health and safety committees, or by way of designated health and safety representatives. All operations have active safety committees with both worker and management representation and hold regular safety meetings. Segments of our workforce are also represented by collective employee labour agreements that contain specific safety provisions.

Making a Difference
By continually striving to improve the health and safety of our work practices, we can have a direct and positive effect on our stakeholders, including our employees, contractors, suppliers and those who live and work in the communities where we operate. We work to set the example when it comes to health and safety, and we share safe work practices and any lessons learned with all who are interested.

Health and Safety Management Systems
Lundin Mining’s RMP and RMMS standards set the context for the Company’s health and safety management system. RMMS requirements apply to all employees and contractors working at Lundin Mining. The RMMS standard is aligned to OHSAS 18001 requirements. Two of our operations, Candelaria and Chapada, are also certified to OHSAS 18001. Our health and safety management system is rounded out with workplace hazard identification and control, qualitative and quantitative risk assessments, lift-saving rules, high consequence protocols (HCPs), safe work procedures and permit systems, safe work observations, and incident reporting and investigation. Each of our operations must have training and formalized safe-work procedures to address each of the requirements of the HCPs.

Health and Safety Reporting
All incidents that result in a reportable injury, and non-injury incidents with high potential for injury, are analyzed and shared weekly across the Company to emphasize key learnings and to contribute in a timely way to the prevention of recurrence. Lessons learned from the most significant incidents are shared and discussed across operations during quarterly meetings.

Consolidated health and safety performance data are frequently evaluated to identify trends and develop focused incident and injury prevention strategies. Statistics, incident details, and summary investigation findings are readily available and accessible to employees, contractors and visitors. Health and safety performance results are reported to corporate senior leadership and shared across our operations monthly, then reviewed quarterly with the Board’s HSEC Committee.

Not Myself Today® – Mental Health Awareness

In 2019, Lundin Mining’s Toronto Head Office participated in a mental health awareness initiative in partnership with the local mental health association to bring awareness and start a conversation about mental health. Not Myself Today® is an initiative from the Canadian Mental Health Association (CMHA) and is based on the insight that there are days when we don’t feel like ourselves. Most of us learn or are told to suppress these feelings or thoughts about our mental health; however, it’s important to take care and acknowledge them. An important part of this conversation is connecting people to the resources they need to address their mental health and to build empathy and understanding toward those living with mental illness. The first stage of this campaign was the dissemination of mood pins that employees can voluntarily wear while at work. Since 2013, more than 450 companies and organizations across Canada have taken part in the Not Myself Today® campaign, with all funds generated directly supporting the work of CMHA.
Health and Safety

Lundin Mining Supporting Good Health and Well-Being

In 2019, as part of an agreement with the local municipality, and to encourage women’s health in the Copiapó Valley, Candelaria inaugurated a new digital mammography clinic at the Family Health Center of Tierra Amarilla. It includes a state-of-the-art mammography unit and will allow for early diagnoses of breast cancer in both men and women in the community. The clinic averages 100 scans per month for patients between 20 and 50 years of age.

At our exploration site in Peru, a health campaign was conducted in collaboration with the staff at the local medical centre in Acarí. Approximately 50 residents of the towns of Amato and Otapara were seen by the medical staff, who conducted health checks and administered vaccinations.

In October, through the Partnership Seminar, Chapada donated a new dental chair to the Santa Rosa Health Center, of the Nova Iguaçu City Hall. The city installed additional equipment and furniture and adapted the room with its own resources. As a result, the facilities were modernized in order to improve dental care for the population. The Health Secretariat and the City Hall are now renovating a second room with their own resources, ensuring healthy living and promoting well-being for all ages.

OUR PERFORMANCE

We measure our health and safety performance using a combination of leading indicators, lagging indicators and performance targets established during the annual business planning process. These are published in corporate and site Annual Health, Safety and Risk Action Plans that are available to our employees and contractors. Lundin Mining follows the US Occupational Safety and Health Administration (OSHA) definition of medical treatment for classification of recordable injuries at all operations, and our reporting is aligned to the International Council on Mining & Metals (ICMM) Health and Safety Performance Indicators manual.

Select leading indicators are used to help identify strengths and weaknesses in our health and safety systems, and to highlight areas where we need to act upon issues or risks with the potential to result in an incident, injury or illness. During 2019, more than 33,000 leading indicators were reported.

Our primary lagging indicator for measuring health and safety performance, and for benchmarking against our peers, is the Total Recordable Injury Frequency (TRIF) rate. Other lagging indicators are Lost Time Injury Frequency (LTIF) rate, Medical Aid Frequency (MAF) rate, Lost Time Severity Rate (SR) and All Injury Frequency rate, the latter of which includes first-aid injuries. All rates are calculated based on a 200,000-hour formula.

There were 75 recordable injuries during 2019, with 46 being lost-time cases, resulting in a TRIF rate of 0.66. While the TRIF rate did not meet our target of 0.60, it was a slight improvement over 2018, when the TRIF rate was 0.67. The 2019 LTIF rate was 0.40; the SR was 15 against a target of 18; and the All Injury Frequency rate was 1.83 against a target of 2.0. There were 133 first-aid injuries across the business in 2019, down from 143 in 2018.

Hours worked during 2019 increased 19% over 2018, principally due to acquiring Chapada in July, an increase in near-mine exploration activities, increased project-related activities (notably ZEP) and other construction across the business.

Overall, 2019 safety performance was impacted by an increase in total recordable injuries compared to 2018. This increase is attributed to the increased hours worked, activities associated with Candelaria improvement projects, the Neves-Corvo ZEP program, Eagle East-related work, the addition of the Chapada mine and several significant, planned maintenance shutdowns. Lundin Mining’s safety objective remains Zero Harm, and our aim is to send everyone home healthy and safe every day. The 2020 Health, Safety and Risk Action Plan will focus on recordable injury prevention at each operation through the elimination of repeat or similar incidents and by enhancing workplace hazard recognition and elimination processes.

Safety Performance Comparison

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Recordable Injury Frequency Rate (TRIF)</td>
<td>0.66</td>
<td>0.67</td>
<td>0.56</td>
</tr>
<tr>
<td>Lost Time Injury Frequency Rate (LTIF)</td>
<td>0.40</td>
<td>0.35</td>
<td>0.30</td>
</tr>
<tr>
<td>Lost Workdays</td>
<td>1,760</td>
<td>1,094</td>
<td>1,223</td>
</tr>
<tr>
<td>Lost Time Severity Rate (SR)</td>
<td>15</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Fatalities</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Hours Worked</td>
<td>22,723,989</td>
<td>19,019,632</td>
<td>17,117,550</td>
</tr>
</tbody>
</table>

OUR PERFORMANCE

- Lundin Mining TRIF Target
- Lundin Mining LTIF Target

Lundin Mining – TRIF / LTIF Rate Trends

1 Our safety performance includes both employees and contractors.
2 Lost/Recordable Injury Frequency rate (TRIF) is calculated as (total number of recordable injuries [including fatalities, lost time injuries, restricted work and medical treatment injuries] x 200,000) / total hours worked.
3 Lost Time Injury Frequency rate (LTIF) is calculated as (total lost time injuries x 200,000) / total hours worked.
4 Lost Time Severity Rate (SR) is calculated as (total lost workdays x 200,000) / total hours worked.
HEALTH AND SAFETY

Industrial Hygiene and Occupational Health

Our Approach

Industrial Hygiene (IH) and Occupational Health are integral to our overall health and safety program. While our health and safety efforts focus on hazards that can result in an immediate incident or acute injury, our occupational health efforts are focused on identifying, monitoring and mitigating exposures to potential workplace hazards such as chemical, biological, physical or ergonomic agents that can lead to both acute illness or to chronic occupational disease.

Each of our operations maintains a risk-based IH program with a focus on identifying and monitoring potential exposures unique to their operating environment, processes or mining methods. When potential exposures are identified, we develop plans and strategies based on the hierarchy of controls to eliminate, control or to reduce potential risk to human health.

Building on work initiated in 2017, each of our operations has established baseline exposure data and profiles for their workforce and physical workplaces. These data are used to develop annual sampling and action plans to target, assess, control and reduce the risk of potential workforce exposure to harmful agents. Along with our planned sampling, additional IH samples are collected to support projects and studies; when new issues or concerns are identified; or when necessary, based on governmental or legislative compliance requirements.

Our Performance

During 2019, working with zincgruvan and neves-corvo management, lundin mining’s corporate health & safety department kicked off a multi-year assessment study of lead. this study is focused on improving work practices and processes related to the production of lead concentrates. the objectives are to reduce workforce exposure to lead and to meet voluntary consensus standards for lead in blood levels that surpass existing regulatory limits.
Health and Safety

Safety Leadership Involves Everyone – Managing Risk™

Lundin Mining’s Toronto office and many of our operations have participated in the Balmert Safety Leadership workshops. These workshops are part of our strategic Safety Zero Harm initiative and are used to enhance the safety knowledge and awareness of our employees. We began offering Balmert Safety Leadership workshops across our operations in 2017. The most recent workshop sessions focused on Managing Risk™ – Recognizing What Can Hurt Us™ and were based on Paul Balmert’s book, Alive and Well at The End of The Day. Balmert Consulting facilitated the workshops, helping our employees improve their risk identification and management skills. The workshop also benefitted staff who visit or directly support our operations by ensuring they are equipped to support our operations by ensuring they are supported by the broader Zero Harm effort.

Occupational Health

We operate professionally staffed, on-site, occupational medical facilities at Neves-Corvo, Candelaria and Chapada. Zinkgruvan is supported by part-time medical professionals who conduct employee assessments and evaluations, while Eagle Mine and our corporate offices utilize outside medical service providers and community clinics. All employees have access to Employee and Family Assistance programs and confidential counselling services.

CRISIS MANAGEMENT

PLANNING AND EMERGENCY PREPAREDNESS

We work to maintain a high degree of emergency preparedness across the Company. As part of that process, we have developed crisis management plans and strategies for each of our operations, including our corporate headquarters, and we conduct formal crisis management training and a mix of practice and desktop scenarios annually. Our crisis management plans are supplemented by site-specific emergency response plans that are catered to the unique aspects of each operation. All our operations maintain emergency response capabilities, including a variety of firefighting and rescue equipment, as well as specialized personal protective equipment that is suited to each of the unique working environments and operational jurisdictions.

Our operations-based emergency responders and mine-rescue team members receive monthly in-house training on equipment and emergency response techniques. Practice exercises and simulated emergency scenarios, as well as external training, are provided to ensure that team skills are maintained. During 2019, teams from Neves-Corvo, Candelaria and Eagle participated in a variety of regional and international competitions to test their skills and capabilities against those of their peers.

We conducted a third-party assessment of our emergency response and mine-rescue capabilities at Eagle Mine and Neves-Corvo during 2019.

Health and Safety

Eagle – High Angle Rescue Training

Facilitated Crisis Management Scenario Exercises

Underground Emergency Evacuation Drills

Surface Facility Emergency Evacuation Drills

Emergency response and rescue team members receive annual training on equipment and emergency response techniques. Practice exercises and simulated emergency scenarios, as well as external training, are provided to ensure that team skills are maintained.


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<tbody>
<tr>
<td></td>
<td>11</td>
<td>363</td>
<td>8</td>
<td>121</td>
<td>87</td>
<td>852</td>
</tr>
</tbody>
</table>

*Includes 44 stand-alone capable units.

Hierarchy of Controls

Most effective

- Elimination: Physically remove the hazard
- Substitution: Replace the hazard
- Engineering Controls: Isolate people from the hazard
- Administrative Controls: Change the way people work
- PPE: Protect the worker from the hazard

Least effective

MORE THAN 7,000

Occupational health assessments and workplace medical examinations conducted in 2019

Candelaria - Safety Award

SDG(S):

PRIMARY SDG(S):

SDG TARGETS: 8.8

CRISIS MANAGEMENT:

Management Objectives

- Take immediate control and manage the crisis effectively and professionally.
- Provide appropriate support to people who may be adversely affected or at risk.
- Communicate effectively both internally and externally, including helping the media to focus on known facts and our actions to manage the situation.
- Provide necessary support to staff, contractors, suppliers, communities and our customers to minimize the impact of events on operations and the business.
- Maintain employee, community, public and shareholder confidence in management’s ability to effectively manage the crisis.
- Continue to run the business effectively and efficiently during the crisis, while also developing and implementing an appropriate recovery plan.

Lundin Mining’s Crisis Management Objectives

- Develop and maintain a high degree of emergency preparedness.
- Maintain clear strategies and effective staff training for emergency management.
- Maintain an emergency management plan that is reviewed annually, and which is dependent upon an assessment of the unique aspects of each operation.
- Establish and maintain a framework for evaluating operations’ emergency response and rescue team performance.
ECONOMIC PERFORMANCE

IN THIS SECTION

- Materiality 36
- Our Approach 36
- Our Performance 38
- Local Procurement 39

MATERIALITY

Economic performance is a material topic for Lundin Mining because the economic sustainability of our business is important to all our stakeholders. We strive to create meaningful value through the responsible acquisition, development, operation and closure of base metal mines, delivering shared value through effective partnerships and innovation while maintaining balance sheet strength and flexibility to act on compelling growth opportunities.

OUR APPROACH

At Lundin Mining, we continuously monitor our performance and objectives, conduct opportunity and risk assessments and integrate these findings into our economic strategy. Financial information is presented in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and with interpretations of the International Financial Reporting Interpretations Committee, which the Canadian Accounting Standards Board has approved for incorporation into Part 1 of the CPA Canada Handbook - Accounting. Economic performance updates regarding our financial and operational results for the reporting period are available in other publications and financial disclosures. More detailed information can be found in the Annual Information Form, 2019 Annual MD&A and Financial Statements, and the Management Information Circular.

Our economic strategy is focused on delivering strong production, cash costs and cash flow generation, maintaining a strong and flexible balance sheet and executing expansionary projects as planned. The Company is focused on improving productivity through operational excellence initiatives, value-added technologies and continuous improvement programs; and will remain committed to optimizing its sustaining capital expenditures. This strategy positions the Company to generate leading returns in a fluctuating and volatile commodity price environment.
Economic Performance

**OUR PERFORMANCE**

Over the last few years, we have invested significantly in our operations and the Company began to realize the benefits of these investments in 2019. Our economic approach supported the successful acquisition and integration of Chapada, maintaining our balance sheet strength after this significant investment.

Lundin Mining’s operations contribute to economic development and prosperity in regions where we operate through wages and salaries paid to employees and contractors, local procurement, taxes, royalties and fees paid to governments, and major community investments or initiatives that advance sustainable development.

As defined by GRI, our Total Economic Value Generated in 2019 was approximately $1.9 billion, and Total Economic Value Distributed was approximately $1.2 billion, as detailed in the following table.

<table>
<thead>
<tr>
<th></th>
<th>US$ 000s 2019</th>
<th>US$ 000s 2018</th>
<th>US$ 000s 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Economic Value Generated</strong></td>
<td>1,903,969</td>
<td>1,759,753</td>
<td>2,089,664</td>
</tr>
<tr>
<td><strong>Total Economic Value Distributed</strong></td>
<td>1,246,232</td>
<td>1,196,059</td>
<td>1,342,323</td>
</tr>
<tr>
<td><strong>Total Economic Value Retained</strong></td>
<td>657,737</td>
<td>563,694</td>
<td>747,341</td>
</tr>
</tbody>
</table>

*(a) 2018 and 2017 Economic Value Distributed and Retained figures have been restated to include dividends paid to Lundin Mining’s shareholders.*


given our commitment to work with our stakeholders to advance socio-economic development in the regions where we operate, we also measure our economic performance in terms of our community investment contributions. This information can be found in the Community Development section of this report.

**LOCAL PROCUREMENT**

Materiality

Local economic impact is a material topic for Lundin Mining because we recognize the importance in achieving meaningful economic benefits to the communities, businesses and governments of the localities and regions where we operate. Local procurement plays a significant role in terms of benefits to the local communities and their economies.

Our Approach

Lundin Mining’s approach is based on local economic procurement decisions and processes that have significant and positive impacts on local economies, with associated benefits to businesses and communities in the regions of our sites.

Our Performance

In 2019, approximately $1.63 billion of our goods and services were procured at the local or country level across the Company’s operating sites in the United States, South America and Europe, increasing from $1.58 billion in 2018 (or 95%, compared to 94% of total procurement in the previous year). The shift in percentages of procurement by local, national and international levels was driven in large part by the recent acquisition of Chapada.

Zinkgruven and Neves-Corvo define local procurement to include all goods and services procured at the country level and their local procurement rates were 91% and 84%, respectively. Given the larger geographic scope of the United States, Chile and Brazil, these sites distinguish between local-level procurement (Michigan state-wide, Copiapó province-wide and Goiás State procurement, respectively) and country-level procurement (all other in-country procurement).

In 2019, goods and services that largely could not be sourced locally included specialized or heavy equipment, chemicals and certain types of specialized technical consulting services. Rail and vessel shipping are also services that generally are procured outside of local areas.

**Candelaria – Open Pit**

**Zinkgruven – Mill Operations**

**Procurement, by Site 2019**

![Graph showing procurement by site 2019](image-url)
OUR APPROACH
Lundin Mining is committed to its employees. We work hard to strengthen our culture of respect and transparency, and practice a management style that both listens to employees and actively addresses any concerns. We believe that success depends on a skilled and motivated workforce, and that employee engagement is key to employee retention. To effectively foster a meaningful work experience, we believe it is important that our employees have knowledge of the Company’s direction and priorities and understand how their efforts and successes contribute to overall goals.

We continuously seek ways to improve and expand our employee communication channels to ensure that employees are kept up to date and informed. Employee training protocols and focused training initiatives further contribute to motivation and workforce engagement. We aim to create safe work environments that promote dignity and respect, and in which diversity and the contributions of all employees are recognized and valued. The Company supports freedom of association and collective bargaining aligned with UNGC Principles Three, Four, Five and Six: Labour.

OUR PERFORMANCE
As of December 31, 2019, Lundin Mining employed 4,170 employees globally, compared to 3,351 in 2018; and 7,192 contract workers, versus 5,564 the previous year. Overall, there were 11,362 people across five operating mines and offices in Brazil, Chile, Portugal, Sweden and the United States; our exploration locations; and our corporate office headquartered in Toronto, Canada. The acquisition of the Chapada operation added 755 employees and 974 contractors to our workforce. Contractors are primarily engaged in maintenance, mine development, mining and project activities; however, they also may temporarily replace workers on leave or are assigned to specific short-term projects.
Our People

All contractors are included in our safety performance statistics and, in compliance with RMMS, are held to the same HSEC standards as our employees. The turnover rate for Lundin Mining in 2019 was approximately 7.0%, which is a decrease from 13.2% in 2018.

In 2019, Lundin Mining proactively recruited female applicants, promoted opportunities for women and made good progress in developing workplaces that accommodate the needs of female workers. Due to the mining industry being traditionally male-dominated, the attraction and retention of female employees are challenging, particularly for operational roles at the industrial sites. Regardless, we increased the number and percentage of female employees at each operation, and commitments were made to strive for continued growth in the number of women we employ across our organization.

The percentage of female employees in senior executive positions and on the Board is publicly disclosed. Diversity and inclusion performance is communicated through our corporate website and in our annual Communication on Progress (COP) to UNGC.

Local hiring is material as it contributes to the local economy and our local communities and is another aspect of Lundin Mining’s local economic impact.

At Lundin Mining, we make it a priority to draw our workforce from the local communities as much as possible to ensure that the economic benefit of employment remains in our host communities. Due to the developed regions where we operate, we have been fortunate to have the ability to source our workforce locally. However, it is occasionally necessary to source specific skills, levels of experience, or technical expertise from abroad.

In 2019, our operational site employees were almost exclusively from in-country, with expatriates accounting for only 0.88% of our employees across our operations. Contractors and suppliers are expected to have practices in place that support and parallel our policies and standards, such as our RMMS, and in this regard, we ask that our contractors and suppliers also adhere to a similar standard with respect to prioritizing local hiring.
Our People

Lundin Mining strives to create a safe, fair and respectful working environment for our employees and supports the unencumbered right to freedom of association and collective bargaining at all our operations. We monitor whether our activities have any adverse impacts on the human rights of our employees to form or join trade unions and to bargain collectively, and whether these rights are at risk at any of our operations. The relationships between the Company, its unions and employees are distinct at each of our mines; however, what is consistent is that our approach focuses on employee representation based on trust and transparency; respectful dialogue; and constructive, peaceful resolution of any concerns, if and when they arise. We engage with union leaders regularly on matters of local labour laws, business changes and the negotiation of contract terms and conditions.

We believe Board, senior management and employee diversity has tangible and intangible benefits that make Lundin Mining a more successful business and employer of choice. The Diversity and Inclusion Policy commits the Company to create an inclusive and diverse work environment. In 2020, we will focus on diversity and inclusion awareness training and establishing minimum requirements across Lundin Mining.

Our Performance

As of December 31, 2019, union-represented employees across our organization equalled 84%, which is slightly higher than 84% in 2018, due to the acquisition of the Chapada mine. The unionized workforce primarily comprises non-managerial employees at the mine sites who are covered under collective bargaining agreements. Employees at Eagle Mine are not unionized, nor are our exploration group or our corporate office employees. There were no strikes, lockouts or work stoppages of significance at our operations in 2019. There is no history of significant labour disruption in the last six years or longer at any of our sites.

Depending on our operations, notice periods provided to employees before the implementation of significant operational changes that could substantially affect them vary according to local legislative requirements as follows:

<table>
<thead>
<tr>
<th>Mine</th>
<th>Notice Period Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candelaria</td>
<td>Before the expiration of the collective agreements, notice period (60 days) is given at the start of the collective bargaining process. Labour relations hold formal meetings based on medium- and long-term schedules. Additional notice (24 weeks) is given before a significant change for planned, non-confidential changes.</td>
</tr>
<tr>
<td>Chapada</td>
<td>Notice periods are not defined in the collective agreement; however, in the event of significant operational changes, employees are notified individually and/or through internal communication channels. The local union is notified and provides input.</td>
</tr>
<tr>
<td>Eagle</td>
<td>There is no collective bargaining agreement. Minimum notice period (60 calendar days) is required by the Worker Adjustment and Retraining Notification Act.</td>
</tr>
<tr>
<td>Neves-Corvo</td>
<td>In 2019, the operation implemented changes to the length of the underground shift and a new site access system. Both changes were discussed and negotiated with the national union and employees and were communicated six months in advance. Notice periods are defined on a case by case basis as there is no Company-specific collective bargaining agreement.</td>
</tr>
</tbody>
</table>

In 2019, notices were filed by two labour unions at Candelaria alleging limitation of union rights. In each case, management engaged with the notifying unions and appropriate steps were taken to resolve the complaint. Neither resulted in strike action. No operations have been identified as being at risk for incidents of child labour or having young workers exposed to hazardous work. Lundin Mining has strict proof-of-age requirements for its workforce upon hiring, at all sites, preventing anyone under the legal industrial working age from obtaining employment at any of our sites or operations. Similarly, our operations are not considered to be at risk for incidents of forced or compulsory labour.
OUR APPROACH
Our social performance approach is guided by leading practices in the mining industry, partnerships with the communities in which we work, and a commitment to continuous improvement across all areas of social performance. Our approach is tailored to adapt to the different contexts of our operations and exploration sites, in six different countries, each with its own unique cultures, languages and levels of economic development.

Mining operations can generate significant direct and indirect social benefits for local communities, including employment and capacity-building opportunities, the stimulation and diversification of local economies, and business and community partnerships. Mining can also contribute to social impacts, including economic dependency, community wellness (e.g., noise, dust and odour) and increased traffic in communities.

We value the continuous input we receive from our communities and other stakeholders, and we consistently seek to reduce our social impacts and improve the societal benefits of our operations, aligned with Lundin Mining’s RMMS. Understanding and proactively managing these benefits and impacts are integral to the success of our operations. Our approach is to:

• Build strong relationships with those affected by our operations;
• Uphold fundamental human rights;
• Invest in meaningful community projects and sustainable development; and
• Respect cultures, customs and values while engaging in open and inclusive dialogue.
Social Performance

OUR PERFORMANCE
Our social performance teams continued to refine and implement site-level, five-year social performance strategic plans in 2019. These plans enable sites to allocate resources informed by an understanding and assessment of social risks, current and potential impacts, contextual changes, stakeholder engagement and social investment priorities. In 2019, we finalized three key RMMS management standards: Community Investment, Social Performance, and Stakeholder Engagement. We commenced workshop training with the Eagle team on implementation of the standards, to be extended to all remaining sites in 2020. The corporate team also developed and implemented training to build capacity and competency for best practices and for meeting policy commitments articulated in the RMP.

To enhance local education and interest in mining and technical studies, Eagle Mine welcomed students and instructors from Michigan Tech’s Field Geology class to the operation for a tour and showcase led by site leaders. The students were able to see the mine surface facilities and the mill, where they saw their learnings in practice. The students were prepared with many questions and Eagle employees were eager to share their knowledge of Eagle’s mining and milling operations. The initiative is one of several university and local partnerships with our Eagle operations aimed at fostering interest in mining education and technical training in science, technology, engineering, and mathematics.

Eagle Bringing the Classroom to the Mine and Mill

STAKEHOLDER ENGAGEMENT
Materiality
Stakeholder engagement, community relations, and grievance mechanisms are material topics for Lundin Mining because mining operations can generate significant direct and indirect benefits and impacts to local communities and beyond. Understanding stakeholder concerns and actual or perceived impacts allows our sites to manage and continually improve their operations to reduce risk exposure and improve value creation.

Our Approach
Lundin’s stakeholder engagement approach, based on clear communication, transparency and trust, helps us to understand the interests and concerns of our stakeholders, as well as the emerging issues and risks to our operations.

Our Stakeholder Engagement Standard and accompanying Guidance help ensure a consistent approach to engaging with communities, employees and other stakeholders. Each of our sites uses a systematic and recurring stakeholder mapping process to identify and prioritize stakeholders from direct and indirect influence areas, as well as those interested in, or potentially affected by, the site’s activities.

As site activities change (for example, as we cease exploration activities, or move towards closure), the level of interest of different stakeholder groups and the nature of their interests and concerns can also change. Special consideration is given to identifying potentially vulnerable groups (either within the socio-economic or the political context) whose voices and perspectives may not otherwise be heard.

Providing opportunities to enhance the learning, experience and interest in mining is an important cause for Neves-Corvo and Lundin Mining. In autumn 2019, Neves-Corvo welcomed an intern at their underground operations from the Girl MOVE Academy. The Academy and internship were facilitated by the Life Movement, an organization that facilitates the mentorship of young, university-educated women from Mozambique, Africa, and is closely aligned with Lundin Mining’s Values. The intern had the opportunity to learn and gain experience in mining operations, administration, community outreach and social responsibility at Neves-Corvo. The Girl MOVE Academy is responsible for bringing 30 interns to Portugal every year. These are young Mozambican women with powerful life stories who are motivated to solve challenges in their communities.

Neves-Corvo Supporting Girls From Developing Nations for Education and Training

Chapada - Volunteering Services Day

PRIMARY SDG(S):
4.4

SDG TARGETS:
4.4
Our Performance
The table below provides an overview of stakeholder groups with whom Lundin Mining engaged in 2019, the types and frequency of engagement, some examples of key interests and concerns raised in 2019, and how the Company is responding to these concerns. Updates on stakeholder engagement are provided to management every month.

### Primary Stakeholder Groups, Key Interests and Concerns, and Lundin Mining's Responses

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Frequency and Type of Engagement</th>
<th>Key Interests and Concerns Raised in 2019</th>
<th>Lundin Mining’s Response in 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local Communities</strong> (Priority group for all sites)</td>
<td>Regular and ad hoc meetings throughout the year</td>
<td>Traffic, noise, dust, vibration issues, water use and waste stockpiles</td>
<td>Conducting site assessments, where appropriate, and developing plans to minimize impacts of transportation, noise, dust and vibrations in the communities around our sites (e.g., Candelaria developed a blast monitoring plan with community members and formed a citizen committee to monitor noise and vibration)</td>
</tr>
<tr>
<td></td>
<td>Timely response to requests for engagement</td>
<td>Local employment, procurement and economic benefits to local stakeholders</td>
<td>Community forums and other engagement activities to share local content plans; local procurement mapping to identify opportunities; local social investment initiatives</td>
</tr>
<tr>
<td></td>
<td>Community offices</td>
<td>Sustainable funding models for the community investment program</td>
<td>Economic development projects with stakeholders (e.g., perception held by local fishermen)</td>
</tr>
<tr>
<td></td>
<td>Social media</td>
<td></td>
<td>Studies to determine future funding models that ensure the longevity of the programs (underway)</td>
</tr>
<tr>
<td></td>
<td>Newsletters</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community perception surveys</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indigenous Peoples (Priority group for Eagle and Peru)

- Continuous engagement with local Indigenous community members, within the context of identified concerns and opportunities for collaboration and partnership
- Protection of environmental and cultural resources
- Proactively provide information on operational activities and potential exploration areas
- Involvement in community environmental monitoring program
- Monitoring of environmental and cultural resources in regional operations and exploration areas
- Engagement processes to discuss issues of interest, concerns and investment initiatives

### Government (Priority group for all sites)

- Regular meetings or consultations
- Timely and complete reporting as required
- Environmental compliance and monitoring
- Formal environmental management systems (standards and procedures) aligned with the RMMS and permitting requirements
- Environmental monitoring is undertaken routinely at all sites and RMMS conformance audits were completed at all sites in 2019
- The company has been working with the relevant authorities to develop strategies for the protection of the aquifer at Zinkgruvan

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**Preserving Cultural Heritage in Castro Verde**

Preservation of our host communities’ heritage and ensuring that value is lasting is a focus of the Company’s community investment program and our commitment to our stakeholders. In 2019, Neves-Corvo announced its support for the restoration of the Royal Basilica of Castro Verde, pledging $61,678. The monument, located in the centre of the village, contains murals made up of thousands of tiles depicting the Battle of Ourique. The first phase of the restoration was celebrated in December 2019, including the blessing, restoration and ringing of the Basilica bells in honour of Our Lady of Conception, patron of Castro Verde.

**Heritage in Castro Verde**

Common forms of stakeholder engagement across our sites include:

- Formal engagement activities, including community, one-on-one and committee meetings (e.g., health and safety), site visits, stakeholder perception surveys, grievance and suggestion mechanisms, and environmental monitoring programs;
- Informal engagement activities, including delivery of presentations at events, timely response to information requests, social media and training sessions; and
- Reporting, including our annual sustainability reports and language-specific brochure, government-focused revenue transparency reports, financial statements, compliance statements and news releases.

These approaches are used regularly to engage with stakeholders on an ad hoc, monthly, quarterly, bi-annual and / or annual basis, however, engagement is not undertaken specifically as part of this report preparation process.
Social Performance

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Frequency and Type of Engagement</th>
<th>Key Interests and Concerns Raised in 2019</th>
<th>Lundin Mining’s Response in 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees and Contractors (Priority group for all sites)</td>
<td>• Each operating site maintains a Joint Health and Safety Committee (JHSC) • Regular meetings and email correspondence • Employee survey • Union meetings and discussions</td>
<td>• Training and capacity building • Visibility of managers • Mine closure planning and communications</td>
<td>• Develop management and action plans to address concerns and recommendations made by employees through surveys and regular meetings</td>
</tr>
<tr>
<td>Labour Unions</td>
<td>One-on-one and group meetings • Site visits</td>
<td>• Collective bargaining • Skilled trade development • Health and safety • Mine closure</td>
<td>• Continue to encourage an open dialogue; mine management engages regularly and constructively with employees and trade unions on issues such as working conditions, training and capacity development</td>
</tr>
<tr>
<td>Non-Governmental Organizations</td>
<td>Community collaboration programs • Regular meetings planned throughout the year (quarterly, at a minimum) • Timely response to requests for engagement</td>
<td>• Environmental (including concerns regarding water, air and noise) • Community development issues</td>
<td>• Continuing and creating partnerships with local non-governmental organizations to build capacity and enhance social and environmental performance across our sites</td>
</tr>
<tr>
<td>Industry Associations / Regional Business Associations</td>
<td>Ongoing membership for industry associations • Participation in industry forums and workgroups • Site tours and presentations</td>
<td>• Economic and regulatory performance</td>
<td>• Transparent and proactive communication</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Monthly meetings with local contractors • Annual trade fairs</td>
<td>• Local economic impact</td>
<td>• Focus attention on strengthening / supporting fair and open local procurement practices</td>
</tr>
<tr>
<td>Customers</td>
<td>Regular contact • Environmental, social and governance (ESG) surveys to ensure accurate and updated information • Timely response to information requests</td>
<td>• Health and safety • ESG performance • Reliable supplies • High-quality products • Hazard information on any hazards</td>
<td>• Policies and systems in place to support ESG performance, including the Code of Conduct, Ethical Values and Anti-Corruption Policy, Responsible Mining Policy and RMMS</td>
</tr>
</tbody>
</table>

Additional key stakeholder groups include shareholders, investors, lenders and financial institutions. The corporate office engages directly with these groups through regular reporting (e.g., financial statements, compliance statements, annual reports) and responses to information requests to ensure accurate and updated information. Lundin Mining also engages with shareholders and investors through quarterly and event-specific conference calls, site visits, presentations and investor briefings.

Community Perception Surveys

Community perception surveys are used by most sites to gather important information from local communities on their views of operations, specific issues where the sites are doing well, and where improvements are needed. In 2019, we met our goal to develop action plans in response to community perception survey results for at least two of our sites.

Eagle’s survey is primarily focused on impacted communities and those residents who live along the mine’s ore haulage transportation route. The 2018 data was used to guide Eagle’s community capacity-building programs, communications and closure planning in 2019.

In 2018, Neves-Corvo partnered with the University of Lisbon to conduct the mine’s first stakeholder perception survey. Findings were positive, with 85% of stakeholders in support of the mine. Findings were used to inform stakeholder engagement, communications, community investments and operational activities through integration into the site’s annual plan.

Chapada partnered with Commonwealth Scientific and Industrial Research Organisation (CSIRO) to conduct a series of community perception surveys. The results of the survey showed the acceptance level of Chapada was rated as good, with a score of 4.0 out of the possible 5.0. According to CSIRO, it is a sound level of acceptance, but there is still room to improve through enhancement of social performance plans.

In June 2019, 100 girls attended Komtek’s Technology Camp in Örebro, focused on educating the next generation of leaders in entrepreneurship and technology. Dedicated to developing interest in science through creativity, the camp aims to guide more girls into careers in science, technology and engineering. Zinkgruvan offered scholarships to 10% of the camp attendees from Askärsund, Zinkgruvan’s close community neighbour, to advance gender diversity in these fields. During the week of programming and lectures, Zinkgruvan’s Head of Surface Maintenance spoke to the attendees about her role and career. As a leader at Zinkgruvan and Lundin Mining, she has three direct reports and is responsible for about 60 employees – an inspiration and role model for the future female leaders in attendance.
Social Performance

Lundin Mining’s operations have continued to strengthen their approach to stakeholder engagement in 2019. The table below provides engagement highlights from 2019. We plan to build on these accomplishments moving forward through 2020.

<table>
<thead>
<tr>
<th>Site</th>
<th>Engagement Accomplishments</th>
</tr>
</thead>
</table>
| Candelaria | • Engaged with fishermen to implement economic development projects.  
|           | • Continued to implement the site’s engagement strategy with local communities, including site visits and information sessions on Candelaria 2040 (EIA Candelaria Optimization and Continuity Operations).  
|           | • Continued to liaise and informing residents about blasting times and events.                                                                                                                                         |
| Chapada  | • Entered into a cooperation agreement with Alto Horizonte municipality to support the construction of a bypass to divert heavy traffic around the town.  
|           | • Implemented the Rural Development Program created to promote adequate benefit sharing among the farmers who live on land adjacent to Chapada.  
|           | • Managed a discussion group on the economic diversification of Alto Horizonte.                                                                                                                                     |
| Eagle    | • Initiated the “Engagement Multiplier” program that allows participants to anonymously complete an employee engagement survey online and summarizes the results immediately.  
|           | • Negotiated a new Community Environmental Monitoring Program agreement. The new program includes the Keweenaw Bay Indian Community and will continue for the life of the mine.  
|           | • Hosted an event to promote diversity in the workforce with over 800 community members participating.                                                                                                              |
| Neves-Corvo | • Partnered with relevant stakeholders to identify new social investment opportunities.  
|           | • Fostered and promoted the concept of the mine as a catalyst for positive social change.                                                                                                                                  |
|           | • Increased the use of robust and pertinent metrics to assess the social performance of the Company.                                                                                                                                                   |
| Zinkgruvan | • Maintained and established good relationships with stakeholders and property owners in areas of imminent exploration.  
|           | • Continued work with Lakeside Pride Askersund to highlight Zinkgruvan’s support of diversity and inclusion.                                                                                   |
|           | • Held Run of Mine, which is an annual race above and below ground for adults and youth that engages hundreds of participants and employees each year.                                                                 |

INDIGENOUS RELATIONS

Materiality

Indigenous relations are a material topic for Lundin Mining because mining projects can impose on the rights, traditional land uses and cultural activities of Indigenous Peoples. Respectful engagement with Indigenous Peoples and associated conservation of cultural heritage is relevant to our operations at Eagle Mine and our exploration project in Peru.

Our Approach

Lundin Mining is committed to respecting and considering the rights, interests, concerns, traditional land uses and cultural activities of Indigenous Peoples within our sphere of influence, as articulated in our Responsible Mining Policy. For operations whose activities can directly or indirectly affect Indigenous Peoples, our RMMS standard requires the establishment of formal procedures and processes related to Indigenous Community engagement, economic inclusion and cultural heritage conservation, while ensuring we meet applicable legislative requirements. Our Stakeholder Engagement Standard and Guidance guide our relationships with Indigenous Communities by outlining specific requirements around engagement, communication, integration of community input, monitoring and review.

Chapada Supports Local Entrepreneurs

Core to sustainable development are local economic stimulation and diversification for communities. To support these, Chapada donated materials, equipment and utensils to a local snack factory related to the Association of Entrepreneurial Women of Nova Iguacu de Goias. The entrepreneurs took part in a food preparation course and received guidance on opening and maintaining their business. The association has already begun selling snacks in Nova Iguacu and has plans to expand the business to neighbouring cities. Chapada’s contribution expands the Company’s investment in the economic diversification of host communities to promote their development and become more sustainable, prosperous places to live and work.
Social Performance

Chapada Rural Development Program

Chapada’s Rural Development Program is an innovative initiative created to promote adequate benefit-sharing with the farmers and ranchers who live in the surrounding areas of Chapada. Through this initiative, Chapada is providing an annual in-kind donation per property, sponsoring initiatives to increase water availability or to support farming and ranching. Chapada has identified farmers through land use information and existing relationships, mapping nearly 50 property owners, with additional farmers anticipated to be identified. Property owners are not eligible for Chapada’s other social investment programs, but are highly impacted by Chapada operations. Each farmer has his / her own specific issues and interests that forms the basis for the relationship. The program does not replace the Company’s commitment to prevent and mitigate real and perceived mining impacts; it complements the Neighbouring Farmers Action Plan.

Our Performance

We currently have activities that take place in or near areas where Indigenous Peoples are located, as follows:

• Our Eagle Mine operations are located on ceded territory near the Keweenaw Bay Indian Community (KBC) and Eagle’s regional exploration interests are near the Lac Vieux Desert Band of Chipewa Indians, both of whom are part of the Anishinaabe group of Native American tribes;

• Our exploration project Amauta is in southern Peru, Arequipa Region, District of Acarí. The exploration site is located on the border of the traditional lands of the Indigenous community Comunidad Campesina de Sancos (Sancos), self-identified as a Quechua group with 1,100 registered members.

The Amauta exploration project (50% of relevant sites) has a formal written benefit agreement with the appointed leaders of the Indigenous community. Lundin Mining Peru S.A.C. (Lundin Peru), through its subsidiary Compañía Minera Mohicano S.A.C. (Mohicano), working under a seven-year community agreement with Sancos, continues engagement with the community through local procurement and hiring for its exploration activities.

Eagle Mine is committed to continuing constructive engagement with local tribes throughout the mine’s operation. Through regular dialogue, we work with local tribes to identify common interests concerning land (e.g., closure activities and mineral exploration), water (e.g., water quality monitoring) and protection of cultural resources; identify employment and economic development partnership opportunities; and identify opportunities for investment. In 2019, Eagle continued to meaningfully engage with local tribes and had ongoing conversations regarding environmental and cultural monitoring of regional exploration areas. Eagle formed a negotiation committee with the KBC and two community groups to address the expired Community Environmental Monitoring Program (CEMP) agreement. The negotiations were successful and the new agreement is scheduled to initiate in 2020 for the life of the mine.

Our Candelaria operations are in the Atacama Region of Chile where 3,000 people self-identify as Indigenous Cola community members.

In 2019, there were no disputes relating to land use, customary rights of local communities and Indigenous Peoples, or incidents of violations involving rights of Indigenous Peoples. As a result, grievance mechanisms were not used to resolve any issues.

MANAGING SOCIAL IMPACTS

Our Approach

Lundin Mining operations are located immediately adjacent or nearby many communities. This proximity can result in a range of actual and potential impacts on local communities. Sites are guided by Lundin Mining Social Management Standards and accompanying Guidance. In 2019, all operations developed assessment processes to identify and assess the actual and/or potential social impacts of the site’s activities.

Our Performance

All Lundin Mining operations have a grievance mechanism in place to ensure that stakeholders can voice concerns about Company activities and impacts and that these concerns are documented in a transparent, accountable manner and addressed in a timely fashion. The table below lists the total number of grievances filed through grievance mechanisms at each of Lundin Mining’s operations in 2019. It includes figures for grievances under ongoing management and those that were resolved.

The higher number of grievances at Candelaria compared to other sites is consistent year to year and reflects the large operational footprint and proximity to local communities. Many registered grievances were related to intermittent instability of the Wi-Fi connection (currently, free Wi-Fi is provided to 85% of Tierra Amarilla residents by the mine; however, the mine does not control the system).

Eagle Mine Donates to Children In Need

Lundin Mining believes that all people, including those vulnerable and infants, should have access to safe, nutritious food all year round. In December 2019, Lundin Mining’s Eagle Mine employees participated in a food drive to collect items and donate to the Public-Michigamme School District’s “Hot Packs” lunch program. The Eagle team came together to collect hundreds of canned and other food items, in addition to donating over US$1,000 themselves, to provide food to children in need. All donations raised by employees were matched by Eagle Mine to help the cause.

SDG TARGETS: 2.3

<table>
<thead>
<tr>
<th>Operation / Exploration Site</th>
<th>Total Number of Grievances</th>
<th>Grievances With Ongoing Management</th>
<th>Grievances Resolved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candelaria</td>
<td>37</td>
<td>6</td>
<td>31†</td>
</tr>
<tr>
<td>Chapada</td>
<td>20</td>
<td>0</td>
<td>20†</td>
</tr>
<tr>
<td>Eagle</td>
<td>12</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Neves-Corvo</td>
<td>4</td>
<td>1</td>
<td>3†</td>
</tr>
<tr>
<td>Zinkgruvan</td>
<td>9</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Amauta</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

† Seven outstanding grievances from 2018 were also resolved in 2019.

† Post-acquisition period from July to December 2019. There were no outstanding grievances at the time of acquisition.

† One outstanding grievance from 2017 was also resolved in 2019.

SDG TARGETS: 2.4, 8.3

• Our Eagle Mine operations are located immediately adjacent or nearby many communities. This proximity can result in a range of actual and potential impacts on local communities. Sites are guided by Lundin Mining Social Management Standards and accompanying Guidance. In 2019, all operations developed assessment processes to identify and assess the actual and/or potential social impacts of the site’s activities.

Our Performance

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SDG TARGETS: 2.3
Social Performance

Social Impacts From Our Activities in 2019

The following table identifies the most significant social impacts for each location based on site-level assessment, grievances and stakeholder perspectives from ongoing engagement efforts.

<table>
<thead>
<tr>
<th>Site</th>
<th>Social Impacts From Our Activities and Grievances</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candelaria</td>
<td>• Operational activities, such as dust, blasting and traffic impact local communities</td>
<td>• Created a citizen committee to monitor noise and vibration related to blasting</td>
</tr>
<tr>
<td></td>
<td>• More than 20 years of operation in an area of low economic development has created a dependency on the mine</td>
<td>• Scheduled mine-related buses and traffic to reduce traffic interaction</td>
</tr>
<tr>
<td></td>
<td>• Dust, noise, vibrations, driving course certification issues, traffic levels and speed, water quality and the maintenance of Candelaria property adjacent to residents led to grievances</td>
<td>• Copiapó and Caldera now use a bypass road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HAulage routes modified in Tierra Amarilla to avoid residential areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Support programs that focus on economic diversification through identifying</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opportunities for regional development based on activities other than mining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide support for local entrepreneurs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Coordinate with municipalities and other partners to address grievances</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Installed systems (e.g., seismographer) to address community concerns about blasting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Monitor other mining related factors (e.g., dust, noise)</td>
</tr>
<tr>
<td>Neves-Corvo</td>
<td>• More than 30 years of operation in an area of low economic development has created a dependency on the mine</td>
<td>• Support programs that focus on economic diversification through identifying</td>
</tr>
<tr>
<td></td>
<td>• Operations, including noise and vibration impact local communities</td>
<td>opportunities for regional development based on activities other than mining</td>
</tr>
<tr>
<td></td>
<td>• Dust, occupation of agricultural land, road damage and the conflict between exploration activities and hunting practices led to grievances</td>
<td>• Provide support for local businesses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide support for promotion of entrepreneurship in local schools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Installed systems (e.g., seismographer) to address community concerns about blasting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Monitor other mining related factors (e.g., dust, noise)</td>
</tr>
<tr>
<td>Zinkgruvan</td>
<td>• High reliance on the mine for local jobs and economic growth impact economic development</td>
<td>• Support local entrepreneurship programs and economic growth initiatives not related to the mine</td>
</tr>
<tr>
<td></td>
<td>• Operations, including traffic, noise and vibrations impact communities</td>
<td>• Inspection of perceived impacts of operations (e.g., structural damage from vibration) and actions taken to address actual impacts (e.g., a sound barrier was built around an exploration rig)</td>
</tr>
<tr>
<td></td>
<td>• Noise, vibrations, odours, dust and traffic led to grievances</td>
<td>• Inspection of perceived impacts of operations (e.g., structural damage from vibration) and actions taken to address actual impacts (e.g., a sound barrier was built around an exploration rig)</td>
</tr>
<tr>
<td>Eagle</td>
<td>• Potential impacts on culture due to expanded exploration program (program ended in 2019)</td>
<td>• Continue constructive discussion with local tribes regarding the identification of cultural resources in exploration areas and economic development opportunities</td>
</tr>
<tr>
<td></td>
<td>• Local economy will be impacted as the mine approaches closure</td>
<td>• Review of Eagle’s community investment programs to measure impact, understand</td>
</tr>
<tr>
<td></td>
<td>• Haul truck driving incidents led to majority of grievances; employee etiquette on social media provided for one complaint</td>
<td>closure options and ensure the programs remain successful</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Address haul truck grievances on a case-by-case basis</td>
</tr>
</tbody>
</table>

SOCIAL PERFORMANCE

Promoting inclusive, quality education is a part of our Social Performance agenda and is closely aligned with our Values. Enabling education in our local communities is important to Chapada and Lundin Mining. During 2019, Chapada invested in local children’s education near the operation by creating two reading corners in Alto Horizonte and Nova Iguaçu de Goiás at local elementary schools. Each reading corner included 1,200 books and encourages elementary and pre-school children to interact with literature and knowledge through fun and cooperation. The project was implemented by Rede Educare in partnership with the municipalities and Lundin Mining.

Chapada Invests in Community Literacy

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Social Performance

COMMUNITY DEVELOPMENT

Materiality
Community development, including community investment and capacity-building, is a material topic for Lundin Mining because these initiatives are integral components of Lundin Mining's commitment to delivering on our social performance obligations. Supporting community development in partnership with communities creates meaningful and outcome-focused initiatives and supports the achievement of local priorities.

Our Approach
Across Lundin Mining, strategic plans focus on the Company being a catalyst and partner in sustainable development for the regions where it operates. We are committed to providing sustainable benefits to local communities near our operations, working in partnership with governments, local businesses and non-government organizations to support meaningful and outcome-focused initiatives. We recognize that social investment – including community investment, community development and capacity-building – is an important benefit that mining operations can provide in partnership with other local, regional and national organizations and governments. Given that each of our sites operates in a diverse socio-economic context, our local teams work closely with our host communities to identify community investment opportunities that will be of most benefit.

For certain programs, our community investments are carried out through the Lundin Foundation, a Canadian non-profit organization principally supported through contributions from the Lundin Group of Companies. The Foundation works with Lundin Mining and other Lundin Group corporate partners, host governments and local communities to improve the management of, and benefit streams from, natural resource development projects. Program staff work with our social performance teams at each site to address stakeholder priorities aligned with business needs or capacities. Foundation staff also work with Lundin Mining and other stakeholders to plan, implement and resource long-term community investment initiatives with a focus on market-based approaches.

Our Performance
We continued our emphasis on promoting economic diversification and advancing local entrepreneurship during 2019 through effective completion of several community investment initiatives at our mine sites and Lundin Foundation projects. Each operation's community investment plan identifies engagement and investment activities that are predicated on the socio-economic context of the regions where we operate, community needs and priorities, capabilities, and emerging risks and opportunities.

Direct Lundin Mining Community Investments
Total direct community investment expenditures across our operations and corporate headquarters in 2019 were approximately $4.77 million, compared to $9.79 million in 2018, and supported education, health, environmental concerns, community development, cultural programs and small business economic stimulation. The decrease in community investment compared to 2018 largely reflects the deferral to 2020 of a large project supported by Candelaria.

Contributions to the Lundin Foundation in 2019 to Advance Programs
In addition to direct community investments, Lundin Mining contributed $2.68 million to the Lundin Foundation to support the development and implementation of social investment programs.

Lundin Mining Community Investments 2019

<table>
<thead>
<tr>
<th>Operation / Project</th>
<th>2019 Lundin Mining Community Investment Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Community Investment</td>
<td>$7,446,000</td>
</tr>
</tbody>
</table>

1 Community investment total since acquisition in July 2019.
2 Values are rounded to the nearest thousand dollars.

In 2019, through Lundin Mining direct investments and contributions to the Lundin Foundation, our community investments totalled $7.45 million.

Lundin Mining Total Community Investments 2017-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$7,446,000</td>
</tr>
<tr>
<td>2018</td>
<td>$11,996</td>
</tr>
<tr>
<td>2017</td>
<td>$9,756</td>
</tr>
</tbody>
</table>

1 The 2019 community investment total includes the Chapada mine, acquired in July 2019.
2 Lundin Foundation totals: $2.7M in 2019, $2.2M in 2018, and $1.8M in 2017.

Alto Horizonte – Brazil
The following tables highlight key community investment initiatives at each of our sites, many of which are implemented over several years.

### Candelaria

<table>
<thead>
<tr>
<th>Program</th>
<th>Purpose</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agreements with Local Municipalities</strong></td>
<td>To promote sustainable development in Tierra Amarilla, Copiapó and Caldera through processing and selling seafood products to an international sustainable seafood market, supporting local job creation in partnership with the Atacamagica Foundation, Regional Education Ministry and Atacama University</td>
<td>During 2019, several initiatives were co-financed, including a mammograph for improving breast cancer detection, participatory budgets for local organizations and festivals for supporting local businesses among others.</td>
</tr>
<tr>
<td><strong>Scholarship Program</strong></td>
<td>To grant scholarships to students across the Copiapó province for the lowest 40% of family income. Scholarships support tuition fees, housing, transportation, tutoring, materials and emotional needs. In partnership with the Atacamagica Foundation, Regional Education Ministry and Atacama University</td>
<td>During 2019, 127 students benefited from this program. Candelaria also launched a new call process and a new version of the program available in the Copiapó province.</td>
</tr>
<tr>
<td><strong>Punta Frodden Fish Processing Plant</strong></td>
<td>To create jobs and income improvements for fishermen in Caldera through processing and selling seafood products to an international sustainable seafood market. Provides certified training to potential employees of the Punta Frodden Plant.</td>
<td>In 2019, the program provided certified training to 27 participants, and the plant hired 18 employees.</td>
</tr>
<tr>
<td><strong>Inventa: Inventor &amp; Accelerator Program</strong></td>
<td>To transform ideas of social and environmental innovation into prototypes by promoting community-led, commercially viable solutions to environmental and social issues in the region. A flagship program for Candelaria and Lundin Foundation, in partnership with Universidad de Valparaíso.</td>
<td>Seven finalists were selected by a jury to participate in the Inventa 2019 program. Selected entrepreneurs focused on recycling, composting, water quality, personal security, and education.</td>
</tr>
<tr>
<td><strong>Chapada</strong></td>
<td>To support local job creation in partnership with the community. Launched in October 2019 to commercially distribute five different types of snacks that service a local market.</td>
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</tr>
<tr>
<td><strong>Economic Diversification Program</strong></td>
<td>To help address the high dependency on mining. In partnership with Agenda Publica, an NGO. Initiated the program through a workshop with Alto Horizonte stakeholders. One project within this program is the Fish Farming Project, which is set to support five fish farms for food in the local community.</td>
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</tr>
</tbody>
</table>

### Eagle

<table>
<thead>
<tr>
<th>Program</th>
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<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td><strong>Accelerate UP!</strong></td>
<td>To contribute to the long-term economic development of Marquette County by providing free business coaching to new and expanding businesses in the region.</td>
<td>The program has supported the creation / expansion of more than 400 businesses in Marquette County since its inception. In 2019, Eagle supported the development of a three-year strategic plan.</td>
</tr>
<tr>
<td><strong>Support to local organizations</strong></td>
<td>To support organizations and projects that promote quality of life in the surrounding communities of Neves-Corvo.</td>
<td>The company provided in-kind donations to 79 organizations located in villages and towns across Baixo Alentejo Region, in the areas of sports, education, community safety and wellness.</td>
</tr>
<tr>
<td><strong>Zinkgruvan</strong></td>
<td>Guided tours showcase the decommissioned Knallna mine and the mining history of the area for community members and tourists; tours include underground visits. Increased understanding and interest in local mine history, as well as employment opportunities for a small number of previous mine workers and community members.</td>
<td>Launched in 2019, the program trained 40 teachers as a kick-off to the project and held workshops with local business representatives, school representatives and politicians.</td>
</tr>
<tr>
<td><strong>Technology Training</strong></td>
<td>To provide courses in technology and entrepreneurship for children and young people. A partnership with KOMTEK. Zinkgruvan sponsored 10 girls from the community to participate in KOMTEK’s technology camp.</td>
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</tr>
<tr>
<td><strong>Installation of Dry Latrines</strong></td>
<td>To provide more-sanitary means for waste disposal to improve the health and safety of local families.</td>
<td>Installation of dry latrines for 15 families located in the town of Amato.</td>
</tr>
</tbody>
</table>

### Zinkgruvan

<table>
<thead>
<tr>
<th>Program</th>
<th>Purpose</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knallna Mine and Zinkgruvan Mining Museum</strong></td>
<td>Guided tours showcase the decommissioned Knallna mine and the mining history of the area for community members and tourists; tours include underground visits. Increased understanding and interest in local mine history, as well as employment opportunities for a small number of previous mine workers and community members.</td>
<td>Launched in 2019, the program trained 40 teachers as a kick-off to the project and held workshops with local business representatives, school representatives and politicians.</td>
</tr>
<tr>
<td><strong>TechnoCentro</strong></td>
<td>To provide courses in technology and entrepreneurship for children and young people. A partnership with KOMTEK. Zinkgruvan sponsored 10 girls from the community to participate in KOMTEK’s technology camp.</td>
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</tbody>
</table>

### Amauta Exploration

<table>
<thead>
<tr>
<th>Program</th>
<th>Purpose</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Installation of dry latrines for 15 families located in the town of Amato.</td>
</tr>
<tr>
<td><strong>Infrastructure Support</strong></td>
<td>To improve the infrastructure of the Sancos community. Donation of a metal platform to the Sancos district municipality for cultural events.</td>
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</tr>
</tbody>
</table>
Our stakeholders – from employees, local communities and governments to our customers, suppliers, transportation providers and shareholders – are interested in understanding how our concentrate products are handled and transported, and the measures that we take to reduce any potential risks associated with these materials. Additionally, consumers are also expressing increased interest in responsibly sourced and managed goods.

Lundin Mining’s commercial initiatives focus on being a preferred, responsible supplier by providing sustainably developed, quality products; technical and marketing support; and dependable, on-time delivery. Concentrates are moved using a variety of methods, including truck and rail car, directly to ports in North America and Chile or to ports where they are exported, either in bulk or in containers, to smelters in Europe or Asia. Lundin Mining’s concentrates are sold and transported in accordance with local, international and European Union (EU) regulations, and shipments are accompanied by appropriate and current documentation.
Candelaria Mine – Punta Padrones

The Punta Padrones port celebrated 24 years of operations, an important milestone in the history of Candelaria mining. From design, the port terminal was constructed as a fully encapsulated complex, operating safely and with strict environmental control. These characteristics have allowed the port to have ISO 14001 certification for its Environmental Management System, OSHAS 18001 certification for Occupational Safety and Health and the International Ship and Port Facility Security Code (ISPS), which establishes a standard for the security of port facilities. Since the first shipment on the Capetan Tassos motor ship in 1995, Punta Padrones has serviced 758 ships and dispatched more than 14.4 million tonnes of copper concentrate.

Eagle Mine Wins 2018 CN Safe Handling Award

In 2019, Eagle Mine was awarded the Canadian National Railway (CN) Safe Handling Award. This is part of the Responsible Care Program, an ongoing performance improvement initiative, to which CN is a partner in both Canada and mid-America. Eagle was awarded for exceptional focus on safety and environmental protection from concentrate production to the point of sale to customers. To ensure the effective and safe transportation of these goods, Eagle must consider proper and secure loading, complete and correct documentation, trustworthy equipment, track structure integrity and on-time pickup and delivery. This is a coordinated effort carried out by numerous site teams and external partners, integral to Eagle’s operation and their commitment to SDG 12 and Lundin Mining’s Mission and Values.

Materials and Product Stewardship

We routinely evaluate potential health and safety impacts associated with the production of concentrates and have developed comprehensive Safety Data Sheets (SDSs). For each shipment, SDSs with information on the health, safety and environmental hazards of our concentrates are provided to Lundin Mining personnel, customers and those handling and shipping our products. We continually evaluate potential risks associated with the production and transportation of our concentrates and take steps to address and manage any identified risks before proceeding with the activity.

Lundin Mining maintains a strong focus on ensuring that the contractors we engage are appropriately equipped and trained, and that they follow best-practice procedures to enable them to deliver our concentrates safely.

Candelaria – Copper Concentrate

Neves-Corvo – Setúbal

MATERIALS AND PRODUCT STEWARDSHIP

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Effective environmental management is integral to the success of Lundin Mining’s operations, from day-to-day activities on site to corporate strategic planning.

Our approach is founded on a commitment to compliance with applicable laws and regulations along with a host of voluntary external commitments, including UNGC’s Environment Principles Seven, Eight and Nine. Our RMMS standard, aligned with the ISO 14001 Environmental Management System standard, forms the foundation of our global environmental management approach.

Our primary objective is to minimize potential environmental impacts throughout the life of our mines and post-closure, through robust engineering, construction and operations along with the implementation of environmental management controls and procedures designed to meet the individual needs of our operations in their unique environmental and social settings.

Each of our sites operates in accordance with stringent environmental management controls and practices that have been designed to protect the communities and environments in which we operate. A series of Corporate Environmental Technical Standards that formalizes these requirements, in compliance with the RMMS, is being developed, along with the update of our existing environmental standards. Candelaria, Ojos del Salado and Chapada operate in compliance with Environmental Management Systems certified under the international standard ISO 14001:2015.
During 2019, we have continued:

• Making water stewardship gains, with measurable reductions in fresh water use and increases in water re-use;
• Monitoring surface water, groundwater, soils and biodiversity to confirm the effectiveness of our environmental protection procedures and to enable timely identification of any issues that may arise;
• Assessing and implementing energy efficiency and GHG reduction initiatives;
• Monitoring noise, vibration and air emissions to confirm the effectiveness of our environmental protection procedures and to enable timely identification of any issues that may arise;
• Periodically conducting additional studies to improve our ability to manage risks to human health and the environment.

Environmental risk assessments and management are routinely conducted at our operations through the identification and assessment of credible environmental risk scenarios. Environmental risks that are deemed significant are managed and tracked through the Company’s risk reporting system, which is used to develop effective mitigating action plans supporting effective responses, continuous improvement and ongoing planning processes. Operational and enterprise environmental risks are reported to the HSEC Committee of the Board quarterly. In 2019, we completed the implementation of the RMMS process at all sites.

Environmental Permitting and Compliance

We recognize that our demonstrated commitment to responsible and sustainable mining is a critical factor in maintaining credibility among our stakeholders and in supporting our ongoing license to operate. Permitting, approvals and compliance management are crucial for the effective regulation of mining-related activities to prevent possible negative impacts on the natural environment, as well as the interests and rights of local communities. Our mines operate under valid environmental approvals and licenses and routinely submit applications for new permits, when required, as well as submitting compliance reports for existing permits to demonstrate conformity with current legal and other obligations.

Throughout 2019, Candelaria prepared an environmental permit application, to be submitted in early 2020, that will reflect the continued growth in mineral reserve discoveries and further extension of the operating life to 2040. Zinkgruvan submitted environmental study reports (e.g., noise, vibration, dust emissions and water discharge quality) in compliance with the conditions of their Environmental License. These reports are in various stages of review and response with the relevant authorities. In June 2018, Zinkgruvan submitted a Mine Concession application to the Mine Inspectorate for the Dalby property, which was granted in 2019. An application for a mining concession, as part of the Flavin exploration license, was submitted in 2019.

Environmental Incidents

Lundin Mining has a rigorous reporting system for environmental incidents requiring classification on a severity scale of Level 1 (low) to Level 5 (high). The severity of an environmental incident is judged by one or more of the following:

• Impact on species, communities and habitats that comprise ecosystems of the natural environment;
• The degree of regulatory non-compliance; and
• The level of local community concern.

Incidents that are classified as Level 3 or above are reported to the Board of Directors and are disclosed in our annual sustainability reports. Two Level 3 incidents were recorded in 2019, each being a spill of tailings at our Neves-Corvo mine. The tailings pipeline ruptured at the point where it crosses the Deiras River, releasing tailings to the riverbed. Quantities of tailings released were estimated at 50 m³ in September and 35 m³ in November. In both cases there was no water flow in the river at the time, enabling removal of the tailings and any contaminated soils from the riverbed, and minimizing environmental impact. The ruptured sections of the pipeline have since been replaced.

Compliance With Environmental Laws

We strive to comply with relevant environmental laws in all aspects of our operations. Unfortunately, on occasion, sanctions or fines are issued by regulatory authorities. Further details can be found in our AE. Fines of $30,000 or above are disclosed in our annual sustainability reports.

We are continuing to track the outcome of charges notified to our Candelaria mine in 2015 by the Chilean Environmental Superintendent (Superintendencia de Medio Ambiente, or “SMA”) associated with alleged infractions of its environmental approvals. The charges originate from two inspections carried out in 2013 and 2014 before Lundin Mining acquired the mine. In 2016, the SMA issued a resolution clearing some of the charges and sanctioning Candelaria with a fine for others. Until 2018, Candelaria pursued various appeals before the Second Environmental Court (“Second EC”), which secured the Company’s right to appeal to the Supreme Court and it did so. In May 2019, the Supreme Court ordered a re-hearing of the case before a new panel of judges on the Second EC, which Candelaria expects to take place in 2020.
Environment

Eagle Mine Fostering Continuous Improvement Through Lean Six Sigma

In 2018, claims on behalf of a group of Caldera fishermen were consolidated into a single proceeding filed against Candelaria in the Copiapó Court of Appeals. The claim alleged contamination of marine habitat as a result of vessel loading activities at the Punta Paitonos port operations owned by Candelaria and that this contamination has caused harm to fishermen and local communities, including impact on health and livelihood. In 2019, a ruling was issued dismissing all claims made by the plaintiff Caldera fishermen. Candelaria is currently awaiting a hearing date since the plaintiff Caldera fishermen subsequently filed an appeal with the Valparaíso Court of Appeals. The Company intends to defend this claim, which it believes to be without merit.

In July 2019, the State Defense Council (Consejo de Defensa del Estado, or “CDE”) filed a lawsuit against Candelaria before the First Environmental Court (“First EC”) alleging environmental damage due to extraction of groundwater beyond Candelaria’s permitted limits. The CDE is seeking a declaration by the First EC that Candelaria is responsible for environmental damage to the Copiapó aquifer and an order that Candelaria implements certain remedial measures. In December 2019, a public hearing was held during which the First EC proposed to both parties the basis of a settlement agreement. Candelaria is considering the content of this proposal and, if the parties cannot agree on the proposed or different settlement terms, expects a new hearing to be held in mid-2020.

In 2018, the Lisbon and Tagus Valley Regional Coordination and Development Commission issued a notice that our Neves-Corvo operation had undertaken unauthorized construction in a National Ecological Reserve (REN) area at our Setúbal Port Facilities. Having appealed the notice, Neves-Corvo was liaising with the relevant authorities regarding the matter at the close of 2019.

As reported in our 2018 Sustainability Report, the Portuguese Environmental Inspection Authority issued a fine equivalent to approximately $25,275 to the Neves-Corvo mine relating to formal reporting deviations dating back to 2014, with the fine paid in full in 2019.

In 2017, Eagle launched a Lean Six Sigma program, which focuses on increasing engagement in continuous improvement and responsible production through training. The development program has demonstrated increasing engagement and numbers of graduates each year. In 2019, Eagle graduated and certified 76 employees as Lean Six Sigma Yellow Belts, the first phase of training. The second phase is to receive more-in-depth education on continuous improvement and the methodologies by which Eagle may continue to responsibly produce base metals in the Upper Peninsula of Michigan.

In 2017, the Lisbon and Tagus Valley Regional Coordination and Development Commission issued a notice that our Neves-Corvo operation had undertaken unauthorized construction in a National Ecological Reserve (REN) area at our Setúbal Port Facilities. Having appealed the notice, Neves-Corvo was liaising with the relevant authorities regarding the matter at the close of 2019.

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TAILINGS AND WASTE ROCK

Materiality

Tailings and waste rock management is a material topic for Lundin Mining because mining and mineral processing produce a significant amount of these mineral wastes. When they are not properly managed, they have the potential to impact local people and the natural environment during operations and post-closure.

Our Approach

Lundin Mining’s operations generate mineral waste in the form of waste rock and tailings. Through efficient mining and mineral processing practices, along with underground disposal of these wastes where practicable, we can minimize the overall quantity stored on the surface. Our operations employ comprehensive mineral waste management practices that allow us to minimize associated environmental and social risks and ensure adequate protection of our local resources.

Lundin Mining’s RMMS includes a specific Tailings Management Technical Standard that was developed in 2015 and is currently under update to align with new requirements. This standard requires that our operations ensure tailings facilities and major water retention dams are planned, designed, constructed, operated, decommissioned and closed in such a manner that they are stable. It also ensures that all aspects comply with regulatory requirements, conform to Company standards and accepted international practices and adhere to any commitments made to local stakeholders.

The engineering design of the waste rock depositories at all Lundin Mining’s sites is based on geological and geotechnical characterization studies, including seismic stability parameters. Construction supervision, inspection and monitoring are undertaken to minimize any stability risk. Equally important is an assessment of all environmental and social aspects to understand and resolve any potential impacts.

An important environmental consideration for all our mineral wastes is the potential for generation of acidic water, known as acid rock drainage (ARD), that can be formed when sulphide minerals in waste rock and tailings are exposed to moisture and air. The release of ARD can adversely affect the quality of waterways or groundwater by introducing undesirable levels of acidity and dissolved metals. Appropriate geochemical characterization programs allow us to understand and minimize this risk at our operations.

Zinkgruvan – Tailings Storage Facility
Environment

Tailings Management

Surface tailings facilities represent a significant environmental risk for the mining industry. Lundin Mining takes considerable care to ensure our tailings facilities are well-designed and built in accordance with leading industry practices and standards. To assure that they are well-maintained, the facilities are routinely inspected, carefully monitored and independently reviewed. We are open and transparent about our overall tailings management approach, and provide more detailed information, including a full list of our tailings facilities, in the Tailings Management Information Sheet located in the Responsible Mining section of our website www.lundinmining.com.

Lundin Mining operates five mines with five active tailings facilities and uses two widely accepted methods of tailings disposal:

- Underground disposal involves combining tailings with products such as sand or cement, followed by disposal as a paste backfill or hydraulic backfill in previously mined areas of underground mines; and
- Surface disposal involves placement in engineered surface impoundments or, in the case of Eagle, in a previously mined open pit.

The five active tailings facilities use various construction techniques for the main and secondary (or perimeter) dams, but none use the upstream construction method. Lundin Mining also maintains and monitors six inactive / closed tailings facilities, one of which is a rockfill hybrid combination of centreline and downstream design, followed by rockfill upstream raises and buttresses (Enemossen tailings facility at Zinkgruvan). Of the five Lundin Mining operations, Eagle Mine is the only operation that does not have a constructed tailings impoundment with dams.

Monitoring and Surveillance

A requirement of the Tailings Management Technical Standard is for all sites to conduct regular geotechnical, hydrogeological and environmental monitoring to meet regulatory requirements and prevent the uncontrolled release of tailings and/or water to the environment. All sites employ monitoring and surveillance systems, which may include surface prisms, piezometers, inclinometers, remote sensing and other technologies to monitor tailings dams and water levels. Trigger action response plans (TARPs) provide clear guidance on how to respond to pre-determined trigger levels for surveillance activities.

Responsible Person

Sites are required to identify a Responsible Person to ensure ownership and proper management of the tailings facility. This person must be an appropriately qualified, experienced and site-dedicated individual employed directly by the site. The Responsible Person guarantees the procedures for each facility, including an Operating, Maintenance, and Surveillance (OMS) Manual and an Emergency Preparedness and Response Plan, are regularly documented and made available to site personnel.

Staff Inspections

Tailings facilities and dams are regularly inspected by trained operators and technical staff, sometimes as frequently as several times daily, with formally documented staff inspections at least quarterly.

Engineer of Record

Each active and inactive tailings facility has an appropriately qualified, licensed and experienced third-party geotechnical engineer to act as an external Engineer of Record or Design Engineer in the relative jurisdiction.

Dam Safety Inspections

Formal dam safety inspections are conducted at least annually by the external Engineer of Record, and reports are issued to the Responsible Person for action on recommendations.

Risk Assessment

Tailings and water dam safety-focused risk assessments are reviewed and updated at least annually and include input from site personnel, corporate technical specialists, the Engineer of Record and independent reviewers.

Independent Reviews

Our Tailings Management Technical Standard requires two levels of independent review. The first level includes detailed technical peer reviews on all new facility and expansion designs. The second level includes annual independent third-party tailings reviews, which are recognized as a leading practice for effective tailings and water dam stewardship. These annual reviews are focused on impoundment stability and integrity and provide an expert, independent opinion as to whether the tailings facility design and performance meet accepted international practices. In 2019, independent third-party tailings reviews were completed at all our operations except for Candelaria, which is planned for 2020. Results from the third-party reviews are carefully tracked, and progress updates are sent to the HSEC Committee each quarter.

Total Weight of Waste Rock Mined and Tailings Generated 2019

<table>
<thead>
<tr>
<th>Unit</th>
<th>Candelaria</th>
<th>Chapada</th>
<th>Eagle</th>
<th>Neves-Corvo</th>
<th>Zinkgruvan</th>
<th>Total</th>
<th>Waste Rock</th>
<th>Tailings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thousand Tonnes</td>
<td>11,796</td>
<td>15,756</td>
<td>610</td>
<td>3,459</td>
<td>10,986</td>
<td>41,367</td>
<td>96,490</td>
<td>10,000</td>
</tr>
</tbody>
</table>

Note: Chapada data are for the post-acquisition period of July to December 2019.
Environment

Waste Rock Management

Approximately 97.4 million tonnes of waste rock were mined across all of Lundin Mining’s operations in 2019, including Chapada for the post-acquisition period of July to December, 98% of which was mined at the Candelaria and Chapada open pit operations. In 2019, 64% of the waste rock mined underground was not brought to the surface, being used underground for mine stabilization. Some waste rock that was brought to the surface for operational scheduling reasons was subsequently returned underground as rockfill. Management of waste rock and any identified risks are summarized individually for our operations as follows.

Candelaria

At Candelaria, the waste rock that is not used for the construction of tailings facility embankments on site is stored in terraced surface waste depositories located immediately to the north of the open pit and south of the open pit and plant area. Seismic stability was a key factor in the design of the waste rock depositories, which extend over approximately 2,130 hectares. The waste rock at Candelaria has been classified as having a low potential for acid generation. Due to the arid climate and lack of groundwater infiltration, no specific ARD controls are required. Waste rock placement is designed to reduce “shadow effects,” thereby mitigating the potential for environmental and visual impacts on the neighbouring Tierra Amarilla community.

Chapada

Prior to Lundin Mining’s acquisition of Chapada, waste rock material from the three open pits was placed in a number of storage piles located adjacent to the perimeter of each pit. At the end of the reporting period, waste rock was added to existing stockpiles and covered an area of approximately 740 hectares. Geochemical characterization of waste rock undertaken prior to acquisition identified that a considerable portion of the waste rock has the potential to generate ARD. Historically, the mine operation attempted to segregate potentially acid generating (PAG) waste from non-acid generating waste in separate waste rock piles or to strategically place PAG waste in a manner that would reduce the potential environmental impacts such waste might cause. Currently, the operation utilizes compacted low-permeability soils as a storage pile base layer to minimize impacts to groundwater and employs a paddock dumping technique to reduce ARD generation. Static testing results are utilized in its geological block modeling to assist in waste management planning, as well as regularly sampling seepage from the tailings dam and waste rock dumps. A priority for Lundin Mining since acquisition has been to review available geochemical characterization and environmental monitoring data to evaluate risks or impacts arising from Chapada’s existing waste rock piles. Our aim is to improve Chapada’s overall waste rock management practices, which, when combined with enhanced water management practices, will underpin a comprehensive ARD Management Plan aligned with Lundin Mining’s environmental standards and policies. This review and evaluation process will continue in 2020.

Eagle

At the time of mine closure, all waste rock from Eagle mine is required by permit to be deposited underground. Following closure, the mine will be flooded resulting in an oxygen-deficient environment that is ideal for preventing the potential generation of ARD. During operations, the waste rock is, therefore, generally managed underground to reduce the potential for ARD generation, in addition to reducing the environmental and financial impact of hauling aggregate to the site for use as backfill to stabilize previously mined areas. Due to mining schedule constraints, some waste rock must be temporarily stored on the surface at the mine site and progressively returned underground. The surface storage facility is fully lined and all water from that facility is collected for treatment at the mine water treatment plant. At the close of 2019, the temporary waste rock storage area extended over approximately 3.2 hectares.

Neves-Corvo

Neves-Corvo’s comprehensive Waste Management Plan is designed to minimize or eliminate the potential for ARD generation in its waste rock. Waste rock with acid potential is retained in the underground mine and used as backfill to stabilize previously mined areas as often as possible. The remainder of the waste rock is stored in a temporary waste rock storage facility until it is ultimately used in the tailings facility for the construction of internal berms and cell covers. The temporary storage facility on the surface extended over approximately 9.1 hectares at the close of the reporting period and incorporates a peripheral drainage system to allow the collection and management of contact water.

Zinkgruvan

Zinkgruvan does not maintain waste rock stockpiles. All waste rock is used underground to stabilize previously mined areas or is used in the construction of on-site access roads or tailings facility embankments. Characterization studies for ARD potential have shown that the waste rock poses no immediate or long-term risk of generating ARD, due to the low sulphide content and the presence of calcareous minerals with buffering capacity. As a precaution against the potential for elevated metals concentrations in water, the use of waste rock at the surface is restricted to tailings facility embankments and road sections where contact water is directed into the tailings facility.

Environment
Effective water quality monitoring systems are implemented for timely detection of any changes to water quality or aquatic biodiversity that might be attributable to our activities. Lundin Mining reports both planned and unplanned water discharges from the regulated discharge points at our operations. None of our water discharges are re-used by another organization.

During 2019, probabilistic water balances were developed at Neves-Corvo, Zinkgruvan and Chapada to provide an additional water management tool for each site. This predictive tool will allow us to be more proactive and helps us to continue developing a better understanding of these operations in the context of their catchment water positive and water-stress levels. Eagle also continued to develop its water balance model for managing the water at the former open pit where it places its tailings. Our future efforts in water management will include an increased focus on the resilience of site water management infrastructure, and processes and procedures concerning the potential for more frequent and extreme weather events in changing climatic environments.

Our Performance
Reflecting on the diversity of natural environments in which Lundin Mining's operations are located, our mines rely on different sources of water for operational and potable water needs. In view of our commitment to transparency, including at a local level, we disclose our primary water sources are significantly supplemented by process water reclaimed from our tailings facilities and water treatment plants for re-use by our operations.

Since Lundin Mining's acquisition of Chapada in July 2019, we have been developing a new Company-wide water balance. Preliminary models have enabled us to include Chapada within our water withdrawal accounting for the post-acquisition period of July to December 2019. We have opted to not report a Company-wide water recycling rate for 2019, while the methodologies used by our operations are under review to ensure consistency in approach across all mines now in our portfolio. It remains the case that all our sites have continued to seek to reduce abstraction from natural water systems through improved operational efficiency, water re-use and water recycling.

Lundin Mining withdrew a total of 34,702,540 m³ of water in 2019, representing an increase of approximately 2.8 million m³ compared to 2018 as a direct result of the addition of Chapada into our withdrawal balance. When considering only our original four operations pre-acquisition, water withdrawal in 2019 was reduced by 2.7 million m³. Our operations at Zinkgruvan and Neves-Convo withdrew additional municipal water (approximately 1,700 m³) and surface water (approximately 301,000 m³), respectively, for supply to local residents. These volumes were provided as a service to the local community and, therefore, are not included in our operational water withdrawal accounting. Also excluded from our water accounting are natural flows that our Zinkgruvan (644,417 m³) and Eagle (664,320 m³) operations do not use but route via closed systems to maintain a number of local surface water environmental flows.

Lundin Mining discharged a total of 14,253,121 m³ of water in 2019. Our operations strive to be always-compliant with their water discharge licence conditions, and although there was only a small number of non-compliances in 2019 in comparison to the hundreds of water-quality parameters measured in our discharges each year, we recognize the importance of compliance, not only for regulatory purposes but also for protection of the environment and downstream users. As a result, our sites always implement action plans to address the underlying conditions for non-compliances, with the aim of improvement in the future. There were no unplanned discharges from our operations in 2019.
Environment

Water Withdrawal by Source, by Operation 2019

Regulated Water Discharge to the Environment, by Operation 2017-2019

Lundin Mining’s Water Withdrawal 2019
- Total of 34.7 million m³ withdrawn across all five operations
- 56% of total (19.6 million m³) was seawater withdrawn for treatment
- 77 million m³ of treated seawater pumped for use at Candelaria, the remainder being returned to the sea

Lundin Mining’s Regulated Water Discharge 2019
- 14.3 million m³ discharged across all five operations
- 75% of total discharge was seawater returned to the ocean
- 25% of total discharge was to a freshwater environment

Key water trends and progress are summarized individually for our operations as follows.

Candelaria
Our Candelaria Complex has continued to demonstrate a proactive approach to responsible water stewardship, thereby reducing pressure on precious water resources in the Atacama Region. Candelaria’s operational water requirements are met entirely through supply from the Company’s water desalination facility at Punta Padrones, and the operation continues planning for its objective of meeting its total water demand, including potable supplies, from the desalination plant by July 2025. Candelaria has continued to maintain a strong focus on water use efficiency, and in 2019 reduced its overall water withdrawal by 2.2 million m³. Notably, the operation ceased its use of treated municipal wastewater in April, significantly earlier than the 2027 regulatory requirement, enabling these resources to be redirected to other uses in this water-scarce region. Furthermore, in recognition of the importance of the Sector 4 Copiapó River groundwater resource to local communities, Candelaria no longer routinely uses groundwater from its permitted well for potable supplies, following a commitment to mitigate any effects on the local aquifer related to use of groundwater that seeps into the Alcaparrosa underground mine. Candelaria’s well is currently assigned for use by the local water company.

Chapada does not have a regulated water discharge.

Provided below are details of the metal load in our regulated discharges for 2019. Since the chemical parameters measured by our operations are site-specific, discharge load data do not exist for all parameters at all sites.

Annual Metal Load in Regulated Discharge (kg)

<table>
<thead>
<tr>
<th>Operation</th>
<th>Arsenic</th>
<th>Cadmium</th>
<th>Copper</th>
<th>Nickel</th>
<th>Lead</th>
<th>Zinc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candelaria (to sea)</td>
<td>Not measured</td>
<td>Not measured</td>
<td>294</td>
<td>Not measured</td>
<td>Not measured</td>
<td>458</td>
</tr>
<tr>
<td>Eagle Mine (to groundwater)</td>
<td>0.11</td>
<td>0.02</td>
<td>0.11</td>
<td>0.22</td>
<td>0.11</td>
<td>1.10</td>
</tr>
<tr>
<td>Eagle Mill (to river)</td>
<td>0.63</td>
<td>0.12</td>
<td>1.98</td>
<td>20</td>
<td>0.61</td>
<td>6.20</td>
</tr>
<tr>
<td>Neves-Corvo (to river)</td>
<td>0.22</td>
<td>0.02</td>
<td>2.47</td>
<td>1.12</td>
<td>0.10</td>
<td>3.12</td>
</tr>
<tr>
<td>Zinkgruvan (to river)</td>
<td>16.76</td>
<td>1.50</td>
<td>3.90</td>
<td>Not measured</td>
<td>110</td>
<td>1,167</td>
</tr>
</tbody>
</table>

Chapada does not have a regulated water discharge. 1

Chapada data included for the post-acquisition period of July to December 2019.

1 Candelaria metal loads originate from the seawater that was abstracted for the desalination process.

Water Withdrawal by Source, by Operation 2019

Chapada does not have a regulated water discharge.

1 Chapada data included for the post-acquisition period of July to December 2019.

Regulated Water Discharge to the Environment, by Operation 2017-2019

<table>
<thead>
<tr>
<th>Operation</th>
<th>Million Cubic Metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>Candelaria (Pacific Ocean)</td>
<td>11.58</td>
</tr>
<tr>
<td>Eagle Mine (Groundwater)</td>
<td>0.29</td>
</tr>
<tr>
<td>Eagle Mill (Middle Branch Escamilla River)</td>
<td>1.25</td>
</tr>
<tr>
<td>Neves-Corvo (ECisco Creek)</td>
<td>0.09</td>
</tr>
<tr>
<td>Zinkgruvan (Ekershyttebäcken Creek)</td>
<td>1.88</td>
</tr>
<tr>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>Candelaria (Pacific Ocean)</td>
<td>10.73</td>
</tr>
<tr>
<td>Eagle Mine (Groundwater)</td>
<td>0.22</td>
</tr>
<tr>
<td>Eagle Mill (Middle Branch Escamilla River)</td>
<td>1.25</td>
</tr>
<tr>
<td>Neves-Corvo (ECisco Creek)</td>
<td>0.07</td>
</tr>
<tr>
<td>Zinkgruvan (Ekershyttebäcken Creek)</td>
<td>2.00</td>
</tr>
<tr>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>Candelaria (Pacific Ocean)</td>
<td></td>
</tr>
<tr>
<td>Eagle Mine (Groundwater)</td>
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<td>Neves-Corvo (ECisco Creek)</td>
<td></td>
</tr>
<tr>
<td>Zinkgruvan (Ekershyttebäcken Creek)</td>
<td></td>
</tr>
</tbody>
</table>

1 Chapada does not have a regulated water discharge.
Chapada
Chapada’s three open pits capture rainwater, surface runoff, and infiltrating groundwater and were the primary source of water for operational requirements from July to December 2019. Additional rainwater was collected within the catchment of Chapada’s tailings facility and storage ponds. This contribution by Chapada accounts for Lundin Mining’s increases in both precipitation and groundwater withdrawal in 2019 compared to previous years. Chapada is also permitted to source freshwater from the nearby Rio dos Bos, subject to a daily rate restriction during the wet season and with prohibition at times when the river flow rates fall below a specified threshold, which are typical during the dry season. Withdrawal from the river has not occurred since 2017. Potable water is obtained through the pumping and treatment of groundwater from two Company-owned groundwater wells under permit.

Contact water collected from the mineral processing plant area is recirculated for operational use. Surface water from the waste rock piles evaporates, infiltrates and is released to the environment. There is no legislation regulating discharge by conducting thorough studies and making operational adjustments to prevent similar occurrences in the future.

Eagle Mine
Our Eagle operation is unusual among our mines in that its water withdrawal volumes are largely beyond its direct control, being influenced by annual precipitation levels and groundwater infiltration into both the underground mine and the former Humboldt Mill open pit (where Eagle now stores its mill tailings). In this context, the operation needs to manage water that exceeds its requirements, reducing the necessity for, and the operation’s ability to, recycle water. In 2019, Eagle proactively reduced groundwater use at the mill site by replacing intake from its industrial well with additional reclaimed water from the tailings facility for processing operations. Eagle’s total water withdrawal quantities in 2019 were comparable to the previous year, albeit with a greater amount of precipitation to manage.

Precipitation, snowmelt and operational requirements to manage the water levels within the storage basins and tailings facility also influence Eagle’s discharge volumes, which were higher in 2019 compared to 2018 but comparable to earlier years at both the mine and mill sites. Eagle uses a comprehensive treatment process for its mine site water, culminating in reverse osmosis and final pH adjustment, followed by discharge to groundwater within the mine’s boundary. Treatment of the mill site discharge comprises metals precipitation, sedimentation and ultrafiltration followed with reverse osmosis on a portion of the water prior to discharge to the Middle Branch Escanaba River, from where the flow eventually enters Lake Michigan.

Low-volume, off specification discharges were reported in the mine site discharge on isolated occasions, due to discharge being outside of the permitted range for pH. In these instances, the plant automatically shut down the discharge as designed. The mill site also received non-compliance notifications for its discharge, to which Eagle responded by conducting thorough studies and making operational adjustments to prevent similar occurrences in the future.

In 2019, no water bodies or related habitats were significantly affected by water or runoff discharges at our Eagle operations. Monitoring is routinely undertaken and will be continued throughout operations, closure and the post-closure period.

Eagle’s withdrawal from the Middle Branch Escanaba River is not included in our water accounting as it is not used, but rather is pumped directly to an adjacent wetland to maintain environmental flows.

Neves-Corvo
Neves-Corvo continued to promote sustainable practices, consistent with its key water management objectives, to reduce the consumption of fresh water, maximize water storage capacity inside project boundaries and reduce discharges. The operation continues to benefit from water management infrastructure upgrades implemented in recent years. Increased recycling capability allows the operation to reduce freshwater intake and reduce, or even cease, discharge according to natural water flow rates in the Ceiras River. Neves-Corvo successfully met its objective to withdraw a smaller quantity of surface water in 2019 compared to the previous year. Neves-Corvo has revised its calculation methodology for mine water withdrawal, the quantity of groundwater withdrawn from the mine in 2019 was approximately a third of previously reported values. Neves-Corvo is also newly reporting withdrawal from a Company-owned groundwater well location at the Setúbal port facility that has not previously been included in our water accounting (11,289 m³ in 2019).

Neves-Corvo’s water treatment system is based on an oxidation process, followed by pH adjustment, metals precipitation and sulphate precipitation. A clarifying step is used to remove solids, and then a reverse osmosis process is completed for some of the water prior to discharge. In 2019, the operation discharged half the volume of water discharged in 2018, over just four months of the year; the discharge was in full compliance with permitted limits. As a result of the smaller discharge volume, the discharge chemical load was reduced for almost all parameters measured.

Neves-Corvo mine continued its focus on water management and aquatic biodiversity initiatives, with ongoing monitoring of the previously reported, localized biodiversity impact resulting from water discharge into the Dovers River. In 2019, local engagement initiatives resulted in the Company’s development of potential mitigation projects for the effects of drought-related, prolonged herbicide dryness on species diversity in the river. The operation has also continued its site-wide investigation to enhance its understanding of the local hydrogeology.

Candelaria Supports Regional Environmental Education
Education on the surrounding environment, biodiversity and its inhabitants is an important aspect of sustainable development in any region. Understanding that Candelaria contributed financial support to scientific research and publication which led to the launch of the book Reptiles of the Atacama Region. It is dedicated to understanding the different species and ecology of reptiles in the Atacama Desert in Chile, to preserve knowledge of local ecosystems and promote local youth interest in science and reading. The book represents the culmination of years of scientific research into the diverse reptilian ecology of Chile. Copies of the book were delivered to the Municipality of Caldera, and to schools in the community for educators to include in their lessons.
Environment

Zinkgruvan
Zinkgruvan is our only operation where we have assessed that operational water withdrawal has the potential to have a significant effect on water sources. This assessment is based on the criterion that the lake sources are considered to have high value or importance to local communities. Part of the operation’s supply is sourced from local lake systems that cover an area of approximately 3.6 km². These lakes are not of protected status and are not known to be of significant biodiversity value. The operations team continues to responsibly manage conditions at the lakes and adjusts its practices to minimize impacts on the community and the environment. It achieved full compliance of its understanding of influences on the local water supply aquifer, and in December, works resulting from overtopping of ponds that collect seepage water from the tailings facility. The releases were reported to the relevant authorities and potential impacts investigated. Data availability limits a definitive assessment of the impact on the creek; however, since the concentrations of most parameters were within the acceptable range for surface waters and the releases were diluted by the water flowing in the creek, no lasting environmental impact is anticipated. Water management and monitoring procedures have been enhanced to ensure that water levels in the collection ponds are maintained at a safe operating level, minimizing the potential for a recurrence.

Zinkgruvan continued its focus on the responsible use of surface water, given the environmental and recreational value of the local lakes from which water is supplied, reducing the volume of water withdrawn for operational purposes in 2019. Zinkgruvan’s precipitation withdrawal increased in 2019, partially due to higher precipitation levels compared to 2018, but also due to improved data capture.

Zinkgruvan’s discharge water treatment process is based upon residence time in a clarification pond. The chemical load in Zinkgruvan’s permitted water discharge increased for some parameters in 2019, as changes to operations at the tailings facility and the clarification pond that had commenced in 2018 were ongoing. Guideline values were exceeded in Zinkgruvan’s discharge for some parameters during that period, although the operation addressed this issue and achieved full compliance with the guideline values by the end of April 2019.

Two unplanned releases to a creek that lies adjacent to the Zinkgruvan property occurred in 2019, both resulting from overtopping of ponds that collect seepage water from the tailings facility. The releases were reported to the relevant authorities and potential impacts investigated.

CLIMATE CHANGE, ENERGY AND GHG EMISSIONS

Materiality
Climate change and greenhouse gas (GHG) emissions are material topics for Lundin Mining due to the energy-intensive nature of mining and mineral processing operations and resultant carbon footprint. The Company acknowledges climate change as an international and community concern. It is important for Lundin Mining to demonstrate a responsible approach to energy consumption and resulting GHG emissions, along with preparedness for regulatory and physical changes associated with climate change.

Our Approach
Lundin Mining recognizes the need for effective approaches to managing climate-related responsibilities, especially in consideration of the remote locations in which we operate, the energy-intensive nature of our extractive industry sector, and the sometimes limited availability of renewable energy in national energy supply. While acknowledging our responsibility to manage our GHG emissions, we also recognize the importance of our role in sustainably providing raw materials to support the global transition to a low-carbon future. The commodities we mine, including copper, zinc, nickel and lead, are critically important in technologies and innovations such as solar panels, wind turbines and batteries for associated energy storage. Furthermore, our commodities are among the most-recycled materials on the planet, significantly contributing to the circular economy.

From Lundin Mining’s perspective, factors that are particularly relevant in our response to climate change include:

Factors that are relevant in our response to climate change

Factors that are relevant in our response to climate change include:

1. Engagement on climate-related issues
2. Climate-related risk & opportunity assessment
3. Measurement of effectiveness of initiatives
4. Design and implementation of actions to reduce our contribution
5. Adaptation to increase our resilience against identified risks

Our Approach
Lundin Mining recognizes the growing expectations of our investors with respect to our response to climate change and we engage actively with them to meet those expectations. We report annually to the CDP (Formerly Carbon Disclosure Project) Climate Change and Forestry programs, aligned with the Task Force on Climate-related Financial Disclosures (TCFD). Each year, CDP awards a score to submissions by companies, based on their comprehensiveness of disclosure, awareness and management of environmental risks, and best practices associated with environmental leadership. Lundin Mining retained a B score for our 2018 Climate Change report, a significant achievement within the context of a North America regional average score of C and a metallic mineral mining sector average score of C. Further disclosure on our climate-related practices is provided in our annual climate change submission to CDP.
Environment

Risks and Opportunities
Our operational sites are located across a wide geographical area and in a range of climatic zones, including arid (Candelaria), semi-arid (Neves-Corvo), tropical (Chapada) and temperate (Eagle and Zinkgruvan). Our operations assess risks and opportunities associated with climate change and approaches for reducing and/or mitigating its influences within the context of broadly anticipated scenarios of changing temperatures, changing precipitation, more frequent and severe extreme weather events, and changing regulation. The identified risks and opportunities are reported in greater detail in our GPD report.

Several governments or governmental bodies have introduced, or are contemplating regulatory changes in response to the potential impacts of climate change. Selected potential climate-related regulatory risks identified by our operations include:

• Regulation relating to emission levels and energy efficiency becoming more stringent, resulting in increased costs;
• Cumulative-effects concerns impacting permitting for future expansions;
• Financial impacts associated with increased tax and regulation focused on lowering emissions, such as carbon tax or cap-and-trade; and
• Regulatory changes placing restrictions on access to certain water sources.

To mitigate impacts to our business associated with potential regulatory risks, our operations continue to closely track regulatory developments in their respective jurisdictions with the support of corporate sustainability professionals.

Climate-related physical risks can also have an adverse effect on some of the Company’s operations. Selected potential physical risks identified include:

• Extreme rainfall events leading to the need for the emergency discharge of untreated water or uncontrolled discharge of stormwater, compromising site infrastructure or damaging road, railway or port infrastructure; and
• Prolonged droughts impacting the availability of water resources, resulting in the need for increased management of particulate emissions; and/or increased risk of wildfire on neighbouring land with associated smoke and/or site access issues.

Our operations have also identified climate-related opportunities for the support of local communities. In recent years, some of our operations have assisted local government departments, emergency services and communities during flood and wildfire events. Some operations may be in a position in the future to assist with the temporary provision of water in the event of shortages. Similarly, potential opportunities could be identified for maintaining environmental flows in watercourses and lakes with associated ecosystem benefits.

Opportunities associated with emerging low-carbon and more energy-efficient technologies are also being tracked by our operations and integrated into our business strategies. Opportunities currently being tracked or implemented include fuel-switching, negotiation of contracts to increase the use of renewable and lower carbon energy sources and improving energy efficiency.

Climate Change Adaptation
At Lundin Mining, it is recognized that climate action and innovation are integral to responsible mining at all stages of the mine life cycle. Our Amauta exploration team, located in a remote mountainous region of Peru, assessed their energy needs and alternative methods of generation. The team sought to implement innovative ways to reduce reliance on diesel fuels, reduce costs and improve the quality of life for project workers and local communities. In 2019, this installation of a new solar power system helped the team minimize risks and strengthen their emergency response as a result of the system’s independence and reduced need for transmission cables providing electricity for the camp’s offices, exterior lights and various other camp facilities.

Powdering Peruvian Exploration with Solar Energy

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Energy and GHG Emissions

Our Approach
Managing energy consumption and greenhouse gas (GHG) emissions is a high priority for Lundin Mining as we continue to focus on our climate-related risks and opportunities. All our operations track upcoming changes to energy and GHG regulations and policies, allowing them to plan for any adjustments required for future energy management. Corporate systems for efficient tracking of energy consumption were introduced for our operations in 2019, streamlining ongoing assessment processes for energy use efficiency and GHG emissions reduction opportunities.

Our Performance
In Europe, both our Neves-Corvo and Zinkgruvan operations comply with regulatory requirements through the completion of periodic energy audits and the submission of formal plans for energy efficiency to the authorities. During 2019, Neves-Corvo continued the development of its Plano Verde (Green Plan) intending to provide a framework for the development of initiatives that align with national commitments to emissions reduction. Zinkgruvan is in preparations for its three-year energy audit cycle, due 2020. Our Candelaria operation also conducts routine energy audits following regulatory requirements and made the significant business decision in 2019 to introduce an Energy Management System that will include all facilities in the Candelaria Complex, to gain certification under the ISO 50001 Energy Management System standard in the future.

Eagle Mine’s operations team has continued to identify opportunities for more efficient energy usage, where possible, across its sites. Typical of the global mining sector, our operations are energy intensive, consuming significant quantities of fuel and electricity for mining and mineral processing.

At Lundin Mining, we are committed to a structured and transparent approach to our energy consumption and GHG emissions reporting. Details are provided in Appendix B.

When analyzing our energy consumption and GHG emissions data, we consider several important factors that contribute to variations between sites and within sites from year to year:

• Fuel and electricity consumption are highly influenced by the relative scale of each operation;
• Electricity consumption is closely related to the quantity of ore milled since most of our electrical energy is used during the processing of ore to produce our concentrate products;
• Underground mines consume additional electrical power for ventilation, lighting, hoisting, conveyors, pumps and other equipment;
• Open pit mines typically consume higher quantities of fuel due to additional haulage distances for waste rock and ore; and
• Operating conditions change over time with the ore characteristics (ore grade, hardness, depth and accessibility), expansion projects (mining and haulage non-mineralized rock and extending into new mine areas and construction activities), haulage distances for ore and waste rock, and on-site construction projects (new buildings, offices, facilities, tailings facility embankment raises, drainage and water storage projects).
Environment

Energy Within Lundin Mining
Total fuel and electrical energy consumption within Lundin Mining in 2019 was 10,738,795 GJ (Gigajoules) representing an increase of almost 1.7 million GJ (or 19%) compared to 2018, of which 1.4 million GJ was attributable to the inclusion in our inventory of Chapada’s energy consumption for the period of July to December. For comparative purposes, excluding the contribution from Chapada, our energy consumption increased by 3%.

We consumed slightly more fuel energy than electrical energy in 2019 (52% compared to 48%). Almost 98% of our fuel energy consumption was from diesel and almost 2% was from propane, with gas oil, bio pellets, biodiesel, gasoline, natural gas and LPG making up the balance. According to available data from our suppliers, 2% of our fuel supplies were from renewable sources.

The Candelaria Complex is our largest energy consumer across its mines, processing plants, desalination plant and port site. Lundin Mining’s total electricity consumption is heavily influenced by the relatively massive scale of Candelaria such that reductions in consumption at the complex in recent years, including in 2019, have had a positive impact on our overall electricity-consumption levels. However, Lundin Mining’s total electricity-consumption increased in 2019, largely due to the addition of Chapada to our portfolio, but also due to the continuing expansion of our underground mines to access ore at greater depths.

The total consumption of energy from fuel is strongly influenced by our Candelaria and Chapada open pit operations, where ore and waste haulage result in energy consumption from fuel exceeding that from electricity. Eagle Mine’s fuel consumption is influenced by the approximately 105 km ore haulage distance from the mine to the mill. At our remaining underground mines, energy consumption from electricity exceeds that of fuel.

Candelaria’s fuel consumption increased in 2019 as it continued to implement numerous projects, expansion-oriented and permit-driven, that required the mobilization of more equipment. Ore grade, ore accessibility and waste rock haulage distances were also relevant factors. Candelaria, with ongoing new projects and deepening of the pit resulting in an increased fuel consumption trend, focused on achieving measurable improvements in efficiency to minimize resulting impacts.

Due to the acquisition of Chapada, Neves-Corvo has become our third-largest energy consumer with its consumption reflecting its production levels, followed by our two smaller operations, Eagle and Zinkgruvan. As expected, corporate headquarters’ energy use was very low in comparison to our operational sites.

Scope 1 and Scope 2 GHG Emissions
To account for the acquisition of Chapada in July 2019, we recalculated our 2015 base year.

Lundin Mining 2015 Base Year Emissions
- Scope 1: 309,339 tonnes CO₂e
- Scope 2 (Location-based): 477,869 tonnes CO₂e
- Scope 2 (Market-based): 466,293 tonnes CO₂e

Our Scope 1 emissions, which result predominately from fuel used on site by Lundin Mining and contractors, have increased significantly since 2015, primarily associated with the expansion of our Candelaria, Neves-Corvo and Eagle operations; and, in the case of Candelaria, hauling waste rock and ore greater distances. Our Scope 2 emissions, which result from electricity consumption, have increased to a much lesser extent, primarily accounted for by the expansion of our Eagle and Neves-Corvo mines underground.

As expected, Lundin Mining’s GHG emissions broadly correlate with our energy consumption trends – increased Scope 1 emissions (from increased fuel consumption) and increased Scope 2 emissions (from increased electricity consumption). Our market-based Scope 2 emissions continue to benefit from Zinkgruvan’s investment in a 100% renewable electricity supply supported by a Guarantee of Origin. In the future, we will also realize the positive effect of Candelaria’s contractual agreement with its supplier for an increase in renewables to a minimum of 80% in the energy mix, prioritizing wind and solar energy, commencing in 2023. In our comparisons across operations, we use location-based Scope 2 data.

Renewable Content of Fuels Consumed by Lundin Mining 2019

<table>
<thead>
<tr>
<th>Renewable Content of Fuels Consumed by Lundin Mining 2019</th>
<th>Energy From Fuel (GJ)</th>
<th>Energy From Electricity (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Renewable (GJ)</td>
<td>107,989</td>
<td>1,143,375</td>
</tr>
<tr>
<td>Renewable (GJ)</td>
<td>5,477,611</td>
<td>5,155,420</td>
</tr>
</tbody>
</table>

Lundin Mining GHG Emissions 2017-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Scope 1 Location-Based</th>
<th>Scope 2 Location-Based</th>
<th>Scope 1 Market-Based</th>
<th>Scope 2 Market-Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>492,229</td>
<td>440,207</td>
<td>452,840</td>
<td>493,375</td>
</tr>
<tr>
<td>2018</td>
<td>490,222</td>
<td>440,575</td>
<td>452,085</td>
<td>493,802</td>
</tr>
<tr>
<td>2019</td>
<td>488,655</td>
<td>437,276</td>
<td>450,669</td>
<td>491,099</td>
</tr>
</tbody>
</table>

1 Chapada emissions data included from July to December 2019.
In 2019, our total Scope 1 GHG emissions increased by 24% compared to 2018, partly due to the inclusion of Chapada’s emissions in our inventory for the period of July to December, but also due to the increased fuel consumption at Candelaria. Our Scope 2 location-based GHG emissions increased by 4% due to the combined effect of Chapada’s contribution and slight increases in electricity consumption at our Eagle, Neves-Corvo and Zinkgruvan mines. Biogenic CO₂ emissions in 2019 are not included in our Scope 1 accounting, following GHG Protocol requirements, and are reported separately at 8,485 tonnes CO₂ reflecting an increasing trend in renewable content in fuels in Europe and Brazil. Fugitive GHG emissions from refrigeration and air-conditioning equipment at our operations form a very small portion (approximately 0.2%) of our total Scope 1 emissions.

Candelaria is the largest source of our GHG emissions due to the scale of the operations and associated energy consumption, with the contribution from our other mines reflecting their relative scale. Chapada will likely become our second-largest source of GHG emissions in 2020 following its first full year of operation in our portfolio, mostly due to fuel consumption (the source of Scope 1 emissions). Chapada and Zinkgruvan’s Scope 2 emissions benefit from a low national electricity emission factor; electricity consumption is for heating and ore haulage. Renewable energy content of regional and national electricity grids also influence these data; our Chapada and Zinkgruvan operations benefit from higher renewable content, while Eagle does not benefit in this way.

Chapada has the lowest intensity levels arising from the movement of significant quantities of material over relatively short distances. Candelaria’s low energy intensity levels also reflect the large tonnage of ore and waste rock excavated, although the haulage distances are greater. Our remaining three underground operations do not benefit from such efficiencies of scale, especially those located in colder climates that require additional energy for heating.

Since this metric describes energy consumption in relation to the quantity of ore and waste rock mined, any mine that consumes a significant portion of its energy for indirect operational purposes (e.g., heating) will have a higher intensity. Eagle has the highest energy intensity using this metric, since almost one-third of its energy consumption is for heating and significant amounts of fuel energy are consumed hauling ore approximately 105 km to the mill site, neither of which is reflected in the ratio between the amount of energy consumed and the amount of ore-plus-waste mined.

The decreasing trend in Lundin Mining’s energy intensity at Chapada and Candelaria reflecting large-scale movement of rock and the relatively high intensity at Eagle reflecting emissions associated with heating and ore haulage. Renewable energy content of regional and national electricity grids also influence these data; our Chapada and Zinkgruvan operations benefit from higher renewable content, while Eagle does not benefit in this way.

The increase in emissions intensity at our Neves-Corvo and Eagle operations in 2019 can be attributed to continued development and expansion works at these operations. Although total GHG emissions increased this year, associated with significant development and construction projects and factors associated with increasing mine age, efficiency improvements have been achieved overall in relation to mining activity.

**Energy and GHG Emissions Intensity**

Energy and GHG emissions intensity ratios allow an analysis of efficiency in the context of an organization-specific metric and are reported “per tonne mined.”

A decreasing trend in Lundin Mining’s total energy intensity, observed in 2018, has continued for our original portfolio of four mines and become more marked with the addition of Chapada. This demonstrates that, although total energy consumption increased this year, efficiency improvements have been achieved in relation to our mining activities.

Chapada has the lowest intensity levels arising from the movement of significant quantities of material over relatively short distances. Candelaria’s low energy intensity levels also reflect the large tonnage of ore and waste rock excavated, although the haulage distances are greater. Our remaining three underground operations do not benefit from such efficiencies of scale, especially those located in colder climates that require additional energy for heating.

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The decreasing energy intensity trend for Lundin Mining overall is also observed for GHG emissions intensity, again with a relatively low GHG emissions intensity at Chapada and Candelaria reflecting large-scale movement of rock and the relatively high intensity at Eagle reflecting emissions associated with heating and ore haulage. Renewable energy content of regional and national electricity grids also influence these data; our Chapada and Zinkgruvan operations benefit from higher renewable content, while Eagle does not benefit in this way.

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In addition to reporting our energy and GHG emissions intensity using the "per tonne mined" metric, we have continued our analysis of a range of metrics during 2019 to track our energy and GHG management efficiency. This is important for us as certain metrics are more meaningful for some of our operations than others, depending on internal factors, such as the type of mine, mine development activities and type of ore; and external factors such as the renewable content of the grid electricity supply. While we continue this analysis and while our operations are subject to significant changes in their energy input requirements associated with expansion projects and advancing mine age, we maintain a strong focus on operational efficiencies and have not set a corporate GHG emissions target at this time.

### GHG Emissions Intensity 2017-2019

<table>
<thead>
<tr>
<th>Location</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candelaria</td>
<td>0.055</td>
<td>0.063</td>
<td>0.069</td>
</tr>
<tr>
<td>Chapada</td>
<td>0.077</td>
<td>0.082</td>
<td>0.086</td>
</tr>
<tr>
<td>Eagle</td>
<td>NA</td>
<td>0.022</td>
<td>0.026</td>
</tr>
<tr>
<td>Neves-Covo</td>
<td>0.027</td>
<td>0.027</td>
<td>0.027</td>
</tr>
<tr>
<td>Lundin Mining Total</td>
<td>0.025</td>
<td>0.025</td>
<td>0.026</td>
</tr>
</tbody>
</table>

GHG emissions intensity: Scope 1 + Scope 2 (location-based) GHG emissions per tonne mined.  
1 Chapada data included from July to December 2019.

### Energy and GHG Outside Lundin Mining

As a step toward tracking selected Scope 3 GHG emissions associated with our value chain, we calculate energy consumption and GHG emissions associated with some transport activities that take place beyond our project boundaries to support our operations.

#### Energy Consumption and GHG Emissions Outside Lundin Mining 2019

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Energy Consumed</th>
<th>Scope 3 GHG Emissions (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 4: Upstream Transportation and Distribution</td>
<td>Transport of concentrate and some of our most significant imported raw materials</td>
<td>398,166 GJ</td>
<td>27,434 t CO₂e</td>
</tr>
<tr>
<td>Category 7: Employee Commuting</td>
<td>Transport by bus of some personnel</td>
<td>26,970 GJ</td>
<td>1,985 t CO₂e</td>
</tr>
</tbody>
</table>

1 Categories defined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

### GHG Emission Reduction and Energy Conservation Measures

During 2019, approximately 30 energy- and GHG emission-reduction initiatives were assessed and / or implemented across our operations. Systems to enhance data collection on these initiatives require further development, as currently, the benefits of several implemented initiatives are not quantified. Also, we have not included Chapada’s reductions in our 2019 estimates due to implementation being started before acquisition. It is estimated that annual savings of approximately 20,000 GJ and 2,000 tonnes carbon dioxide equivalent (CO₂e) may be achieved by energy reduction initiatives that were fully implemented by the end of 2019 and for which energy-saving estimates were available.

### Energy From Renewable Resources at Zinkgruvan

Zinkgruvan’s commitment to clean energy and climate action is demonstrated through its responsible sourcing and procurement practices. Since 2017, Zinkgruvan purchased electrical energy from 100% renewable resources directly from the Swedish national grid. Zinkgruvan utilized these renewable resources in 2019 to power its entire operation, from mining to processing, with the energy consumed equal to over 100,000 MWh of electricity over the year, representative of a transition toward clean energy consumption across all Lundin Mining operations.
Environment

Key aspects of our energy and GHG reduction programs and initiatives under investigation or implementation in 2019 are described below for each operation.

**Candelaria**
- Specialist committee, supported by specialist consultants, to progress the identification and implementation of energy-efficiency opportunities;
- Early-stage initiatives assessing the potential for re-use of wood to heat shower water and for on-site solar power plant related to the renegotiation of PPA with energy supplier from 2023;
- Continued implementation of a project comprising gradual replacement of lighting above and below ground; and
- Joint initiative with personal transport contractor for replacement of 18 diesel buses with electric buses.

**Chapada**
- Continuous Improvement Project for the reduction of diesel consumption resulting from truckload control;
- Implementation of electricity-saving initiative, involving reconfiguration of reclaimed water pipework from the tailings facility to the processing plant, reducing the need for boosters; and
- Implementation of energy-efficiency initiative within the processing plant, resulting in greater comminution power without increasing electricity consumption.

**Eagle Mine**
- Retention of a Continuous Improvement Lead and Steering Committee to evaluate and implement selected staff-provided recommendations, including energy-reduction initiatives;
- Ongoing assessment of the use of a fuel additive to reduce emissions and save on fuel consumption underground, and an ambient heating and cooling optimization project at the mine site; and
- Implementation of initiatives for lighting management in three areas at the mine site.

**Neves-Corvo**
- Development of a Plan to Verde (Green Plan) as a framework for progressive investigation and implementation of GHG emission reduction initiatives;
- Continued implementation of changes to lighting above and below ground;
- Implementation of energy- and GHG emission-reduction projects continued, including several retrofits projects in the processing plant to improve efficiency; and
- Replacement of a diesel forklift with an electrical forklift at the site’s industrial waste park.

**Zinkgruvan – Lake Åmmeberg**
- Early-stage assessment of ventilation shaft heating initiatives, one assessing the use of biopellets and one assessing the use of heat recovery from mine water;
- Continued implementation of initiatives including lighting management in new areas;
- Implementation of a switch to a new electric wheel loader; and
- Maintenance of 100% renewable-energy source for electricity supply, supported contractually by Guarantee of Origin, since switching on 1 January 2017.

**Corporate Office, Toronto**
- Participation in “ForeverGreen,” a tenant-engagement program where one of the core components is energy efficiency and carbon-emission reduction; and
- Signed corporate sponsorship agreement with Coalition for Energy Efficient Communion (CEEC) for the promotion of industry uptake up of energy-efficient, lower footprint mining.
Neves-Corvo Celebrates Tree Week 2019 With 400 Holm Oaks

Neves-Corvo celebrated the United Nations International Day of Forests, March 21, 2019, which promotes the importance of forests and trees in our lives, addressing issues such as deforestation. The preceding week celebrated World Tree Week. To contribute to the cause, Neves-Corvo planted 400 holm oak trees, also known as Quercus ilex, in the areas surrounding the mine. Holm oaks are a protected species of evergreen oak native to the Mediterranean region; they occur naturally near the operation. The planting included 23 local participants, including young children ready to learn about protecting and promoting their environmental future. The team at Neves-Corvo spent the day spreading awareness and highlighting the importance of sustainability and environment protection to community members and neighbours of the operation.

Social Aspects of Mine Closure Planning

Mine closure plans that incorporate both physical rehabilitation and socio-economic considerations are an integral part of the mine life cycle. Mines should be designed so that future public health and safety are not compromised, after-use of the site is beneficial to affected communities, and adverse socio-economic impacts are minimized while socio-economic benefits are maximized.

At Eagle Mine, which is currently forecast to close circa 2025, social programs have been developed with closure in mind. In preparation for closure, mine representatives provide annual updates to local government to explain tax structure changes and provide budget recommendations related to closure. In 2019, Lundin Mining held mine closure workshops to review the current mine closure programs and mine closure costs ensuring plans are aligned with the Company’s Procedure for Mine Closure Planning.

AIR EMISSIONS, NOISE AND VIBRATION

Air emissions, noise and vibration were not identified as material topics during our materiality assessment process. However, we recognize that these can be of relevance for the mining sector, frequently being of particular interest or concern to local communities, as borne out by grievances registered at our sites in 2019. For this reason, we include some information concerning the subject areas in our report.

Our Approach

Lundin Mining’s objective is to minimize disturbance to our neighbouring communities and the surrounding environment from air pollutants, noise and vibration emissions arising from our operations. Management of oxides of nitrogen and sulphur (NOx and SOx) and particulate emissions (dust) by mining operations is important for employees and contractors, the surrounding communities and the environment. Dust control is particularly significant at Candelaria, located in an arid area with limited natural vegetation and which hosts several other industrial and agricultural operations, resulting in considerable lateral particulate matter in the air. Candelaria employs processes and technology to monitor and manage air quality impacts and regularly reviews and updates them. In January 2019, Candelaria became aware that the Ministry of the Environment had commenced a technical review of the air quality of the Copiapó and Tierra Amarilla areas to determine if they might be declared a saturated zone for purposes of Chilean law. Later in 2019, the local industry and government agreed to work together to voluntarily develop and propose mitigation measures that would remove the need to formally declare the area as a saturated zone.

Lundin Mining continues to manage noise and vibration emissions from our sites with the primary aim of minimizing disturbance to local communities. Measures employed include noise mitigation works where required, restricting activities with greater noise emissions to daytime hours whenever possible and informing local communities of blasting times in advance.

Our Performance

Although Chapada, Eagle and Neves-Corvo have regulated NOx and SOx air emissions, Chapada was the only operation required to undertake compliance monitoring in 2019, and full compliance was achieved. In addition to compliance monitoring required at some of our sites, particulate matter is routinely measured to assess impacts from our Neves-Corvo operation in the neighbouring villages of Graça, Corvo and Neves. Candelaria monitors particulates for the authorities at official Community Status monitoring stations in the communities of Tierra Amarilla, Caldera and Nartoco. The data collected represents the cumulative effect of a range of sources of particulates in the region, including from other mines and a smelter.

In 2019, all our operations were in full compliance with regulated limits for particulate emissions. Occasional exceedances of limits recorded at the off-site Community Status monitoring stations are not considered by the authorities to be non-compliances for Candelaria, due to the range of particulate sources that are not related to Candelaria’s activities.

Noise-mitigation initiatives undertaken in recent years at Neves-Corvo and Zniguan have reduced emissions and improved compliance. At the Neves-Corvo ZSP, construction activities with the potential to cause noise disturbance were undertaken during daytime hours only. Furthermore, noise mitigation measures were incorporated into the expansion design to minimize noise emissions.

Candelaria Partners With Tierra Amarilla for Cleaner Streets

Trusted and meaningful partnerships between Lundin Mining and local municipalities play a critical role in promoting sustainability and safety in our communities. An example of this in action is Candelaria’s partnership with Tierra Amarilla, where they provided the community with three new industrial street sweepers. The aim of the initiative was for Candelaria to showcase pride in vibrant Tierra Amarilla and maintain clean streets for the safety of all residents and the work continues in 2019. The site team handled the delivery of the equipment and quickly put the sweepers to work in the presence of community members, local authorities and Lundin Mining executives.
Environment

Neves-Corvo’s Partnership With the League for the Protection of Nature

Neves-Corvo is located in an area of High Biodiversity Value. Since its inception, the operation has integrated preservation of biodiversity and local species into its business objectives. Through meaningful partnerships and careful project planning, Neves-Corvo has contributed to the ecological health and well-being of local species and habitats for many years. To continue the work, a partnership was established in 2019 with the League for the Protection of Nature (LPN) and their Centro de Educação Ambiental do Vale Conçalinho (CEAVG) project to create an environmental education centre for their neighbouring communities. The goal of the project is to present environmental information in an accessible, entertaining way with an emphasis on local cultural values and the history of the region. It will also provide information and tips on enjoying the local trails and exploring the Special Protection Zone. The CEAVG project covers the counties of Castro Verde, Almodôvar, Mértola, Ourique and Aljustrel.

Biodiversity and Land

Although not identified as a material topic during our materiality assessment process, Lundin Mining considers its role in biodiversity stewardship to be a fundamental sustainability responsibility and therefore chooses to include some details in our report.

Our Approach

Lundin Mining contributes to biodiversity management through the proper assessment of biodiversity conditions, minimization of habitat degradation and contributions to habitat restoration during the life of mine cycle.

Our objectives for biodiversity management include considering biodiversity-related information and management systems during due diligence assessment programs, undertaking comprehensive biodiversity baseline studies to document conditions before the development of new mines or significant expansion beyond a current mine’s footprint, monitoring biodiversity management programs and promotion of sustainable management of living natural resources through the fostering of partnerships that seek to integrate conservation needs and development priorities, and aiming to include community-based knowledge in the development of the plans, where available.

Our Performance

Our operational sites have continued to progress the alignment of their existing biodiversity management plans to the corporate requirements set by the Company, including compliance with the requirement to prepare and update their biodiversity action plans on an annual basis, identifying biodiversity risks and opportunities, and to inform the development of operational plans at each site.

Neves-Corvo’s lands lie adjacent to the Oeiras River, a High Biodiversity Value Area integrated into the Guadiana Valley Natural Park as part of the European Natura 2000 network. Conservation of the Oeiras River habitat is one of the highest environmental priorities for Neves-Corvo.

In Sweden, part of our Zinkgruvan operational area lies within the Krasila Nature Reserve, which is a popular spot for hiking. A minor part of Lake Viksjön lies within this reserve and our Zinkgruvan operation plays an important role in managing the water level of the lake while maintaining the flow rate of a nearby creek within a valley of high natural value. There are no protected or High Biodiversity Value Areas within or adjacent to our Candelaria or Eagle sites.

Chapada is located within a remado aberto boisio, or low, open savannah region of Brazil. There are no protected areas within the property boundaries or in the region surrounding the operation. Prior to the development of the mine, the land was zoned as a legal reserve. When the zoning was changed to permit mining, the legal reserve was relocated approximately 23 km north of the site; the reserve is managed by Chapada, along with an environmental education centre.

Species of Interest

Habitats hosting three critically endangered and 13 endangered species, as defined by the International Union for Conservation of Nature (IUCN) Red List and national conservation lists, can be found in regions where we have operations. The monitoring and protection of all Red List species are addressed in the relevant biodiversity management plans developed and implemented by each site. This year, Zinkgruvan reported the findings of biodiversity studies conducted around the receiving environment for its treated discharge water; and wych elm (Ulmus glabra) was identified, a critically endangered species due to the impact of Dutch elm disease in Europe.
Environment

Some of the significant biodiversity management actions implemented or continued, and our engagement activities for biodiversity conservation, are summarized below by site and detailed in case studies throughout the report.

### Candelaria
- Extensive biodiversity monitoring programs to periodically assess desert flora and fauna in the mine complex region;
- Coastal marine monitoring program to assess potential impacts upon aquatic life and fish resources from the desalination plant’s seawater abstraction and discharge process in addition to the port facilities;
- During 2019, 4 hectares of trees were planted, completing a project to plant 10 hectares of native trees in the area of Candelaria’s Alcaparrosa mine;
- Continued relocation of species of cactus and reptiles from the footprint of the Los Diquest tailings facility and waste rock expansion projects; and
- Voluntary funding of the publication of a book about Reptiles in the Atacama region, in association with local experts and the University of Antofagasta.

### Chapada
- Monitoring of species of fauna, flora, ichthyofauna, and benthic invertebrates to support new permit applications;
- Ownership and management of 1,651 hectares of forest reserve as compensation for land used for the mine; includes a nursery for the growth of native cerrado plants for planting in deforested areas;
- A plant survey and carbon-capture program commenced at the site’s reserve in 2019 and will continue in 2020; and
- Relocation programs for selected flora and fauna species in the event of permitted extensions to the site footprint.

### Eagle Mine
- Annual flora, fauna and aquatic surveys and threatened or endangered species assessments at the mine and mill sites and surrounding areas; comparison of results to baseline data to assess any changes that could be potentially attributable to mining operations; and
- Rigorous management of discharges to ensure the downstream water environment and the ultimate receiving water bodies for the discharges from the mill and mine sites are not adversely impacted.

### Neves-Corvo
- Routine monitoring of flora and fauna (birds, mammals, reptiles, amphibians) and air and water quality;
- Soil remediation and biomonitoring initiatives (including aquatic macroinvertebrates, fish and shellfish) in partnership with the University of Lisbon and Coimbra University;
- Working with the Institute for the Conservation of Nature and Biodiversity (ICNF) / Parque Natural do Vale do Guadiana (PNVG) to support several projects and management planning for the Guadiana Valley;
- Management of riparian habitats in the Vasçao River (Site of Community Interest, Natura 2000, Ramsar Convention listed wetland and tributary of the Guadiana River) as compensation for impacts on Oeiras River, assisting in the protection of the threatened fish species Saramago (Anoectochilus hispanoensis);
- Implementation of an emergency response plan developed in collaboration with Evora University and PNVG to safeguard the Red Listed molusc species Unio tumidiformis in the Oeiras River.

### Zinkgruvan
- Development of species inventories for areas closest to operations for natural values and biodiversity classification, including an inventory of the nature conservation value of Ekershyttbacken Creek;
- Protection of wych elm (Ulmus glabra) and common ash (Fraxinus excelsior) during water management improvement works at and around Ekershyttbacken Creek;
- Monitoring of the success of the relocation of a Swedish protected orchid (Dactylorhiza incarnata) to a nearby sheltered area and to protect flora species in an area of high natural value adjacent to the new tailings facility;
- Commitment to transferring water from Lake Viksjön, maintaining environmental flows in a local creek, as agreed with the previous approval of the tailings facility;
- Commitment to transferring the higher quality water from Lake Viksjön to Lake Sävsjän / Dalby sjön and Dalby sjön to maintain their water quality; and
- Responsible water stewardship to ensure the cultural value of nearby lakes is not adversely impacted.

### Land Management
At the beginning of 2019, Lundin Mining was managing 5,802 hectares of land that we own or lease and occupy with our mining and processing activities and associated infrastructure. At the close of 2019, Lundin Mining was managing 8,762 hectares, with 2,836 hectares being added through our acquisition of the Chapada mine. Most of the land managed by Lundin Mining is located at our Candelaria Complex.

#### Land Management (Hectares)

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<tr>
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<th>Chapada</th>
<th>Eagle Mine</th>
<th>Neves-Corvo</th>
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<td>56</td>
<td>678</td>
<td>181</td>
<td>8,762</td>
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</table>

1 Neves-Corvo’s borrow area, which had not been included previously, has been added for 2019.
2 Chapada footprint included in Lundin Mining closing balance only, following the acquisition in July 2019.

New land disturbance that took place in 2019 at our Candelaria operation was associated with permitted increases in the footprint of the waste rock dump and tailings facilities. Candelaria also completed the final rehabilitation of two smaller tailings deposits that resulted from operations at the site before Lundin Mining’s acquisition.
Continuous improvement at our operations and the integration of innovative, sustainable technologies are critical to Lundin Mining’s efforts to contribute to the achievement of SDG 9: Industry, Innovation and Infrastructure. Neves-Corvo, Lundin Mining’s operation located in Portugal, has begun implementing a modernization program and made significant steps in 2019. The plan seeks to replace vehicles and equipment with more efficient, sustainable technologies to improve environmental and operational performance and improve working conditions. As part of this effort, a new, fully electric forklift was added to the fleet to replace the previous diesel-run model. The shift to an electric waste management fleet is expected to result in a reduction of 12 tonnes of CO₂ emissions per year. Neves-Corvo also purchased six new Epiroc MT65 mining trucks that are more eco-efficient vehicles than those in recent operation and that can transport loads of up to 65 tonnes with reduced diesel consumption. The upgrades increase the resource use and efficiency of Neves-Corvo through the adoption of clean and environmentally sound technologies in existing processes.

ENVIRONMENT

Sustainable Waste Management at Neves-Corvo

Continuous improvement at our operations and the integration of innovative, sustainable technologies are critical to Lundin Mining’s efforts to contribute to the achievement of SDG 9: Industry, Innovation and Infrastructure. Neves-Corvo, Lundin Mining’s operation located in Portugal, has begun implementing a modernization program and made significant steps in 2019. The plan seeks to replace vehicles and equipment with more efficient, sustainable technologies to improve environmental and operational performance and improve working conditions. As part of this effort, a new, fully electric forklift was added to the fleet to replace the previous diesel-run model. The shift to an electric waste management fleet is expected to result in a reduction of 12 tonnes of CO₂ emissions per year. Neves-Corvo also purchased six new Epiroc MT65 mining trucks that are more eco-efficient vehicles than those in recent operation and that can transport loads of up to 65 tonnes with reduced diesel consumption. The upgrades increase the resource use and efficiency of Neves-Corvo through the adoption of clean and environmentally sound technologies in existing processes.

Non-mineral waste was not identified as a material topic during our materiality assessment process. However, we recognize that responsible waste management is important for the mining sector. For this reason, we include some information about the subject. Responsible management of non-mineral waste at our operations is formalized at Lundin Mining through the implementation of comprehensive waste management plans. These plans specify how the different types of waste produced by our activities are to be managed, including identification of opportunities for waste minimization, recycling and re-use. All waste generated by the Company’s operations in 2019 was stored and disposed of following applicable waste regulations and the site waste management plans; the majority of both hazardous and non-hazardous materials were recycled. During 2019, approximately 34,500 tonnes of non-mineral waste were generated by Lundin Mining, of which or 88% were classified as non-hazardous waste. Our waste generation levels have remained broadly consistent over recent years.

HEALTH & SAFETY STATISTICS 2019

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## HEALTH & SAFETY STATISTICS 2019

### Employees

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### Exploration

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### Lundin Mining Total

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### Staffing Summary 2019

#### Number of Employees

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</table>

### Explanation of how data is compiled:

- For the purpose of this report, the "Injury Rate" is based on total recordable injuries.
- Total Recordable Injuries = Medical Treatment Cases + Restricted Duty Cases + Lost Time Cases. First aid injuries are not included.
- Lost Day Severity Rate (SR) = Based on workdays lost after the first day. SR calculation: \( (\text{lost workdays} \times 200,000) / \text{hours worked} \).
Appendix B: Basis for Energy and Greenhouse Gas Reporting

**Basis for Lundin Mining Energy Reporting 2019**
- Energy Within Lundin Mining includes fuel and electricity consumed in our corporate office and onsite by Lundin Mining and contractors for core business activities.
- Energy Outside Lundin Mining includes fuel consumed by contractors for the transport of concentrate, some imported raw materials and personnel in buses.
- Data sources include Lundin Mining’s internal purchase records and fuel-consumption records reported to Lundin Mining by contractors.
- Factors to convert quantities of fuel consumed to energy units sourced in-country from product data sheets and national publications.
- Electricity-consumption data obtained from suppliers and onsite meters.

**Basis for Lundin Mining GHG Reporting 2019**
- GHG emissions calculation approach aligned with the GHG Protocol methodologies.
  > Consolidation approach based on operational control.
  > Latest Global Warming Potentials, given in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report were used, as recommended by the GHG Protocol and CDP.
  > Calculations include carbon dioxide, methane and nitrous oxide, reported as carbon dioxide equivalents (CO₂e).
  > LMC defined as the base year for GHG emissions reporting, primarily because data were externally assured in that year and both location-based and market-based Scope 2 data were reported.
  > 2015 base year Scope 1 and Scope 2 emissions recalculated in 2019 for account of the acquisition of Chapada mine in July 2019 using pro-rata option, such that Chapada is excluded in the January to June period for both the base and current year inventories. Full recalculation will be made for the 2020 reporting year.
- Scope 1 emissions accounting based on fuel, blasting agents, and fugitive emissions from refrigeration and air-conditioning equipment at our operations.
  > Where available, fuel emission factors obtained in-country, from national publications; otherwise, default fuel emission factors from 2006 IPCC Guidelines for National Greenhouse Gas Inventories used.
  > Fugitive emissions calculated in alignment with the GHG Protocol’s Scoring Method (W3: Emission Factor-Based Approach to Estimate HFC and PFC Emissions from Refrigeration / AC, 2015).
- Scope 2 emissions accounting based on electricity consumption onsite and in corporate offices.
  > “Location-based” and “Market-based” Scope 2 emissions calculated in accordance with GHG Protocol Scope 2 Guidance, published in 2015.
  > Emission factors for location-based emissions calculations were regional or national data obtained in-country, where available, and otherwise were sourced from the International Energy Agency (Emissions Factors 2019).
  > Emission factors for market-based calculations were sourced from a contractual arrangement between our Swedish operation and its electricity supplier; European Residual Mix (AIR, 2019) for Portugal; and, since residual mix data are not currently available for Brazil, Chile and the U.S., regional grid average data were applied.
- Scope 3 emissions from some fuel combustion (transportation only) based upon fuel-consumption data supplied by contractors (note that the July to December quantity for concentrate transport by Chapada was assumed to be 50% of the annual quantity consumed for 2019).
- Energy and GHG data are reported for Chapada for the post-acquisition period of July to December 2019. The operation has worked to align its data collection and reporting formats with those of Lundin Mining since acquisition. During this transition period, we acknowledge reduced certainty about Chapada’s energy and GHG reporting.

**Independent Assurance Statement**

**INTRODUCTION AND OBJECTIVES OF WORK**
Apex Companies, LLC (Apex) was engaged by Lundin Mining Corporation (LMC) to conduct an independent third-party assurance of select sustainability information presented in its 2019 Sustainability Report (the Report) for the calendar year ending in December 2019. The Assurance Statement applies to the related information included within the scope of work described below. The intended users of the assurance statement are LMC’s management and stakeholders of LMC. The overall objective of the assurance process was to provide assurance on the accuracy, reliability and objectivity of LMC’s Report for the specific key performance indicators (KPIs) covered by the scope of work (below).

The information that was assured and its presentation in this Report are the sole responsibility of the management of LMC. Apex was not involved in the calculation of the data or drafting of the Report. Our sole responsibility was to provide independent assurance on the selected Key Performance Indicators (KPIs).

**ASSURANCE STANDARDS APPLIED**
The assurance engagement was performed in accordance with AccountAbility’s AA1000AS:2008 standard and was conducted to meet the AA1000AS: Type II moderate level of assurance requirements for most metrics.

Greenhouse gas emissions were verified to a reasonable level in accordance with ISO 14064-4 Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions.

**SCOPE OF WORK**
LMC requested Apex to include independent assurance of the following KPIs for the calendar year 2019 reporting period:
- Safety – total recordable injury frequency rate (TRIF) and lost time injury frequency rate (LTIF);
- Total amount of water withdrawn from all sources;
- Energy-consumption within LMC’s operations including electricity, liquid fuels and gaseous fuels;
- Greenhouse gas emissions – Scope 1, Scope 2 (location and market based);
- Stakeholder grievances filed during the year;
- Stakeholder engagement as it relates to AccountAbility’s AA1000AS:2008 principles of inclusivity, materiality and responsiveness.

A table listing the reported and assured data is attached to this statement.

**FINDINGS AND CONCLUSIONS**

Excluded from the scope of our work is any assurance of information relating to:
- Performance indicators and text in the report not indicated above; and,
- Activities outside the defined assurance period of calendar year 2019.

**METHODOLOGY**
Apex undertook the following activities:
1. Interviews with relevant personnel of LMC and LMC’s consultant;
2. Review of internal and external documentary evidence produced by LMC;
3. Audit of select KPI data presented in the Report including a detailed review of samples of data;
4. Review of LMC data and information systems for collection, aggregation, analysis and internal verification and review, and,
5. Review of the Report as it relates to the assured KPIs.

A site visit to the Neves-Corvo Mine located in Portugal was planned, as was a visit to LMC’s headquarters in Toronto, but both visits were cancelled due to Coronavirus travel restrictions. All data review and interviews with Lundin personnel were performed remotely.

The work was planned and carried out to provide a moderate level of assurance for most KPIs and a reasonable level of assurance for GHG emissions and we believe it provides a sound basis for our conclusions.

**PUBLISHED BY ACCOUNTABILITY**

1 Published by AccountAbility: The Institute of Social and Ethical Accountability
Independent Assurance Statement

ADHERENCE TO THE PRINCIPLES OF AA1000AS

As required by the AA1000AS (2008) standard, outlined below are our observations relating to LMC’s adherence to the principles of inclusivity, materiality and responsiveness.

INCLUSIVITY

LMC’s Responsible Mining Policy and Stakeholder Engagement Standard outlines the company’s commitments regarding communities, stakeholders and external engagement. LMC’s Stakeholder Engagement Standard and associated Stakeholder Engagement Procedure (Stakeholder Engagement Guidance document) provides the minimum requirements for sites to identify and engage with groups and individuals who may be impacted by company activities. In prior years, when Apex visited the Candelaria Mine (2019), Zinkgruvan Mine (2018) and Eagle Mine (2017), Apex observed implementation of external stakeholder engagement during our discussions with external stakeholders and LMC employees. In 2020 Apex interviewed LMC employees and reviewed documentation and reports to determine stakeholder engagement during the 2019 assurance period. LMC’s approach to stakeholder engagement, examples of primary stakeholder groups and the key interests and concerns of each stakeholder group are described in the Stakeholder Engagement section of this Report. Our observations, both in this assurance period and in previous years indicate that LMC takes Stakeholder concerns into consideration and has adequately addressed the inclusivity principle in its operations and the 2019 Report.

MATERIALITY

LMC commissioned a materiality assessment during 2017 that included identifying issues of importance for internal and external stakeholders. LMC conducted an internal review of material issues identified in the 2017 materiality assessment to determine issues of importance to the company. LMC also identified additional issues that, while not deemed to be material to the business, were identified as issues of interest to some of their stakeholders. These additional issues were Governance, Human Rights, Biodiversity and Land, and Materials and Product Stewardship. The Report included a discussion of these identified issues and is organized to align with the issues determined to be material to LMC’s business and stakeholders. Based on our site visits to the Candelaria Mine (2019), Zinkgruvan Mine (2018) and Eagle Mine (2017), interviews with external stakeholders (including LMC employees) and review of the Report, LMC has adequately addressed the materiality principle in its operations and the 2019 Report.

RESPONSIVENESS

LMC has developed requirements and systems to respond to stakeholder issues such as grievances and complaints in their Stakeholder Engagement Standard and associated Stakeholder Engagement Procedure (Guidance). The Guidance document requires sites to have a Stakeholder Communication and Engagement Plan and a Grievance Mechanism in place to identify, track and respond to concerns raised by stakeholders both formally and informally. Apex observed the implementation of Stakeholder Engagement Guidance and the Grievance Mechanism through our discussions with external stakeholders and LMC employees during our visits to the Candelaria Mine (2019), Zinkgruvan Mine (2018) and Eagle Mine (2017), and through interviews with LMC employees and review of internal documents and reports in 2020. Responses to stakeholder concerns were found to be timely and complete based on observations made at the aforementioned mines, interviews with LMC employees and reviews of internal documents and reports. Based on our review, we conclude that LMC has adequately addressed the responsiveness principle in its operations and the 2019 Report.

KEY OBSERVATIONS

- LMC’s commitment to Stakeholder Engagement was evident during our previous visits in 2017, 2018 and 2019 to the Eagle, Zinkgruvan and Candelaria Mines, respectively, and from data review and interviews with LMC personnel both previously and during the 2019/2020 assurance process.
- Good internal data validation by corporate personnel was evident for all assured metrics, as well as for metrics not assured by Apex.

STATEMENT OF INDEPENDENCE, IMPARTIALITY AND COMPETENCE

Apex is an independent professional services company that specializes in Health, Safety, Social and Environmental management services including assurance with over 30 years history in providing these services.

No member of the verification team has a business relationship with Lundin Mining Corporation, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Apex has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

The verification team has extensive experience in conducting assurance on environmental, social, ethical and health and safety information, systems and processes, has over 20 years combined experience in this field and an excellent understanding of Apex’s standard methodology for the verification and assurance of sustainability and environmental data.

Attestation:

David Reilly, Lead Verifier
Trevor Donaghy, Technical Reviewer
Principal Consultant
Program Manager
Apex Companies, LLC
Apex Companies, LLC
Santa Ana, California, USA
Pleasant Hill, California, USA

LUNDIN MINING CORPORATION DATA AND INFORMATION SUBJECT TO ASSURANCE – 2019

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IMPARTIALITY AND COMPETENCE

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Program Manager
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Apex Companies, LLC
Santa Ana, California, USA
Pleasant Hill, California, USA
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All disclosures for reporting in accordance with the ‘Core’ option are reported, with no omissions. ✓ Represents data and information subject to external assurance.
Additional disclosures beyond the criteria for Core are reported to provide a more detailed and comprehensive report. These additional disclosures may be reported in full or used to guide relevant content. The Mining and Metals Sector (MM) Disclosures have been retired by GRI. While a new GRI Sector Standard is awaited, these are included as additional disclosures and may be reported in full or used to guide relevant content.

All disclosures for reporting in accordance with the ‘Core’ option are reported, with no omissions.

*Represents data and information subject to external assurance.

### UN Global Compact

**COMMUNICATION ON PROGRESS**

Lundin Mining joined the United Nations Global Compact (UNGC) in 2016 and has documented its support of the 10 Principles on human rights, labour standards, environment and anti-corruption, and the 17 Sustainable Development Goals (SDGs) through its Communication on Progress (COP). This COP presents a summary of our 2019 progress and actions related to the UNGC Principles and the SDGs, achieved through Company-wide activities and documented in more detail throughout the 2019 Sustainability Report.

### Principles

<table>
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<tr>
<th>Expectations</th>
<th>Labour</th>
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<tbody>
<tr>
<td>1. Business should support and respect the protection of internationally proclaimed human rights</td>
<td></td>
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<tr>
<td>2. Business should make sure that they are not complicit in human rights abuses</td>
<td></td>
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</table>

In 2019, the Company completed Human Rights Risk and Impact Assessments at its Eagle, Zinkgruvan, Neves-Corvo operations and Peru exploration site and will continue with assessments at its Chapadmalal and Candelaria sites in 2021. In addition, the Company prepared a draft Human Rights Policy that will be finalized and released in 2020 and described in future reports.

The Company fosters a work environment free from discrimination against gender, age, national origin, marital status, sexual orientation, religious beliefs, disability, or any other personal characteristics protected by international human rights law. In 2019, human rights-related grievances were filed through the Company’s grievance mechanism and whistleblower reporting hotline. All cases were investigated and where claims were substantiated, management took appropriate action.

In addition to the UNGC, Lundin Mining demonstrates its commitment to support human rights through consideration of the following international principles/standards: Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises (MNEs), United Nations Guiding Principles on Business and Human Rights, and the Voluntary Principles on Security and Human Rights.

Supplementary details on progress in these areas can be found in sections of the 2019 Sustainability Report:

- Governance - Human Rights
- Our People
- Social Performance – Our Approach
- Case studies (throughout the report)

### Expectations - Human Rights

<table>
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<tr>
<th>Expectations</th>
<th>Human Rights</th>
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<tbody>
<tr>
<td>3. Business should uphold the freedom of association and the effective recognition of the right to collective bargaining</td>
<td>Lundin Mining is committed to achieving a safe, productive and healthy work environment across all operations. The Company supports freedom of association and collective bargaining, does not tolerate any form of harassment and fosters a work environment free from discrimination. In 2019, two labour unions filed notices alleging limitation of union rights. Management engaged with the unions and resolved the complaints. We support the elimination of all forms of forced and compulsory labour and child labour. Based on our internal assessment, none of our operations are at risk for incidents of child labour, or forced, or compulsory labour. Lundin Mining’s position on labour is guided by the following policies, principles, standards and/or commitments:</td>
</tr>
</tbody>
</table>
| 4. The elimination of all forms of forced and compulsory labour | Code of Conduct
| 5. The effective abolition of child labour | Freedom of Association
| 6. The elimination of discrimination in respect of employment and occupation | Proof of Age Requirements
| | Equal Pay
| | Human Resources Policy |

(*) details for these topics can be found on pages 7 & 8 of the 2017 Communication on Progress Report.

Lundin Mining provides oversight and governance for these Principles through the activities of the Human Resources / Compensation Committee of the Board. As well, the Company is a member of the United Nations Global Compact to advance the 10 Principles and 17 SDGs and considers the International Finance Corporation (IFC) Performance Standards on Social and Environmental Sustainability as best practice.

More details on progress in these areas can be found in this report: Our Performance against 2019 Targets – Social Performance, Our People.
Lundin Mining supports the precautionary approach and continues advancing numerous initiatives and partnerships to improve and optimize environmental, social, and community sustainability performance.

Our material environmental areas of focus include tailings and waste rock management, water, climate change and reclamation and closure.

Our practices are guided by the following:
- HSE Committee of the Board
- Comprehensive and supporting technical standards
- Participation in local, national, and international associations (membership and associated responsibilities)

In 2019, the Company completed the implementation of the RMMS process at all sites and the first third-party RMMS audit program was conducted to assess HSE performance and compliance at all sites with the exception of Chapada. The Chapada RMMS audit is planned for 2021. The results of the audit were reported to Lundin Mining management and sites are developing action plans to address findings and recommendations, for follow-up in 2020. The next audit and verification are in 2021 and will continue bi-annually.

In addition to the UNGC, Lundin Mining’s environmental practices voluntarily align with the IFC’s Performance Standards on Social and Environmental Sustainability, and the OECD Guidelines for Multinational Enterprises. Lundin Mining is a member of the Mining Association of Canada (MAC) and considers the MAC Towards Sustainable Mining Framework as a best practice to enhance Company-wide environmental standards and practices.

In 2019, Lundin Mining continued to integrate innovative, sustainable technologies into its operations and business strategy, including testing LTE / 4G networks for underground mines. To support energy Efficiency, Lundin Mining continues to promote the diffusion of environmental technologies across the mining industry. Additionally, Lundin Mining supports community initiatives that encourage technology development and entrepreneurship.

Details on progress in these areas, and partnerships to advance them, can be found in these sections of the 2019 Sustainability Report:
- Our Performance Against 2019 Targets - Environment
- Case Studies throughout the report.

Certain of the statements made and information contained herein are “forward-looking information” within the meaning of applicable Canadian securities laws. All statements other than statements of historical facts included in this document constitute forward-looking information, including but not limited to statements regarding the Company’s plans, prospects and business strategies; the Company’s guidance on the timing and amount of future production and management expectations regarding the timing and amount of future production and management expectations including production and cash flow forecasts; the Company’s ability to comply with contractual and regulatory requirements; anticipated exploration and development activities at the Company's projects; and the Company’s ability to integrate acquisitions and to anticipate and benefit from trends.
SUSTAINABILITY REPORT FEEDBACK
We welcome feedback from stakeholders regarding our 2019 Sustainability Report. For further information or comments, please contact:

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(CSP) Certified Sustainability Practitioner
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