

Supplying a Sustainable Future



Sherritt International Corporation is committed to providing a safe and rewarding workplace, operating ethically, demonstrating environmental responsibility, engaging stakeholders and benefitting communities. We will meet or exceed the standards where we operate and continuously improve performance.

SUPPLYING A SUSTAINABLE FUTURE

Sherritt's products have a role to play in global plans for a sustainable future for all. So, where do Sherritt's products end up? What is unique about them? What are the opportunities? **Scroll down the page to learn more.**

Sherritt's products have important roles to play in a sustainable future. Each contributes to the development of goods and services which can provide a safe, healthy, secure existence for all. Our products are used widely, in thousands of applications, in the global marketplace.

More and more, in their efforts to ensure a responsible supply chain, customers want to know how we conduct our business. Sherritt expects this interest to grow, and is prepared for the evolution occurring in supply chain relationships.

At Sherritt, we are committed to ensuring that we operate sustainably and that we are not creating undue environmental, social and economic harm in the areas in which we operate. How is Sherritt responding to the challenge sustainability presents when mining and refining non-renewable resources?

ENSURING THE SAFETY AND HEALTH OF OUR EMPLOYEES AND COMMUNITIES

FOSTERING A DIVERSE AND INCLUSIVE WORKFORCE

INTERACTING WITH A WIDE RANGE OF STAKEHOLDERS

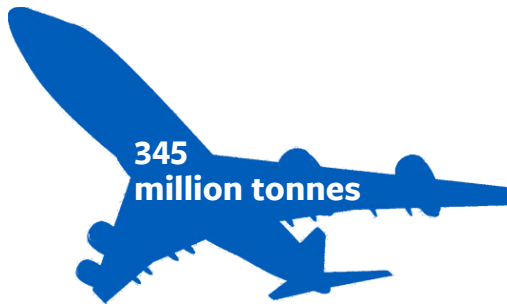
RESPECTING HUMAN RIGHTS

ENSURING THE SURVIVAL OF A VIABLE BUSINESS

PROTECTING THE ENVIRONMENT

PROVIDING BENEFITS TO LOCAL COMMUNITIES

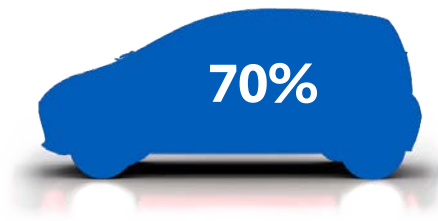
ESTABLISHING RESPECTFUL AND PRODUCTIVE RELATIONSHIPS WITH ALL LEVELS OF GOVERNMENT



345 million tonnes of CO₂ emissions could be eliminated due to increased fuel efficiency in aviation as the result of improving aerodynamics and engine design, using nickel-containing parts.



The average life of nickel-containing products is in the range of 25–35 years, and for some applications such as roofs and cladding this can go up to 100 years. Nickel-containing materials and products are necessary for sustainability.



More than 70% the world's supply of nickel is unsuitable for battery production; however, 100% of Sherritt's Class I nickel briquettes and cobalt is suitable for batteries, including hybrid and electric vehicles.



14% OF EMPLOYEES AT SHERRITT'S DIVISIONS ARE WOMEN AND WE ARE COMMITTED TO DOING BETTER

Diversity is an emerging issue across society, and particularly relevant to the natural resources sector because of the historically low proportion of women and people of differing backgrounds and abilities in our industry. We know that we will become a stronger, more innovative and resilient company as we continue to attract a spectrum of people of different cultural backgrounds, genders, ages and life experience to our company.

We have begun a multi-year effort to increase our understanding of related challenges and opportunities, improve diversity literacy internally, align business processes and structures to be more inclusive, develop and implement a metrics framework, and ultimately improve performance in this area.

In 2019, Sherritt will launch an internal global framework for diversity and inclusion, which includes plans for the next five years at each of our sites.



<30% OF ALL NICKEL IS SUITABLE FOR ELECTRIC VEHICLE (EV) BATTERIES

It is impossible to meet the demands of a developing world without nickel and cobalt. Batteries, which rely on nickel and cobalt, are becoming ever increasingly important for storing renewable energy and supporting the global goals of sustainability and action on climate change.

While the first nickel battery has been around for more than a century, the last three decades have seen extraordinary changes in how batteries are made and used. New applications – from storing solar energy to powering electric vehicles – have emerged.

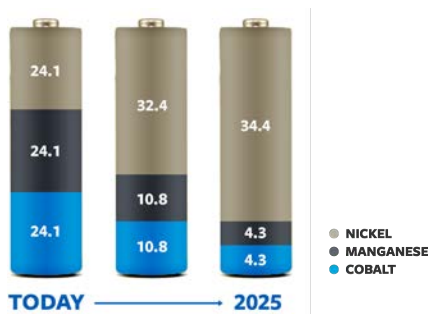
These new applications, in turn, are pushing the limits of battery capacity and power, resulting in greater demands for higher purity metals. Enter Class I nickel.

Unlike nickel pig iron which is high in iron content, Class I nickel is purer and amenable to battery production – particularly for the fast-growing electric vehicle market. Sherritt is a producer of Class I nickel.

It is expected that carmakers will invest \$100 billion in electric vehicles by 2020. Each of these cars will be powered by batteries made from cobalt and nickel.

Sherritt also produces cobalt in briquette form, the most suitable for battery production.

ELECTRIC VEHICLE BATTERIES WILL INCREASINGLY RELY ON NICKEL.



CHANGES DRIVEN BY:

- Cobalt supply constraints
- Commodity pricing environment
- Surging end-product demand



PICTURED HERE IS THE HELIX BRIDGE IN SINGAPORE, MADE FROM NICKEL-CONTAINING STAINLESS STEEL. THE CORROSION RESISTANT PROPERTIES OF STAINLESS STEEL ARE EXCELLENT FOR THE HUMID CLIMATE.

65% OF NICKEL PRODUCED GLOBALLY IS USED TO MANUFACTURE STAINLESS STEELS

Building infrastructure to last is becoming increasingly topical as cities and countries are burdened with the high costs of maintaining things like hospitals and highways, some of which are not particularly old but were built with materials not suited for the intensity of use, the geography, or other factors.

For bridges, in particular, the use of carbon steel rebar has led to the deterioration of concrete over time. The worst corrosion occurs in regions where road salt is heavily used or in areas near salt water, but nickel-containing stainless steel rebar prevents damage to structures caused by rebar corrosion. Stainless steel rebar is used in ever increasing amounts today both in North America and around the world. While stainless steel is more expensive, its selective use can be justified financially when all the costs of maintaining the structure over its life are considered.

In Edmonton, the provincial capital of Alberta, Canada (about 30 km southwest of Sherritt's Fort Saskatchewan site), with a metropolitan population of over one million, a new ring road around the city was completed in 2016, a portion of which, Northeast Anthony Henday Drive, is 27 km of six- or eight-lane highway. Winter is especially hard on the roads in Edmonton. The average daily temperature in January is -10.4°C , with an annual snowfall of about 124 cm. Large amounts of salt, both sodium and the more corrosive calcium chloride, are applied to keep the roads as free from ice as possible. In 2011, Type 2304 (S32304) stainless steel was specified for a trial for one highway interchange on the ring road. The success of that venture led to the specification of Type 2304 rebar for a major portion of this new section, reported to be in the region of 6,000 tonnes. Perhaps in 75 years or so, a lifecycle assessment will be done of one of these Edmonton bridges, leaving no doubt that the engineers in charge made the right decision.



250,000 METRIC TONNES OF FERTILIZER IS PRODUCED BY SHERRITT EVERY YEAR

DID YOU KNOW? SHERRITT'S FORT SASKATCHEWAN REFINERY WAS THE FIRST FERTILIZER PRODUCER IN ALBERTA.

TO LEARN MORE ABOUT HOW FERTILIZER FACTORS IN TO THE NICKEL AND COBALT PRODUCTION PROCESS, SEE THIS INFOGRAPHIC.

DID YOU KNOW?

According to Fertilizer Canada, by 2050, the world will need to increase food production by 70%. Without fertilizer, global food production would be half of current levels, requiring farmers to grow more food on land that is increasingly under pressure from development. Sherritt's nickel refineries in Fort Saskatchewan, Alberta (the Fort Site) and Ambatovy in Madagascar produce ammonium sulphate fertilizer as a by-product, which is then sold to Canadian, East African (including Malagasy), and Asian farmers. A saleable by-product means less waste from the refining process and more food on the table for people around the world.

* This number fluctuates from year-to-year depending on nickel production.



OUR EXCELLENT CRISIS PREPAREDNESS RESULTED IN MINIMAL IMPACTS FROM HURRICANE IRMA, WHICH MADE LANDFALL IN 2017, AND ALLOWED SHERRITT TO QUICKLY MOBILIZE TO PROVIDE POST-STORM SUPPORT IN THE COUNTRY AND BRING THE POWER SUPPLY BACK ONLINE.

LARGEST INDEPENDENT POWER PRODUCER IN CUBA

Sherritt's Cuban power business operates through a one-third interest in Energas S.A. The remaining two-thirds interest is held equally by two Cuban agencies: Union CubaPetroleo (CUPET) and Unión Eléctrica (UNE). Did you know that raw natural gas that would otherwise be flared is supplied to Energas by CUPET free of charge? The processing of raw natural gas produces clean natural gas, used to generate electricity as well as by-products such as condensate and liquefied petroleum gas. The Energas facilities, which comprise the two combined cycle plants at Varadero and Boca de Jaruco, produce electricity using steam generated from the waste heat captured from the gas turbines.

In 2007, the unit at our Varadero facility was granted Clean Development Mechanism status under the provisions of the Kyoto Protocol by the United Nations Framework Convention on Climate Change. We have since built another combined cycle unit at a different facility in Cuba that is eligible for this designation. Not only does this investment provide the Cuban grid with much-needed energy for the Cuban people, but we have also received numerous carbon credits.

Energas' electrical generating capacity is 506 MW.



IN 2018, BUILDING ON OUR UNIQUE EXPERTISE IN METALS PROCESSING, SHERRITT SUCCESSFULLY COMPLETED PILOT TESTING OF AN INNOVATIVE PROCESS TO UPGRADE ALBERTA BITUMEN AT A LOWER COST. READ MORE HERE.

35+ COMMERCIAL OPERATIONS WORLDWIDE HAVE USED SHERRITT TECHNOLOGY

DID YOU KNOW?

Sherritt is one of the best known companies for technological innovation in the mining industry, and certainly has one of the longest histories in Canada. In the 1940s, we began to experiment with new techniques for ore processing at the University of British Columbia. This effort ultimately led to the commercialization of our hydrometallurgical processes for the recovery of metals (including nickel, cobalt, gold, copper, zinc and others). Sherritt's made-in-Canada technology is currently licensed to 35 different processing facilities around the world.

Our leadership in developing and applying such technologies contributes to the industry's innovation agenda, which helps to improve operating efficiencies and, by doing so, reduces environmental impacts. These efforts help drive down production costs of base metals like nickel, whose anti-corrosive, long-lasting characteristics are essential for developing green infrastructure, such as highly durable water-distribution lines -- which have the potential to materially reduce water-loss rates that are as high as 50% in the developing world and 20% in developed countries.



SHERRITT'S CUBA COMMUNITY INVESTMENT PROGRAM COMMITS APPROXIMATELY \$500,000 CDN A YEAR TO COMMUNITIES SURROUNDING OUR OPERATIONS, AND HAS DONE SO FOR OVER A DECADE.

SHERRITT PRODUCED 4,800 BARRELS OF OIL PER DAY (BOPD) IN CUBA IN 2018

Sherritt explores for and produces oil and gas primarily from fields in Cuba (where we are the largest independent oil producer in the country). During our more than 20-year history, we have developed an expertise and proven ability to find, develop and produce oil in Cuba's complex fold-and-thrust belt reservoir. All of our wells are directionally drilled and are located along the northern coast between Havana and Cardenas.

Sherritt produces about one-third of all oil produced in Cuba. In doing so, we contribute to the well-being of Cubans.



SHERRITT IS AN ACTIVE MEMBER OF THE NICKEL INSTITUTE, COBALT INSTITUTE, AND FERTILIZER CANADA – INDUSTRY GROUPS THAT SUPPORT AND PROMOTE THE RESPONSIBLE PRODUCTION AND USE OF THESE RESOURCES.

MINING AND REFINING: PART OF A RESPONSIBLE SUPPLY CHAIN

Mining and oil and gas companies often represent the very beginning of a supply chain, for everything from cars to medical equipment, to plastics, electronics and everything in between.

Customer expectations for mining companies today are growing when it comes to demonstrating high standards for environmental and social performance; all while mining and processing minerals efficiently and safely.

Sherritt produces high-purity nickel and cobalt in low- and mid-risk jurisdictions. Consumers can feel confident that we do so in accordance with applicable laws, regulations, and the highest ethical standards. To support this further, Sherritt became a member of the Mining Association of Canada in 2017 and is implementing the globally recognized Towards Sustainable Mining program, which includes environmental and social protocols, especially the new Child and Forced Labour protocol. Since 2013, Sherritt has been a signatory of the Voluntary Principles and we publicly report on our performance each year. For a number of years, Sherritt has supported the development of UNICEF’s checklist on Security and Children’s Rights through participation in the Working Group.

Sherritt’s Five-Year Sustainability Goals, drafted in 2017 and launched at the beginning of 2018, include a goal to be recognized as a “supplier of choice” for responsibly produced, high-quality products. We will continue to report on our progress publicly with the intention of being transparent.



CEO MESSAGE

“2018 started with optimism for better prices for the commodities we produce. However, increased economic and geopolitical uncertainty over the course of the year led to deteriorating market conditions. External events that we cannot control will always impact our business. What we can control is how we respond and react.”

– David Pathe, President and Chief Executive Officer

Our corporate purpose is to be a low-cost nickel producer that creates sustainable prosperity for all stakeholders. To fulfill that purpose, sustainability must underpin every major decision we make. We need innovation to address some of the biggest issues in our industry. How do we manage our balance sheet? How do we adapt to a changing climate? How do we reduce the environmental impact of mining? How do we sustainably mine finite resources for a growing population? How we respond to these questions will require a workplace that welcomes creative ideas and encourages problems to be identified and brought forward. More than ever, we need to foster a diverse and inclusive culture where people feel valued and feel comfortable speaking up, knowing that their ideas and opinions matter, no matter the challenges we face.

2018 SUSTAINABILITY PERFORMANCE

In 2018, our safety performance continued to be peer-leading, showing improvements against our own past performance and internal targets. At the end of the year, Sherritt’s Total Recordable Injury Frequency Rate (TRIFR) and Lost Time Injury Frequency Rate (LTIFR) were 0.15 and 0.04 per 200,000 work hours, respectively. Over a three-year period, the TRIFR decreased by 63% and the LTIFR decreased by 71%. This is largely due to the enormous focus we as a company have put on management systems and improving safety leadership in the field. I am proud of this work and the accountability we have all taken to ensure that our co-workers and neighbours get home safely each and every day.

2018 was a strong year for health and safety performance in other ways as well. Our Oil & Gas Division in Cuba was lost-time incident free in 2018 and has been since 2016, with more than 2.5 million work hours without an incident. Our Fort Saskatchewan operation had no lost-time or reportable incidents in 2018 and experienced its two best quarters of H&S performance in 10 years, and the Moa site ended the year with its lowest number of LTIs in three years.

Throughout the year, we experienced one high-severity environmental incident, as per our own criteria for such incidents, and this was the first one since 2015. Sherritt achieved an overall reduction of 5% in Scope 1 greenhouse gas emissions and our energy consumption decreased by 11%, mainly due to reduced operations at our Oil & Gas Division compared to 2017.

Through community investment, taxes and royalties, local procurement and wages, we contributed more than \$1 billion in economic benefits to host communities and countries in 2018. Included in this was Ambatovy's first payment of royalties to the various levels of government in Madagascar, totalling over US\$18 million. Sherritt and its joint venture employees reported over 3,800 volunteer hours in our local communities.

Sherritt's refinery was awarded the 2018 Fort Saskatchewan Chamber of Commerce Industry Excellence Award for demonstrating outstanding leadership in innovation, environmental, safety, human resources and community engagement. The recent production milestone of 3 billion pounds of nickel and over 60 years of operation in the community received tremendous recognition and support from the local business community.

Continuing our journey to being a more diverse and inclusive workforce, Sherritt joined Catalyst in 2017 and signed the Catalyst Accord 2022. We are proudly supporting the inaugural International Women in Resources Mentorship Programme and remain committed to the 30% Club of Canada where I was recently appointed co-chair.

TODAY & LOOKING AHEAD

In 2019, our focus as a company continues to be on reliable production and improving our balance sheet, while at the same time demonstrating our commitment to responsible mining and refining. Our strong management systems and our commitments guide us, such as Towards Sustainable Mining, the Voluntary Principles on Security and Human Rights, United Nations Global Compact, and key Sustainable Development Goals.

We continue to implement our five-year enterprise-wide sustainability goals, which include the implementation of our diversity and inclusion plans. It's not an issue that will be resolved overnight, but I'm committed to creating the foundation for meaningful improvement in gender balance and inclusivity.

And finally, our journey to zero harm is ongoing, to be achieved by our relentless commitment to building a stronger safety culture and implementing best-practice standards.



David V. Pathe

President and Chief Executive Officer
Sherritt International Corporation



Our Approach

Our approach to running a sustainable mining and energy business is grounded in a deep commitment to our guiding principles, as outlined in Our Purpose and Our Promises:

Our Purpose

To be a low-cost nickel producer that creates sustainable prosperity for employees, investors and communities.

Our Promises

The principles that we incorporate into our everyday decision-making at both the corporate and operational levels include: integrity, agility, safety and sustainability, continuous learning and innovation, and shared prosperity.

OUR COMMITMENT TO SUSTAINABILITY

Mining and energy companies use a range of terms to describe their approaches to:

- Ensuring the safety and health of their employees and communities
- Protecting the environment
- Interacting with a wide range of stakeholders
- Providing benefits to local communities
- Respecting human rights
- Establishing respectful and productive relationships with all levels of government
- Ensuring the survival of a viable business

At Sherritt, “sustainability” covers these interrelated and increasingly important aspects of our business.

We are committed to providing a safe and rewarding workplace, operating ethically, demonstrating environmental responsibility, engaging stakeholders and benefitting communities. We will meet or exceed the standards where we operate and continuously improve performance.

This commitment underpins our aspiration to be a recognized industry leader in sustainability management and performance.



GOVERNANCE

Our Board of Directors has delegated responsibility for sustainability-related matters to its Environment, Health, Safety and Sustainability (EHS&S) Committee. The Committee's mandate is to oversee, monitor and review sustainability policies, management systems, programs and performance.

This Committee meets at least four times per year, visits our operating sites, and receives information from corporate and divisional management on a quarterly basis, or more often if required. The Committee Chairperson reports to the Board on significant issues. Refer to this link to review the full mandate of the EHS&S Committee.

EHS&S oversight is also within the respective board and executive mandates of each of the three joint ventures that Sherritt is involved in. There are dedicated environment, health and safety committees at the board level for the Ambatovy and Moa joint ventures. Experienced Sherritt executives serve on these committees. At Energas, EHS&S matters are also reviewed by the Board, which has directors from Sherritt's senior management team.

Corporate accountability for oversight of the Sustainability Framework is the responsibility of an executive officer, the Chief Operating Officer. Reporting to the COO, the Director, Environment, Health, Safety and Sustainability (EHSS) develops strategy and standards, oversees performance and reporting, and assists our operating sites in the identification and management of material sustainability aspects, issues and risks. The Director works closely with the management team at all divisions, which are responsible for operating sites, to ensure a practical and coordinated approach to EHS&S is in place across our business interests.

Each division is led by a senior executive who also reports to our COO. These individuals are accountable for all operational matters of their respective operating sites, including sustainability.

The definition of sustainability is broad, and inputs and outputs of our overarching business strategy, with sustainability embedded, includes employees and departments across the company, including operations, human resources, procurement, and more. At Sherritt, everyone has some accountability for safety and sustainability.

BOARD GENDER DIVERSITY

Male	75%
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Female	25%*
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* Compared to an industry average for mining of 11% female directors.

SUSTAINABILITY FRAMEWORK

We uphold our commitment to sustainability through our sustainability framework, which provides a focused and practical approach to prioritizing sustainability issues, risks and opportunities, and to managing performance. The framework consists of a core commitment and a series of issue-specific commitments, which fall under the four pillars below: Providing a Safe and Rewarding Workplace, Operating Ethically, Demonstrating Environmental Responsibility, and Engaging Stakeholders and Benefitting Communities. Our commitments are supported by an integrated management system that sets company-wide standards for planning, implementation, measurement, reporting and assurance of sustainability efforts.

PROVIDING A SAFE AND REWARDING WORKPLACE

HEALTH AND SAFETY

We are committed to providing a safe workplace. Our ultimate goal is zero harm. Zero harm means zero fatalities, no injuries and no work-related illnesses among employees and contractors.

PUBLIC SAFETY

Maintain public safety around our sites through risk management, active communication and ongoing community engagement.

REWARDING WORKPLACE

Provide a rewarding and inclusive workplace that engages and develops a diverse workforce, compensates workers competitively, and offers them exposure to world-class operations, projects, processes and people.

OPERATING ETHICALLY

BUSINESS ETHICS

Foster a culture and environment that support and require ethical conduct.

HUMAN RIGHTS

Operate our business in a way that respects human rights as set forth in the Universal Declaration of Human Rights.

DEMONSTRATING ENVIRONMENTAL RESPONSIBILITY

TAILINGS MANAGEMENT

Design and operate tailings management facilities – throughout the mine lifecycle – to meet or exceed applicable regulatory and company standards.

BIODIVERSITY AND LAND

Achieve no net loss, or preferably a net gain, of biodiversity for greenfield projects and significant expansions of current operations; and practise progressive reclamation as part of normal operations at all mines, working with local jurisdictions.

WATER

Manage water responsibly by optimizing water use, addressing water-related risks to future operational viability and growth, and engaging communities on the use of, and impacts to, shared water resources.

ENERGY AND CLIMATE CHANGE

Monitor and track energy use and greenhouse gas emissions at each site and identify opportunities to reduce impacts; and understand and mitigate the potential impacts of climate change on our assets.

ENGAGING STAKEHOLDERS AND BENEFITTING COMMUNITIES

STAKEHOLDER ENGAGEMENT

Engage stakeholders early on and throughout the asset lifecycle; and build relationships based on mutual trust, respect and transparency.

TRANSPARENCY

Provide stakeholders with timely and accurate information on the impacts and benefits of our mining- and energy-related activities and management practices.

COMMUNITY BENEFITS

Contribute to a lasting improvement in quality of life in the communities where we operate.

MANAGEMENT SYSTEMS

Sherritt has taken an enterprise-wide approach to managing sustainability, which includes an integrated system with a series of sustainability standards. These standards are developed collaboratively between the corporate office and the divisions. Given the differences among the operating environments in Canada, Cuba and Madagascar, the divisions have flexibility in the way they implement these standards at their operating sites.

Specific requirements in the standards reflect our experience, our risk profile and industry best practice. As members of TSM, we are implementing the requirements of the Mining Association of Canada's (MAC) Towards Sustainable Mining (TSM) protocols. As a member of the Voluntary Principles on Security and Human Rights (VPSHRs) Initiative, we are working to apply the Principles at our operating sites. We are also a Supporting Company of the Extractive Industries Transparency Initiative (EITI), the requirements of which we apply in Madagascar, an EITI Candidate Country. Our approach to crisis management is informed by the Incident Command System (ICS) and the United Nations' Awareness and Preparedness of Emergencies at the Local Level (APELL) Programme. In Madagascar, our biodiversity management program aligns with the principles of the Business and Biodiversity Offsets Programme (BBOP).

TOWARDS SUSTAINABLE MINING (TSM)

In 2017, Sherritt joined the Mining Association of Canada, and as such, is required to implement the TSM program – a series of sustainability management protocols – at its Canadian operations. As Sherritt is committed to leadership in sustainability and continuous improvement, the company plans to implement TSM at all divisions and to target Level A conformance.

The first year of public, facility-level reporting for Sherritt will be in 2021 for the 2020 reporting year.

We are currently carrying out a multi-year plan to develop and implement the following corporate standards for sustainability management:

Air Management *new	Fatality Prevention	Significant Potential Incidents
Anti-Corruption	Grievance Management	Stakeholder Engagement
Biodiversity and Land Management	Health and Safety	Tailings Management
Community Investment	Mine Closure	Waste Management *new
Crisis Management	Security and Human Rights	Water Management *new
Energy and GHG Emissions		

“Towards Sustainable Mining is another tool in our toolbox for ensuring that our environmental and social management systems reflect industry leading practices. Now, with one year of implementation behind us, I can confidently say that the journey we started years ago to continually improve has established a solid foundation for adoption of TSM’s protocols, and there are components of the program that will continue to push us towards further improvements. TSM’s approach of continuous improvement is well suited to Sherritt’s desire to have a positive impact wherever we operate.”

– Steve Wood, EVP and COO

MATERIALITY

In 2017, we conducted a thorough update of our assessment of the material sustainability aspects of our business. The assessment involved identifying the sustainability issues of greatest interest to Sherritt’s stakeholders and those that could have the greatest impact on Sherritt’s business. We defined a list of key sustainability topics, conducted interviews, surveys and desktop-based research, and then ranked stakeholder interest and business impact scenarios, which were then validated by Sherritt’s senior management and at a workshop of key Sherritt sustainability personnel.

Those aspects with the highest combined ranking of expected business impact and stakeholder interest are considered “material” for Sherritt, and are addressed through our Sustainability Framework and management system.

The following table maps our material issues against the four pillars of our Sustainability Framework and details the boundary of impact for each material issue.

Pillar	Material Issue	Issue Boundary (internal/external) Where do the impacts occur?	Who is the issue material to?	Where is the issue most material?
PROVIDING A SAFE AND REWARDING WORKPLACE	Health and Safety	Internal	<ul style="list-style-type: none"> • Employees/contractors • Government (regulators) • Communities 	Company-wide
	Public Safety	Internal/external	<ul style="list-style-type: none"> • Employees/contractors • Government (regulators, local authorities, first responders) • Communities 	Company-wide
	Security	Internal/external	<ul style="list-style-type: none"> • Employees/contractors • Government (regulators, local authorities, first responders) • Communities 	Company-wide (focus at Ambatovy)
	Employees Relations, Diversity and Inclusion	Internal	<ul style="list-style-type: none"> • Employees/contractors 	Company-wide

Pillar	Material Issue	Issue Boundary (internal/external) Where do the impacts occur?	Who is the issue material to?	Where is the issue most material?
OPERATING ETHICALLY	Economic Performance	Internal/external	<ul style="list-style-type: none"> Financial community (shareholders) Employees/contractors Communities Business partners Government (host jurisdiction) 	Company-wide
	Business Conduct	Internal/external	<ul style="list-style-type: none"> Financial community (shareholders) Communities NGOs/civil society 	Ambatovy
	Country Risks	Internal/external	<ul style="list-style-type: none"> Government NGOs/civil society Communities 	Ambatovy, Moa, Oil & Gas and Power (OGP)
	Human Rights	Internal/external	<ul style="list-style-type: none"> NGOs/civil society Customers/suppliers 	Company-wide
	Responsible Supply Chain	Internal/external	<ul style="list-style-type: none"> Customers/suppliers NGOs/civil society 	Company-wide
	Transparency	Internal/external	<ul style="list-style-type: none"> Financial community Communities NGOs/civil society 	Company-wide
DEMONSTRATING ENVIRONMENTAL RESPONSIBILITY	Energy and GHG Emissions	Internal/external	<ul style="list-style-type: none"> Government (regulators) Financial community (shareholders) Communities NGOs/civil society 	Company-wide

Pillar	Material Issue	Issue Boundary (internal/external) Where do the impacts occur?	Who is the issue material to?	Where is the issue most material?
	Air and Other Emissions	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Communities 	Company-wide
	Tailings	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Communities • NGOs/civil society 	Ambatovy and Moa
	Climate Change	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Financial community (shareholders) • Communities • NGOs/civil society 	Company-wide
	Environmental Liabilities, Closure and Reclamation	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Communities • NGOs/civil society 	Ambatovy and Moa
	Land and Biodiversity	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Communities • NGOs/civil society 	Ambatovy and Moa

Pillar	Material Issue	Issue Boundary (internal/external) Where do the impacts occur?	Who is the issue material to?	Where is the issue most material?
ENGAGING STAKEHOLDERS AND BENEFITTING COMMUNITIES	Water	Internal/external	<ul style="list-style-type: none"> • Financial community • Government (regulators) • Communities • NGOs/civil society 	Ambatovy and Moa
	Community Development	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Communities • NGOs/civil society 	Company-wide (focus at Ambatovy, Moa, OGP)
	Economic Benefits	Internal/external	<ul style="list-style-type: none"> • Government (regulators) • Communities • NGOs/civil society 	Company-wide (focus at Ambatovy, Moa, OGP)
	Indigenous Relations	Internal/external	<ul style="list-style-type: none"> • NGOs/civil society 	Company-wide

Commentary on a broader set of material issues and risk factors that affect Sherritt – including U.S. sanctions on Cuba – can be found in our 2018 Annual Information Form.

SUSTAINABILITY GOALS

FIVE-YEAR SUSTAINABILITY GOALS

Launched in 2018, Sherritt has six five-year sustainability goals that:

- Align the enterprise by focusing on sustainability priorities that are shared across Sherritt’s business;
- Address existing and emerging industry-wide issues and societal concerns;
- Clearly link Our Purpose and Our Promises, strategic priorities and the Sustainability Framework;
- Drive improved performance across the business;
- Demonstrate our commitment to sustainability excellence; and,
- Align with the Sustainable Development Goals (SDGs).

The goals are as follows:



Achieve Level A requirements in TSM protocols across all operations.



Strengthen our safety culture, behaviour and performance.



Improve water, energy and emissions management across operations.



Create community benefit footprints that support local priorities and the SDGs.



Be recognized as a “supplier of choice” for responsibly produced, high-quality products.



Improve diversity at all levels throughout the company.

SUSTAINABLE DEVELOPMENT GOALS

The United Nations' Sustainable Development Goals (SDGs) consist of 17 ambitious targets to address global issues and to ensure a sustainable and resilient future for the world by 2030. The success of the SDGs depends on the participation of a range of actors – governments, corporations, communities and non-governmental organizations.

Our Role to Play

The nature of the work of the natural resources sector has social, economic and environmental impacts on the jurisdictions where projects and operations are located. As a responsible company, Sherritt seeks out opportunities not only to mitigate and, where possible, avoid our impacts, but also to make a positive contribution to our host countries on both a national and community level. Highlighting how our processing requirements and end products contribute to the SDGs is important; however, so is taking responsibility for and acknowledging the impacts of our activities on the broader development agenda. (To better understand the sustainability issues and challenges most material to Sherritt, please review our materiality analysis.)

Our Priorities

We believe that as a Canadian company operating internationally, we have the ability to make meaningful progress towards relevant Sustainable Development Goals. To understand more fully where Sherritt was having the greatest impact, we assessed the SDGs based on our materiality assessment and aligned our priority SDGs against our enterprise risk management results, our Sustainability Framework and our five-year sustainability goals.

The interactive chart below displays our priorities, what they mean to Sherritt and examples of how our activities align with specific SDG targets.



Healthy, happy communities and employees make for a successful and stable operating environment. Sherritt has a responsibility as a local employer in Canada, Madagascar and Cuba to ensure employees return home from work safely every day.

GOOD HEALTH AND WELL-BEING

Ensure healthy lives and promote well-being for all, at all ages

Examples of SDG targets we are contributing to achieving

SDG Target 3.4 – Our Oil & Gas and Power (OGP) Division hosted lunch-and-learns on mental health and well-being for employees.

SDG Target 3.6 – Refer to this case study for information on Sherritt’s road safety promotion programs delivered in partnership with UNICEF.



Sherritt is committed to advancing stronger gender representation at the board and senior management levels. We are also working to develop, train and promote women from diverse backgrounds throughout the company. In our communities, we will support education and careers for girls and women, as well as safety and economic empowerment.

GENDER EQUALITY

Achieve gender equality and empower all women and girls

Examples of SDG targets we are contributing to achieving

SDG Target 5.5 – Sherritt’s divisions established local diversity and inclusion committees to identify plans of action; members of these committees came together to begin work on a global strategy for improving diversity and inclusion metrics across the business, which will be launched in 2019.



Water is essential for life, but is also a requirement for natural resource extraction and processing activities. Sherritt works hard at water management and ensuring local communities have a healthy supply and sanitation. The nickel we produce is used as a key input for sustainable water storage and distribution infrastructure around the world.

CLEAN WATER AND SANITATION

Ensure access to water and sanitation for all

Examples of SDG targets we are contributing to achieving

SDG Target 6.4 – Ambatovy and OGP are developing plans to reduce their use of potable water in operations.

SDG Target 6.A – In 2018, Sherritt provided water pumps and pipe cleaning equipment to the Santa Cruz del Norte Office of Hydraulic Resources in Cuba. The equipment has increased the municipality’s capacity to provide water and sanitation services to communities near Sherritt’s operations.



Sherritt seeks out opportunities not only to produce clean energy that supports our host countries’ needs, but also to lessen the impacts of our energy use.

AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

Examples of SDG targets we are contributing to achieving

SDG Target 7.1 – In Cuba, Sherritt is the largest independent power producer.

8 DECENT WORK AND ECONOMIC GROWTH



Sharing the economic benefits of our activities with employees, host communities and countries, business partners and investors is not only responsible but essential to our growth strategy. We believe in supporting local employment and procurement in countries in which we operate, and this is evidenced in our results.

DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Examples of SDG targets we are contributing to achieving

SDG Target 8.3 – Ambatovy emphasizes local procurement through a program called ALBI, which sources from and offers technical support to local enterprises.

SDG Target 8.4 – Sherritt’s Economic Benefit Footprint in the areas in which it operates was \$1 billion in 2018.

15 LIFE ON LAND



Sherritt’s approach to environmental management is to avoid impacts wherever we reasonably can, and to minimize, manage and remediate those that do occur. Our award-winning approach to biodiversity management at Ambatovy, and our focus on sustainable mining and refining, positions Sherritt as a global leader in this area.

LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

Examples of SDG targets we are contributing to achieving

SDG Target 15.2 – Refer to this case study for information on Sherritt’s reforestation efforts in Cuba.



In all our businesses, healthy, mutually beneficial partnerships are required for us to succeed. We have a history of strong partnerships with employees, communities, host countries, investors and business partners in each of the jurisdictions where we operate. We believe that the SDGs will only be achieved when all stakeholders work together.

PARTNERSHIPS FOR THE GOALS

Strengthen the means of implementation and revitalize the global partnership for sustainable development



Providing a Safe and Rewarding Workplace

Sherritt's operations are built on a zero harm health and safety culture. We work hard to minimize operational risks to our workforce and nearby communities, and engage with these important stakeholders regularly on matters of safety, security and emergency response. Employee engagement and development remain top priorities in ensuring we attract and retain the people critical to our business and its success. We believe that this is best achieved by fostering an inclusive workplace.

OUR 2018 PERFORMANCE:



Total Recordable Injury Frequency Rate (TRIFR) and Lost Time Injury Frequency Rate (LTIFR) were 0.15 and 0.04 per 200,000 work hours, respectively. Over a three-year period, TRIFR decreased by 63% and LTIFR decreased by 71%.



The Oil & Gas Division in Cuba remained lost-time incident free since 2016, achieving more than 2.5 million work hours without an incident.



The Fort Site had no lost time or reportable incidents in 2018 and experienced its best two quarters of H&S performance in 10 years.



The Moa site ended the year with its lowest number of Lost Time Incidents (LTIs) in three years, and Ambatovy posted its best TRIFR since the project began, outperforming previous years by over 30%.



The Company recorded a 32% year-over-year reduction in security incidents.



Sherritt personnel were invited to work in partnership with local and national regulators on public security and emergency response.



Pierre Tousignant, Senior Advisor, Health & Safety for Sherritt International, and Maria Caridad Linares de Paz, Sub-director HSE of Moa Nickel

PIERRE TOUSIGNANT AND MARIA CARIDAD LINARES DE PAZ

Maria Caridad Linares de Paz is a trained industrial engineer with over 30 years' experience in the mining industry and Pierre Tousignant is an experienced health and safety professional with 25 years' experience around the world. Both Maria Caridad and Pierre have been working at the Moa JV for the last two years, primarily focusing on changing the safety culture for over 2,000 employees and contractors on site.

Maria Caridad credits the improving safety performance to teamwork and a true focus on mentality change where, in some cases, normalized and historical practices did not align with leading health and safety performance expectations. Pierre knows the focus on targeted training and updated policies and procedures supported by management has helped this change. Maria Caridad believes that to see continuous improvement, the focus needs to be on supporting leadership, including site supervisors so that they may demonstrate the required competencies around H&S and be supported to lead their teams with safety top of mind.

Pierre feels that the Cuban workers at the Moa mine site and plant are uniquely determined to make positive change and are “wonderfully involved” in their communities, demonstrated through their volunteerism, the likes of which he has seen nowhere else in his travels.

When asked what Maria Caridad wants her legacy at the Moa mine site to be, she said “When all people coming to the site, employees and visitors, see and feel that safety comes first.”

“Great H&S performance is not an end-state, it’s a continuous journey that evolves and focuses on different things at different times. As long as one single person gets hurt, and their work and family life are impacted, we are not content.

That being said, last year significant improvements were made in H&S performance at the Moa operation. We recognize that improvements in H&S performance are not achieved by one or two people; however, the leadership and cooperation between both sides of the joint venture demonstrated by Pierre and Maria Caridad were critical in creating the positive momentum seen over the course of 2018.

We would like to recognize their vision, consistency and teamwork to achieve a tremendous turn-around in one year.”

– Ivo Gonzalez, Director, Environment, Health, Safety and Sustainability

HEALTH AND SAFETY

MANAGEMENT APPROACH

Our health and safety management approach has historically been decentralized, with each division/operating site applying its own expertise and experience to identify hazards and risks, implement controls, monitor performance, and assign appropriate accountabilities. Over a number of years, we have established enterprise-wide standards and aligned with international best practice as part of our commitment to continuous improvement, operational excellence and a stronger safety culture.

To clearly articulate our expectations for health and safety performance across the business, we are in a multi-year process of developing a general health and safety standard, based on the requirements of Towards Sustainable Mining, and specific fatality prevention standards – such as Light Vehicles, Heavy Mobile Equipment, Working at Heights, and Confined Spaces, among others – which have been or are currently being implemented. This phased approach to implementation is due to the different levels of maturity of our sites. We also have a Significant Potential Incident Standard in place. It requires tracking and specific management actions for any workplace incident that, under slightly different circumstances, could have resulted in a fatality.

The full suite of health and safety standards are being implemented, continually assessed and reviewed as new risks emerge and our sites progress in the management of health and safety.

In addition to implementing standards, we conduct safety culture assessments at our operating sites, and track a series of leading indicators designed to increase hazard awareness, improve performance and strengthen safety culture. These indicators include leader walks around sites to set the tone from the top, proactive health and safety communication activities, workplace inspections and training hours. At the corporate level, we monitor health and safety performance through regular executive reviews, peer comparisons and independent assessments.

Ultimately, experience has taught us that everyone must take ownership of safety and be comfortable having safety-related conversations as a matter of course in their everyday activities.

Sherritt launched its enterprise-wide Operational Excellence (OE) program in 2015. OE is a business improvement process that focuses on team-based problem-solving and process improvement leading to business transformation, including a safer, more efficient workplace. To date, more than 200 employees from the corporate office, Moa, Fort Saskatchewan and Ambatovy have participated in OE events, including 50 project teams focusing on areas such as logistics, maintenance and production. Examples of the types of results achieved through OE so far include:

- Improved cycle time on safe work permits at the Fort Saskatchewan site resulted in a forecasted transition of at least 7,000 hours of non-value-added work to value-added work. This achievement was initiated through the site's Lean program that supports employee implementation of continuous improvement projects
- Reduction of truck refuelling times at Moa to save approximately \$500,000 per year
- Identification of business improvements that could result in cost savings valued at \$24 million for Ambatovy
- Improved visible-felt leadership interactions at Moa leading to an additional 200 hours per year spent by supervisors in work areas seeking ways to make the work safer.

OE projects will continue as part of the company's overall objective to create a safer, more efficient workplace. Refer to this case study for more information on those that occurred in 2018.

PERFORMANCE

Fatalities

In 2018, Sherritt's divisions did not experience any fatalities.

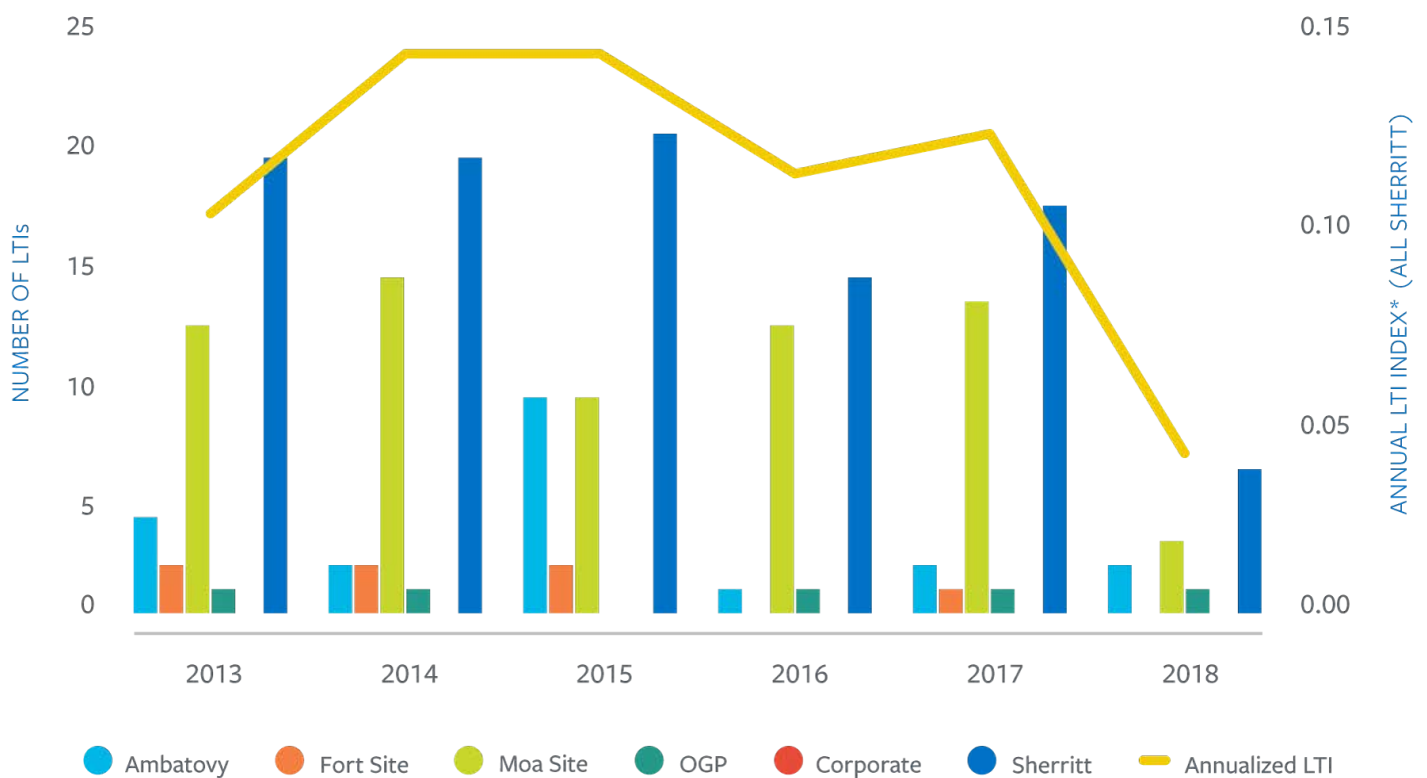
We continue to focus on building a strong safety culture, including removing or reducing fatal risks at the sites and unsafe behaviours. Our target continues to be achieving zero harm for our employees, contractors and community members in the areas in which we operate throughout 2019.

Lost Time and Recordable Incidents

During the year, we reported six lost time incidents (which are recorded when a worker misses at least one shift following a workplace injury) and 24 recordable incidents (which include injuries resulting in death, lost time, restricted work, medical treatment beyond first aid, or loss of consciousness) across the company. These statistics mark a significant improvement over our 2017 performance.

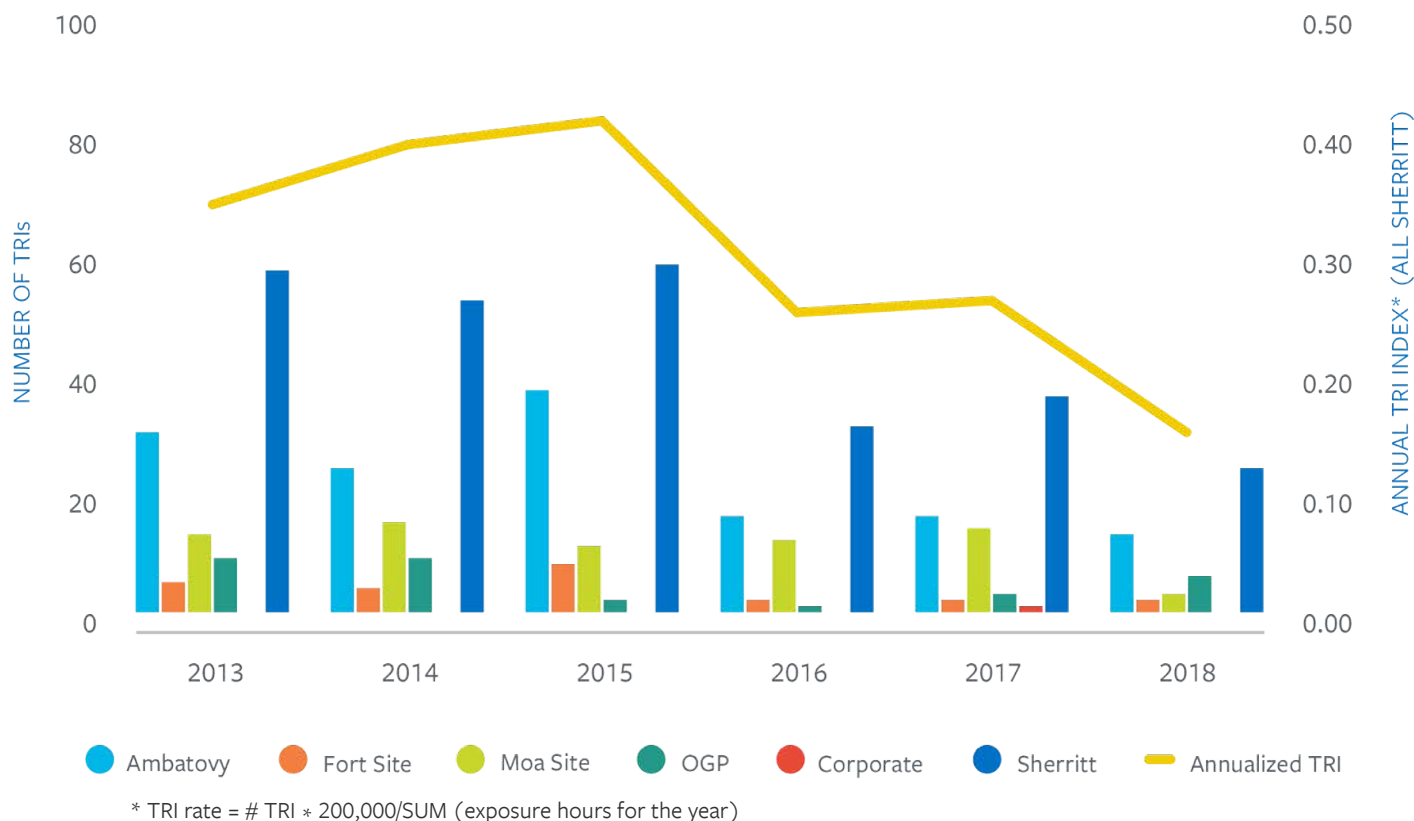
Our overall safety performance in 2018 continued to be peer-leading, with a lost time incident index (total number of lost time injuries per 200,000 work hours) of 0.04 (compared to 0.12 in 2017) and a total recordable incident index (total number of recordable injuries per 200,000 work hours) of 0.15 (compared to 0.26 in 2017), both of which are peer and industry leading results.

Lost Time Incident (LTI) Index



* LTI index = # LTI * 200,000/SUM (exposure hours for the year)

Total Recordable Incident (TRI) Index



Significant Potential Incidents

Sherritt records significant potential incidents (SPIs) – defined as actual or near-hit incidents that, under different circumstances, could have reasonably resulted in at least one fatality – in conformance with our standard. There were 35 SPIs reported over the course of the year, which is comparable to the 31 reported in 2017. The SPIs were investigated to identify the cause(s) of each incident, and actions to prevent recurrence were identified and implemented. The most common types of SPIs in 2018 continued to be related to light vehicles, heavy mobile equipment and working at heights. As a result, we are focusing on efforts to identify and strengthen critical controls in these areas at all our operating sites.

In previous years, a number of SPIs regarding light vehicles were recorded at OGP. In response, OGP updated its DriveRight training program for site vehicles in 2018. DriveRight monitors drivers’ performance and, most recently, has introduced a demerit system to help change bad habits.

“At Sherritt, we understand that remaining relevant and competitive in fast-changing global markets requires Operational Excellence. This is an organizational mind-set that empowers employees to shine a light on, and eliminate, waste in all its forms. The result is continuous improvement across the business, whether it be related to sustainability, production, or costs. Sherritt has been around for over 90 years – achieving Operational Excellence will help us be around for another 90.”

– Tim Dobson, Senior Vice President, Metals



We are using one of our most valuable resources to come up with solutions and improvements for our business: our employees.

OPERATIONAL EXCELLENCE

Operational Excellence (OE) is a business improvement process that focuses on team-based problem-solving and process improvement, leading to meaningful results, including a safer, more efficient workplace. To date, more than 200 employees from the corporate office, Moa, Fort Saskatchewan and Ambatovy have participated in OE events, including 50 project teams focusing on areas such as logistics, maintenance and production.

In 2018, the OE program within Fort Saskatchewan's Metal Division expanded to include a Lean Belt component. The Lean Belt program focuses on developing easy-to-use continuous improvement tools and putting those tools in the hands of employees. The tools are accompanied by leadership development support, coaching, visual management, and improvement routines designed to sustain improvements and create a stronger culture of continuous improvement. Lean Belt approaches are being applied to projects in Supply Chain Management that will improve our ability to maximize strategic sourcing opportunities, allow better optimization of our inventories and result in improved reliability and maintenance strategies.



Safety culture assessments provided valuable insights, including employee sentiment towards the company and control of critical risks.

SAFETY CULTURE ASSESSMENTS

As a result of the four fatalities in 2015, management introduced a strategic focus on fatality prevention and commissioned an independent external assessment of the safety culture at each operating site.

The assessments provided valuable insights into factors that contribute to the safety culture at each site: employee sentiment towards the company, accountability for safety at the line-management level, leadership interactions in the field and control of critical risks. A key learning was that most safety systems and tools are similar around the world. Safety culture comes from the leaders.

Some common findings include: senior leaders have not been role modelling the desired behaviours; there is some confusion over what safety work should be done by various roles; capability gaps exist with front-line leaders; there is a sense of comfort with the status quo; management of low-probability/high-consequence events can be improved; and simple hazard assessment and communication tools are inconsistently used.

In 2018, this was a continuing area of focus. Each site developed an action plan to drive safety culture improvements. Actions included: setting aggressive targets to get leaders in work areas more often; role modelling safety behaviours by leaders; improving the quality of interactions through peer reviews and tiered interactions; increasing the linkage with significant potential incidents; and improving the usage of hazard assessment tools.

PUBLIC SAFETY

MANAGEMENT APPROACH

As good neighbours, it is critical to us that we ensure our activities and business practices avoid unintended or adverse effects on the public. We follow the regulations of our operating jurisdictions, strive to meet the expectations of nearby communities and regularly engage and collaborate with local stakeholders on health and safety-related risk awareness and emergency preparedness. Through engagement, we work to understand public concerns and safety risks, evaluate steps we can take to reduce risk, help clarify misunderstandings and dispel misinformation, and, when appropriate, collaborate with communities on initiatives that make all of us safer.

To minimize the risks of a catastrophic event that could impact a local community, the company has embarked on a multi-year program to implement process safety management systems at all sites. These systems will ensure that major hazards are identified and controlled, changes are appropriately managed, process and equipment integrity programs are in place, operating procedures are in place, and there is adequate communication and training, among many other elements. The company's Cuba operations are aligning with Cuba's Resolution 148 for major hazard installations, the Fort Site will align with the new Canadian CSA Z767-17 process safety management standard, and Ambatovy has aligned with the U.S. OSHA 1910.119 process safety management of highly hazardous chemicals standard.

Another important way we mitigate potential impacts to both communities and our business is through effective emergency preparedness and response planning. At our operating sites, we develop plans, grounded in scenario/risk assessments, to protect the public, the environment and infrastructure in the event of a significant incident. We also implement actions to limit the severity of impacts, should an incident occur.

In Madagascar and Canada, Sherritt is responsible for leading emergency response efforts at its sites, while in Cuba we support our joint venture partners and the government authorities who take the lead in responding to operational emergencies. Refer to this case study for more information on the Cuban approach. Whenever possible, we coordinate closely with emergency responders in both preparedness and response activities, and we regularly conduct joint training exercises with them.

Sherritt's enterprise-wide Crisis Management Standard is informed by Canadian and international practices, including the Mining Association of Canada's Towards Sustainable Mining (TSM) Crisis Management Planning Protocol, the Incident Command System's (ICS) management approach, and the United Nations Awareness and Preparedness of Emergencies at the Local Level (APELL) Programme.

PERFORMANCE

Emergency Response Planning and Training

All operating sites have up-to-date emergency response plans in place, and conducted some form of crisis/emergency preparedness training in 2018.

Every site has established timelines to review emergency response plans and conduct training exercises (at least annually), and to ensure plans are up to date and applicable and response teams are prepared.

The Fort Site subscribes to the Incident Command System (ICS) management framework for emergencies and is carrying out a multi-year plan to train and conduct field exercises for the local response team. Additionally, the Fort Site partners with the Northeast Region Community Awareness Emergency Response (a mutual aid emergency response association) to engage with the public and local industry partners to raise awareness of community safety risks. In 2018, the Fort Site participated in Emergency Preparedness Week and hosted its second annual Sherritt Family Fire Safety Day to educate the public on how to prepare for emergencies.

In 2018, Ambatovy participated in an emergency simulation exercise organized by the Prefecture of Toamasina and Atsinanana Region. The exercise simulated a major sulfur dioxide incident in a nearby community. In previous years, training focused on tailings dam breaches, involving local and regional stakeholders in response planning, including the National Office for Disaster Risk Management, Ministry of Defence, Ministry of Health and others.

In Cuba, multiple training exercises occurred in 2018 at our Moa mine site, as well as our Oil & Gas and Power (OGP) facilities. Exercises such as these are part of regular preparedness training in the event of an incident. These drills also inform any needed updates to plans.

Post-Incident Community Support

Sherritt's Cuba and Madagascar operations are located on island nations, prone to seasonal storm activity. In 2018, Madagascar experienced one cyclone, Ava, which impacted the island between the end of December and beginning of January. Ambatovy collaborated with regional authorities, UN agencies and local partners to assist impacted communities through donations of fuel and clean-up support.

Stakeholder Awareness and Collaboration

Our operating sites continue to engage with local communities on risk awareness and emergency response.

In Moa, the refurbishment of a local community health clinic was completed, and work progressed on a second one. Refer to this case study to learn more about Sherritt's community investment program in Cuba.

The Fort Saskatchewan site continued participating in key multi-stakeholder forums related to crisis and emergency preparedness. Our team there works actively with the Northeast Region Community Awareness Emergency Response (NRCAER). For example, in 2018, the Fort Site worked with a neighbouring chemical facility and supplier to strengthen its emergency response capabilities. We also work with Life in the Heartland on building community awareness about operational risks. It is common practice for employees at the site to meet with local authorities and first responders to update emergency scenario plans and response procedures.



Cuba's National Civil Defense, the institution responsible for disaster-relief planning, has effectively implemented a preparedness system for disasters that was commended by the UN.

EMERGENCY PREVENTION AND PREPAREDNESS – CUBA'S EXPERIENCE

We have preparedness and response plans at all our sites to protect local communities, the environment and our business from emergencies. In Cuba, we work with state agencies to coordinate response planning.

Cuba is geographically situated in the path of hurricanes that can have devastating impacts. Studies indicate that more than two million of the country's 11 million people are vulnerable to disasters. As a result, Cuba has internationally recognized expertise in disaster management – from preparation to response to recovery.

Cuba's National Civil Defense, the institution responsible for disaster-relief planning, has effectively implemented a preparedness system for disasters such as hurricanes, earthquakes, fires, floods, storm surges and other possible events. This system includes an early warning mechanism that ensures the correct behaviour of citizens when it comes to following instructions, preparing for evacuation and other important measures essential to preserving lives.

The success of Cuba's disaster preparation and mitigation efforts is confirmed by results. While material losses have been high in the past, the number of casualties has been minimal. This was underscored during 2016's Category 4 Hurricane Matthew for which the response by the Cuban Civil Defense in the prevention of loss of life was commended by then-UN Secretary-General Ban Ki-moon. The effective response was demonstrated again in 2017 during Hurricane Irma.

The Cuban system of preparation and evacuation is based on a few fundamental principles, namely:

- Citizen engagement – participation of civilians in preparing for natural disasters through training and education
- Coordination – disaster-relief plans are crafted with the participation of government leaders, civilian defence personnel, community organizations and local political leaders
- Maintaining social services – Cuba provides vital resources so that hospitals, schools and other institutions remain open during a natural disaster
- Vulnerability identification – each municipality identifies citizens and infrastructure deemed vulnerable, thus easing the evacuation process

- Protecting/assuring property – the Cuban government helps citizens protect personal items during evacuations and ensures that damaged property will be replaced at no cost

These factors have helped ensure that our mining and energy businesses in Cuba operate in an environment where emergency response capacity is well developed and well integrated into the risks facing the most vulnerable members of the community across the island.



We are proud to support the globally successful UNICEF program for road safety.

PROMOTING ROAD SAFETY TO CHILDREN AND YOUTH IN CUBA

Sherritt is committed to the health and safety of our employees and the communities around our operations. That is why we are thrilled to partner with UNICEF once again in support of Principle 4 of the Children’s Rights and Business Principles – ensuring the protection and safety of children in all business activities. As part of the partnership announced in 2018, Sherritt will support over three years UNICEF’s Child Road Traffic Injury Prevention Program to promote road safety among young people in Cuba.

Road safety is a priority for both the company and the country of Cuba, as unintentional injuries caused by road accidents are the leading cause of mortality among youth and adolescents.

The program builds on UNICEF’s extensive experience with road safety, which is a key component of its Country Programme (2014–2018) and which has already shown successful results at the national level and in La Havana and Santiago de Cuba provinces. With Sherritt’s support, and in collaboration with Cuba’s ministries of Health and Education, the National Road Safety Commission and local governments, the program reaches the provinces of Matanzas and Holguin, including Moa and Cárdenas where Sherritt operates.

The intention of this program is to:

- Increase families’ awareness of how to prevent road accidents through communication initiatives aimed at social and behavioural change.
- Strengthen road safety education of children and adolescents, with emphasis on those most vulnerable.
- Strengthen policies to protect children by ensuring experience and best practices are shared among institutions, mass organizations, professionals on road safety, and child victims of road accidents.
- Support Sherritt’s deep commitment to social responsibility and direct engagement on issues affecting children.

In 2018,

- Over 300 students from five primary schools in Holguin participated in a student interest group with 200 community members and representatives from the Ministry of Education, Ministry of the Interior and Holguin's Provincial Commission for Road Safety, to strengthen students' cognitive abilities and raise their awareness on practical road safety measures.
- A second event was held with 150 primary and secondary students to improve their knowledge and understanding about the National Road Safety Code.
- A workshop on Road Safety, Vehicle Safety and Technical Review was held November 8–9 in Holguin Province with the objective of improving road safety knowledge and skills to improve and enhance the safety of road transport in the region. About 184 specialists and government officials (including the Ministry of Transport, the Provincial Department of Transportation, and the Road Safety and Vehicle Registration Department of the Ministry of the Interior) from the provinces of Guantánamo, Santiago de Cuba, Granma, Holguín and Las Tunas participated in the meeting.

This partnership builds on years of mutually beneficial collaboration between Sherritt and UNICEF in Madagascar. Sherritt and UNICEF are proud to partner again to work towards the achievement of SDG 3.6 – to halve the number of global deaths from injuries and road traffic accidents by 2020. For more information about the history of this relationship, [click here](#).

Credit: UNICEF Cuba/Gonzalo Bell

SITE SECURITY

MANAGEMENT APPROACH

We are committed to safeguarding our people, assets, reputation and the environment, while respecting the rights of the public. We have an enterprise-wide policy that outlines our principles for creating a safe and secure business:

- Entering into agreements with private security service providers
- Entering into agreements with public security forces
- Reporting and investigating security-related incidents
- Use of force
- Protecting providers of confidential information
- Apprehending and transferring suspects to public custody

Ambatovy and Fort Saskatchewan have implemented much of the Voluntary Principles requirements. Application in Cuba requires a more nuanced and phased approach, including familiarizing our joint venture partners and the Cuban government with the Voluntary Principles before determining how best to move forward. MAC member companies that rely upon private or public security forces have committed to implementing a human rights and security approach consistent with the VPs and based on a determination of risk at the mining facilities they control. Furthermore, MAC members with international mining operations report on their implementation annually in MAC's *TSM Progress Report*.

Our operating sites employ full-time and contract security personnel. We believe that competence and training are the most important elements of effective security management and we evaluate all personnel carefully before selecting them for security detail. To ensure our interactions with the public are respectful, we provide values- and expectations-based training, including security and human rights training, to our security personnel. At Ambatovy, we have a memorandum of understanding with the public security force, and require security and human rights training for public security officials who patrol our sites.

In 2016, Ambatovy signed an umbrella agreement with the regional authorities around its operations and the United Nations System in Madagascar to work together to contribute to the social and economic development priorities of the region, including the promotion and integration of the company's commitment to human rights-related principles – such as the VPSHR, among others – in order to effectively analyze and address human rights risks.

PERFORMANCE

Security Incidents

Sherritt's operating sites reported a 32% year-over-year reduction in total number of security incidents in 2018. The majority of reported incidents are theft occurring at Ambatovy's operations, where high levels of poverty are the major driver for this activity; however, there were some more serious interactions of a higher order of severity involving muggings of employees and assaults against guards. Sherritt takes these incidents extremely seriously, particularly when the health and safety of employees and community members is threatened, and each occurrence was investigated thoroughly. The reduction is attributed to theft control measures and changes in security management practices implemented in 2017 and 2018, and follow-up investigations suggested that these improved management practices also helped prevent serious incidents from becoming more so.

Our operations in Cuba and Canada – two jurisdictions with well-established systems of governance – did not record any significant security incidents in 2018.

Security and Human Rights

In 2018, there were no security incidents involving allegations or claims of human rights abuse anywhere across Sherritt. Ambatovy's security and human rights training results improved compared to 2017: 85% of full-time security personnel, 100% of contract security personnel, and 100% of public security officials based near our operations were trained. In 2018, an updated Memorandum of Understanding was signed with the public security in Madagascar, including commitments around training and awareness of the VPs. Learn more about Ambatovy's efforts to conform to the Voluntary Principles on Security and Human Rights (VPSHR) in this case study.

At Fort Saskatchewan, security officers continued to receive basic human rights training through the provincial licensing process in Alberta. The site also trained 100% of its security personnel on the Voluntary Principles, as well as private security contractors and emergency services personnel.

In 2018, Sherritt commissioned an independent assessment of the policies, procedures, and practices used by the Fort Site to verify that the systems comply with the requirements of the Voluntary Principles on Security and Human Rights (VPSHR) and UNICEF's checklist on Security and Children's Rights, as five years had passed since the original baseline assessment and beginning of implementation. Overall it was found that the Fort Site has made significant advancements in implementing the VPSHR on site since the baseline, achieving a completion score of 89%. While Canada remains a low-risk jurisdiction for human rights infractions, Sherritt believes the Fort Site has demonstrated clear value from application of the VPs in this context.

In 2018, the Fort Site was invited to work in partnership with the local Royal Canadian Mounted Police detachment on the development of a security management best practice document for industrial sites in the regions. This work is expected to continue into 2019.

Sherritt's Security and Human Rights Standard includes standardized tools for conducting site-level gap analyses. The standard is part of Sherritt's broader Sustainability Framework Implementation Plan for designing and implementing company-wide minimum standards across sustainability-related functions, including security. In 2019, Sherritt's Human Rights Policy will be reviewed and updated to reflect industry-wide best practice.

Our 2018 annual report to the Voluntary Principles on Security and Human Rights is available online.



Ambatovy has incorporated Voluntary Principles on Security and Human Rights (VPSHR)-related requirements into its private and public security provider agreements.

IMPLEMENTING THE VOLUNTARY PRINCIPLES IN MADAGASCAR

At Ambatovy, we began to implement the Voluntary Principles on Security and Human Rights (VPSHR) in 2009. Since then, Ambatovy has taken a series of proactive steps to bring the site into greater conformance with the VPSHR. In 2012 and 2013, Ambatovy conducted third-party risk assessments that mapped out human rights-related and security-related risks to both our company and our stakeholders. The results of the risk assessments have been used to strengthen existing policies and procedures as well as to develop new systems and programs to prevent and mitigate the identified risks.

Ambatovy's contracts with its private security providers include required compliance with the Voluntary Principles. Ambatovy also formalized a memorandum of understanding with Madagascar's Gendarmerie Nationale, in line with the Voluntary Principles requirements for security arrangements with public security providers during the year. Such requirements include pre-employment screening and comprehensive training on security and human rights and the use of force.

At Ambatovy, the security provider conducts training on human rights, the Voluntary Principles and the use of force prior to sending guards to site. Site security personnel also receive annual refresher training on the Voluntary Principles. In 2018, Ambatovy provided Advanced Criminal Investigation Training to the Gendarmerie to improve investigative skills into security incidents and fraud. The Security Manager, or designate, holds monthly meetings with the Commandant of the Gendarmerie at which the Voluntary Principles are discussed. The site is engaged with the Gendarmerie's command to discuss awareness raising of use of force procedures with the gendarmes. Ambatovy has sponsored a number of third-party training workshops on the Voluntary Principles for public security in the past, and is looking to work with other civil society organizations to organize three large training sessions a year with representatives of the Gendarmerie, police, civil society and other groups interested in security and human rights issues for 2019.

In 2018, Ambatovy also convened an internal committee made up of employees from Security, Human Resources, Mine Operations, Sustainability and Supply Chain Management for the purpose of managing and enhancing security at the mine site. This group facilitates two-way communication across the division, including contractors. Ambatovy also developed a training program for suppliers and subcontractors on UNICEF's Children's Rights and Business Principles, which included creating an action plan for respecting children's rights. The first round of training was rolled out before the end of 2018 and at time of writing this report, 14 sessions had been completed with approximately 150 employees designated by Ambatovy's supplier and contractor companies participating in the sessions. They will then share the knowledge and information gained with their colleagues in a cascade manner. The rationale for delivering this training was to ensure participants understood the content of Ambatovy's management system and policies and that undue risk regarding children can and should be avoided.

Ambatovy's Security and CSR departments also organized a community soccer tournament with communities neighbouring the mine in order to strengthen company-community relations. Approximately 11,000 people were in attendance. In addition to building strong community relationships, the tournament is an opportunity for Ambatovy to convey key messages around health and wellness, children's rights, and safety and security.

For more information on Ambatovy's efforts, you can find Sherritt's 2018 annual report to the Voluntary Principles on Security and Human Rights online.

EMPLOYEE RELATIONS

MANAGEMENT APPROACH

Our business cannot operate and thrive without a dedicated, experienced and engaged workforce. We are committed to listening to and understanding the needs and challenges of our employees; taking action to improve the workplace; and supporting employees in reaching their potential. For the purpose of this report, employee relations include employee engagement, talent development, labour rights, and workplace diversity and inclusion.

Effective and regular two-way communication with employees is the foundation of our employee relations programs. Senior managers in the corporate office and divisions are held accountable for implementing plans to address the key needs of our workforce. In previous years, Sherritt conducted an employee survey to evaluate engagement across the business. We are currently exploring new approaches for gathering employee feedback on a more frequent basis to fulfill our commitment to listen to and understand the needs and challenges of our workforce. We will report on the progress of our renewed approach in our 2019 Sustainability Report.

Ensuring the right programs are in place to support employee development at all levels is crucial for Sherritt's long-term success and succession planning. In spite of the challenging commodity price environment, we remain committed to employee training and development. We provide a range of technical, management and leadership training in Canada, Cuba and Madagascar. Whenever possible, we leverage opportunities to bring different groups together to build cross-organizational networks and strengthen our shared values and culture.

Our compensation programs are aligned with Our Purpose and Our Promises, fostering a company-wide culture of accountability and pay-for-performance compensation. All salaried employees are eligible for an annual performance-based short-term incentive award expressed as a percentage of their base salary.

Across our company, we have both unionized and non-unionized workforces. We recognize and encourage the right to engage in free association and collective bargaining. As with all of our relationships, we strive for productive and mutually beneficial outcomes in our discussions with employees and organized labour representatives. When labour grievances do occur, we investigate and work to reach an acceptable solution for all parties concerned. In certain cases, we may opt for third-party arbitration. Once grievances have been resolved, the management team evaluates the issues that were raised and determines what process improvements, if any, can be made to ensure we learn from each one.

We have a policy for workplace discrimination and violence prevention. There are discrete policies on human rights, business ethics and diversity that meet legal requirements and best practices. We are committed to continuous improvement in these areas, with a growing focus on diversity and inclusion. In Cuba, all national workers are hired through an employment agency and can report any issues of discrimination, which are investigated by the agency in conjunction with management.

PERFORMANCE

Employee Engagement

Sherritt is currently exploring new approaches for gathering employee feedback on a more frequent basis. As such, no employee engagement surveys were conducted in 2018.

Organized Labour, Grievances and Strike Action

In 2018, a process that began in previous years to put a collective bargaining process in place at Ambatovy for all local national employees resulted in the ratification of an agreement in June. At our Fort Saskatchewan site, unionized employees are represented by Unifor Local 530A (Sherritt and Unifor have had an effective partnership for more than 60 years without a labour interruption). In April 2016, a new three-year agreement came into effect. In Cuba, all organized labour considerations are mandated by the Cuban state and many of the systems and tools that are common in other jurisdictions, including collective bargaining, are not employed there. As such, factoring in both Ambatovy and the Fort Site, Sherritt's employee base is now approximately 83% unionized.

Our Fort Saskatchewan site resolves all grievances following the process described in the Collective Agreement and the Labour Relations Act of Alberta. There are currently 39 active grievances in this process.

At Ambatovy, 18 grievances relating to working conditions were reported in 2018. The main topics of the complaints were: harassment, personnel transport, leader behaviour and salary increase. All 18 cases were addressed and resolved during the calendar year.

There were no work stoppages as a result of labour unrest in 2018.

Workplace Diversity and Inclusion

With Sherritt's Sustainability Goal of improving diversity at all levels of the company, Sherritt spent much of the year analyzing the composition of our workforce and assessing our internal policies including hiring, talent management, and flexible work arrangements. In 2019, Sherritt will launch a global framework for diversity and inclusion, setting out our multi-year plan to achieve our stated goal.

Currently, the workforce at Sherritt is 14% female, largely unchanged from 2017. In our Canadian locations (Fort Saskatchewan, Calgary and Toronto), our workforce is 20% female. In Cuba, our main workforce is contracted by the state and Sherritt is not involved in hiring decisions. In fact, the management team of the Cuban side of Sherritt's JV at Moa (Cubaniquel) is currently 40% women. Where Sherritt does not have oversight in hiring, we believe that we can still model by example and influence our JV operations in areas such as human rights and diversity and inclusion.

Although our overall gender diversity percentage is at the upper end of the mining and energy sectors, we remain committed to building a highly inclusive culture in order to attract and retain a diverse workforce.

Sherritt has joined both the "30% Club Canada", whose goal is to ensure that at least 30% of board seats in the country are held by women by 2022, and Catalyst Canada. As a signatory of the Catalyst Accord 2022, Sherritt pledges to help increase the average percentage of women on boards and women in executive positions in corporate Canada to 30% or more by 2022. In 2019, Sherritt's President and CEO assumed the co-chair role for the 30% Club.

	Canada (Fort Saskatchewan, Commercial and Technologies, Calgary OGP and Corporate offices)			Cuba (Moa and OGP) ^{1,2}			Madagascar (Ambatovy)		Other ³			Total		
	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Male	Female	Unknown	Male	Female	Unknown
Permanent	672	169	-	2,320	192	-	3,121	452	5	11	-	6,118	824	-
Full-time	656	158	-	2,320	192	-	3,121	452	5	11	-	6,102	813	-
Part-time	16	11	-	-	-	-	-	-	-	-	-	16	11	-
Temporary ⁴	4	2	57	3	0	-	5,672	621	1	1	-	5,680	623	57

¹ Includes the office in Havana

² Includes Sherritt and General Nickel Company S.A. of Cuba employees at Moa, as well as employees of the entities that make up the Oil & Gas and Power businesses (including Energas)

³ "Other" includes our Bahamian marketing office, which services the Moa JV, and OGP Spain

⁴ Temporary employees include consultants and positions currently filled by contractors

Employee Diversity

	Canada (Fort Saskatchewan and Corporate)	Cuba (Moa and OGP) ¹	Madagascar (Ambatovy)
Employee average age	45	51	37
Women in workforce (%)	20.1%	2.17%	12.6%
Women in management (%)	18%	0%	13.8%

Note: Sherritt does not currently define or track employee ethnicities and therefore has not included these metrics.

¹ Includes Sherritt employees and Cuban local national employees

During the year, Sherritt's Fort Site engaged in a research study to "improve workplace culture in Alberta science, engineering, trades and technology companies by decreasing implicit bias and stereotypical threat," facilitated by the Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT). Sherritt is one of a number of industry participants. The program involves the assessment of workplace culture and a review of formal policies with the intention that the results will help both Sherritt with our diversity and inclusion strategy and the industry more broadly. The project is funded by the Status of Women Canada Western Region with in-kind contributions from participating companies and not-for-profit organizations.

In 2018, Sherritt updated the Harassment, Discrimination and Violence Prevention policy to expand the definition of prohibited behaviours and to clarify the accountabilities of all employees to ensure a safe and inclusive work environment. Training was provided to site leaders at the Fort Site regarding their accountability in addressing harassment and violence in the workplace.

During the year, five instances of discrimination were reported by employees at the Fort Site. This is something Sherritt takes extremely seriously. It is likely that the increase in incidents is not because the incidents were not occurring previously but because of increased awareness of the accountability of leaders and encouraged use of formal reporting procedures; however, each incident has been thoroughly investigated and treated with the attention such issues require, including training and, in some cases, termination of offenders. It is Sherritt's goal to create a diverse and inclusive workplace where issues are readily reported and appropriately addressed.

“Sherritt’s Fort Site is a partner with the Centre for Women in Science, Engineering, Technology and Trades (WinSETT) research project on improving workplace culture for women in STEM companies such as Sherritt. From their early commitment, all levels of the organization have become engaged in assessing their current strengths and challenges in the area of D&I, and have moved this discussion to the development of goals and priorities related to developing and sustaining an inclusive workplace culture. The momentum from an early exploratory discussion through focus groups to a comprehensive draft framework has been remarkable.”

**– Lori Campbell, Principal, Colbourne Institute for Inclusive Leadership,
Norquest College**



COMMITTED TO PAY EQUITY AND PROMOTION

The leadership at Sherritt feels strongly that we will be a better organization if we become more inclusive and more diverse. Over the last two years, we have reviewed and updated policies and procedures, job descriptions, compensation programs and hiring practices – all with a diversity and inclusion lens. We know that these people practices are the foundation of our longer-term strategy and action plan being developed.

Understanding that studies have found, time and again, that women in the workforce are paid on average less than their male counterparts across much of the world, we conducted an internal assessment of our own pay equity situation for Sherritt employees in 2018.

We were pleased to find that, in alignment with our promise to employees, pay for positions of the same value was equitable between women and men. However, what the data did show us is that we have disproportionately fewer women in higher-level positions than men. Now that we have this data, our focus has shifted to understanding the underlying reasons.

In order to achieve our 2022 goal of having a board and an executive team of at least 30% women, our challenge is building and maintaining a strong female pipeline.

We are committed to being transparent about our progress as solutions are implemented and results tracked.

“From pay equity reviews and analysis of workforce trends through D&I lenses, to the commitment to achieve better gender representation in senior leadership and throughout the organization, Sherritt is leading the movement towards better gender representation in the mining industry. It is encouraging to see Sherritt leaders modelling inclusive behaviours and having challenging conversations internally and externally to create a more diverse and inclusive mining industry in Canada and everywhere they operate.”

– Jamile Cruz, Co-Founder and Executive Director, I&D101



Operating Ethically

As a public company, our overarching responsibility is to operate profitably and take advantage of opportunities to grow our business. This allows us to keep our commitments to our shareholders, employees, contractors, host-country governments and communities. Making a profit, however, is not done at any cost. To ensure that we protect our business and reputation, we commit to conducting all activities with integrity and the highest standards of responsible conduct. This includes avoiding actual and perceived conflicts of interest, having zero tolerance for corruption of any form, and respecting the rights of all people with whom we interact. We do this by rigorously implementing our Business Ethics Code, Anti-Corruption Policy and Human Rights Policy, and by ensuring we have the systems and programs in place to realize our expectations.

OUR 2018 PERFORMANCE:



Produced the three billionth pound of finished nickel at our Fort Saskatchewan refinery.

Recorded, managed and closed 24 reportable concerns related to business conduct.

Completed a third-party audit of the implementation of Voluntary Principles on Security and Human Rights at Sherritt’s Fort Saskatchewan refinery in Alberta, Canada, and scored a completion rate of 89%.

Commenced a training program on children’s rights for suppliers and contractors at Ambatovy.



Sarah Stata, Director, Supply Chain

SARAH STATA

Sarah Stata is Sherritt's Director of Supply Chain, who currently splits her time between our Oil & Gas and Power head office in Calgary, Alberta and the Fort Saskatchewan refinery. With over 26 years of experience in Supply Chain, she specializes in Category Management, Procurement, Logistics and Inventory Management. Sarah also sits on the Board of Directors for the Canadian Supply Chain Research Foundation.

In 2019, Sarah was named one of the 100 Influential Women in Supply Chain by the Supply Chain Management Association, which was no surprise to her team and colleagues at Sherritt. Here's Sarah in her own words:

Why is the concept of having a responsible supply chain important for Sherritt? Responsible Supply Chain is important to Sherritt to ensure we are decreasing and mitigating our risks associated with our supply base by examining culture, ethics and compliance practices adopted by the suppliers we use. With the increased need for more global sourcing due to our sensitive sourcing requirements, the need for socially and environmentally responsible practices within our supply chain are critical in ensuring that Sherritt is collaborating with suppliers that fit the Sherritt culture while providing quality goods and services to support our business.

Why is supply chain an area you've dedicated your career? My passion for Supply Chain comes from the endless opportunities for learning, development and challenge in my career. The efficiency and sustainability of a Supply Chain can make or break any organization and I truly enjoy being able to effect change that directly affects the bottom line.

Why have you stayed at Sherritt for most of your career? Sherritt has provided me with a variety of opportunities for development, growth and challenge over the past 21 years. My passion for supply chain is driven by being challenged and having the ability to develop and grow as a leader, and Sherritt has consistently provided me with this. The strong leadership and support that I have received has strengthened my loyalty to Sherritt and I look forward to the future challenges that I will be presented with.

ECONOMIC PERFORMANCE

MANAGEMENT APPROACH

The emergence of the electric vehicle market has created optimism about the nickel and cobalt markets as both metals are key components in current battery technology. As a low-cost, high-purity producer of Class 1 nickel, Sherritt is poised to take advantage of growing demand given that our production is primarily in briquette form – a type ideally suited to battery production.

Sherritt ended 2018 with less debt than the previous year and cash, cash equivalents and short-term investments of \$207.0 million. Net direct cash cost for 2018 ranked the Moa JV within the lowest-cost quartile relative to other producers and ranked it as the lowest-cost nickel HPAL operation according to annualized information tracked by Wood Mackenzie.

Building on our progress of recent years, Sherritt's focus in 2019 will be on the following strategic priorities:

- Preserve liquidity and build balance sheet strength
- Optimize opportunities in the Cuban energy business
- Uphold global operational leadership in finished nickel production from laterites
- Improve organizational effectiveness, including a focus on Operational Excellence and a commitment to strive for leadership in diversity and inclusion

PERFORMANCE

Please refer to our 2018 Annual Financial Report for detailed information on our economic performance last year and an overview of how we plan on executing against our 2019 strategy.



Employees at the Fort Saskatchewan refinery gather together to celebrate 3 billion pounds of finished nickel production.

3 BILLIONTH POUND AT FORT SASKATCHEWAN REFINERY

Early in 2019, Sherritt announced that its refinery in Fort Saskatchewan, Alberta, reached 3 billion pounds of finished nickel production since operations first began in 1954.

“As one of Canada’s oldest mining companies, we are proud of this important milestone,” said David Pathe, CEO and President of Sherritt International. “It serves as a testament to the refinery’s dependability over the past 65 years, and the ability of our employees to adapt to changes in the industry and introduce innovations that have enabled Sherritt to maintain our leadership position as a producer of low-cost, high-quality nickel.”

The Fort Saskatchewan refinery was constructed in 1954 and initially processed feed from Sherritt’s Lynn Lake mine in Manitoba. Today, the Fort Saskatchewan refinery processes mixed sulphides produced through the Moa Joint Venture, which was created in 1994 and in which Sherritt maintains a 50% partnership interest, to produce Class 1 nickel in briquette and powder forms. Class 1 nickel is the purest form of nickel and is particularly suited for applications that require high-purity levels, such as electric vehicle batteries.

In 2018, the Fort Saskatchewan refinery produced 30,708 tonnes of finished nickel (100% basis) and produced 3,234 tonnes of finished cobalt (100% basis) as a by-product. Finished nickel and cobalt produced at the Fort Saskatchewan refinery are sold to international customers, primarily in Europe, Japan and China, for use in stainless steel applications, specialty alloys and assorted battery types.



Sherritt has a long history of technological innovation at its operation in Fort Saskatchewan, Alberta, and that innovation continues today.

MADE IN CANADA INNOVATION FOR RESPONSIBLE PROCESSING

The currently practised laterite process technologies are pyrometallurgical – such as NPI, FeNi and matte smelting – or hydrometallurgical; in particular, high-pressure acid leaching (HPAL), which Sherritt is known around the world for. At the industrial scale, process technology development has been incremental rather than radical, despite numerous studies by the industry and academia. However, pyrometallurgical and hydrometallurgical processing are not economically equal, each approach operating optimally on distinct and different ore composition, with smelting processes being more sensitive to energy cost and the HPAL process being more sensitive to product costs.

Sherritt is continuously on the lookout for technology options that optimize its current practices, while also giving consideration to novel process options that promise greater resource utilization, a lower environmental footprint, and competitive capital and operating cost. From its Technologies hub in Fort Saskatchewan, Sherritt reaches out to a global network of technology partners, complementing its in-house technology development programs.

BUSINESS CONDUCT

MANAGEMENT APPROACH

Our Purpose and Our Promises describe our guiding principles and how we expect them to be lived every day as we carry out our business. Our Business Ethics Code provides clear guidance to our workforce on what it means to act with integrity. It covers conflicts of interest, fraud and corruption, fair dealings, protection and proper use of the company's assets, compliance with regulatory requirements, disclosure, confidentiality, and reporting mechanisms available to employees and contractors.

Globally, there is a necessary focus on eliminating corruption within companies and between businesses and all levels of government. Many countries have passed anti-corruption legislation, imposing significant monetary and incarceration penalties for corrupt practices. Investigative activities by law enforcement agencies have also increased significantly, bringing effect to this legislation.

As a Canadian company, we are subject to the Canadian Corruption of Foreign Public Officials Act (CFPOA), as well as anti-corruption laws in Madagascar and Cuba. The CFPOA prohibits Canadian business interests from making or offering improper payment of any kind to a foreign public official – or anyone acting on his or her behalf – where the ultimate purpose is to obtain or retain a business advantage.

Our Anti-Corruption Policy prohibits the violation of the CFPOA and other applicable anti-corruption laws. All divisions, groups and offices must undergo anti-corruption training and log all government meetings and payments. In Madagascar, governmental and commercial corruption presents a significant risk, whereas in Canada and Cuba, it does not. As such, we provide additional training, awareness-building and controls at Ambatovy, where all suppliers with standard contracts must also sign and adhere to our Anti-Corruption Policy.

Sherritt is very supportive of the transparent reporting of payments to governments. We are a Supporting Company of the Extractive Industries Transparency Initiative (EITI), to which we report in Madagascar. Visit this website to review EITI Madagascar's latest report, which was published in 2015. In 2017, Madagascar was validated by EITI as having made meaningful progress in implementation. For more information on Validation, visit the EITI website. We have also developed a process for meeting the public reporting obligations of Canada's Extractive Sector Transparency Measures Act (ESTMA), the requirements of which are very similar to those of EITI. Sherritt's first Extractive Measures Transparency Act Report is now available online. The report, which is a requirement of the Government of Canada, covers certain payments that Sherritt made to all levels of government in Canada and abroad in 2018.

PERFORMANCE

Ethical Conduct

In 2018, 24 reportable concerns were submitted through the Whistleblower system. Of the 24 reportable concerns, nine were deemed to warrant an investigation and 15 were subsequently closed. These were investigated internally by Internal Audit and/or management. The concerns were mainly related to allegations of fraud within the company, such as inappropriate business relationships with vendors and conflicts of interest. The remaining reportable concerns that were not investigated were deemed to be HR-related matters and were managed and closed by local HR business partners. All of the 24 reportable concerns in 2018 were related to Ambatovy.

Upon commencing employment with Sherritt, all employees are required to review and sign off on their understanding and acceptance of our Business Ethics Code.

Anti-Corruption

Sherritt's Anti-Corruption Policy was last updated in 2018, with a newly updated anti-corruption training module to be rolled out in 2019 as part of Sherritt's existing onboarding program. Previously, 100% of our entire eligible workforce was trained by the end of 2016, and subsequent refresher training for the updated policy occurred in 2017. As part of the training, employees had to sign the policy to demonstrate their understanding and commitment to the anti-corruption principles.

In Cuba, only expatriate employees and a small number of Cuban nationals who work directly for Sherritt were required to take the training, given the nature of our joint venture relationships and our agreement with the state-run agency that provides our operations with workers.

At Ambatovy, all new employees (nationals and expatriates) are required to complete the SkillMine anti-corruption module as part of their onboarding program, within six months of their employment commencement date. At the end of 2018, 91.5% of new employees had completed the online module within the orientation program. The remainder have been advised to complete the module in 2019.

Performance commentary on transparency reporting can be found under Community Development.



Ambatovy's award-winning approach to sustainable mining includes an extensive biodiversity management program.

AWARD FOR EXCELLENCE IN SUSTAINABLE DEVELOPMENT

In recent years, Sherritt has been honoured by several organizations for performance in environmental, health, safety and sustainability. Awards include:

- **United Nations' Green Star Award** for emergency response and preparedness
- **Syncrude Award for Excellence in Sustainable Development** by Canadian Institute of Mining (CIM)
- **Nedbank Capital Sustainable Business Award** for biodiversity management in Madagascar

In 2017, we were proud to be named as one of Corporate Knights' Future 40 Sustainability Leaders in Canada and to be shortlisted to the Canadian Museum of Nature's Nature Awards for our commitment to biodiversity; and for our 2016 Sustainability Report to be awarded Best Corporate Social Responsibility Report among companies with revenue between \$250 million and \$2.5 billion, Best CSR Report Photography and Design, and Best CSR Report Interactive Online Experience by the ASPC's international report competition.

We were very pleased to have won the Syncrude Award for Excellence in Sustainable Development for our sustainability work at the Ambatovy Joint Venture in Madagascar in 2015. The award, issued by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), acknowledges companies or individuals who are "active seekers of sustainability solutions".

Sherritt was recognized for successfully implementing a range of sustainable mining solutions at Ambatovy, including a biodiversity management program that targets "no net loss"; a "buy locally, hire locally" policy supported by several leading-edge initiatives; agricultural skills training for more than 18,000 people from local communities; developmental partnerships with international organizations, such as the World Bank, UNICEF and the Red Cross; and innovative archeological and retraining programs.

"Winning this award is an important achievement, as sustainable mining is core to our business," said Sherritt's President and Chief Executive Officer, David Pathe. "It is a proxy for good management and something that all our stakeholders have come to expect. We are very proud of the work in Madagascar, and I congratulate the entire team at Ambatovy who work tirelessly to ensure we are creating lasting benefits wherever we operate."

HUMAN RIGHTS

MANAGEMENT APPROACH

Understanding and expectations related to human rights in the mining and energy sectors began to evolve 15 to 20 years ago as companies increasingly turned their attention to countries that are less developed. Many of these countries are characterized by weak governance and respect for the rule of law, extreme poverty, a lack of business regulations, and less-than-ideal mechanisms to protect the human rights of their citizens. These and other factors can contribute to instances of conflict in natural resource development – often involving communities, companies, governments and security officers – as a means of resolving grievances of local residents.

The work of Professor John Ruggie, on behalf of the United Nations, defined a practical human rights framework, known as the United Nations Guiding Principles on Business and Human Rights. This framework outlines the roles for state and business actors in the protection of human rights. It also identifies “access to remedy” for anyone with a human rights complaint as a critical element for business to maintain its social license.

Although human rights issues do not currently represent a top risk at Sherritt, they are an inherent risk to all mining and energy production sites. To manage this risk, we are aligning with international best practices and expectations regarding human rights. We developed an enterprise-wide policy that commits to uphold the Universal Declaration of Human Rights, along with other international principles.

The primary human rights-related considerations for Sherritt include: access to remedy; the interaction between security personnel and communities near our operation in Madagascar (addressed under Site Security); labour rights (addressed under Employee Relations); and children’s rights in Madagascar.

At Sherritt, remedies for complaints, up to and including potential human rights violations, are provided through the community grievance mechanisms in place at the site level. Grievance mechanisms are processes to receive, acknowledge, investigate and respond to community complaints. These are valuable early-warning systems that can resolve sources of friction between stakeholders and companies, and can, over time, build trust. We have incorporated best-practice guidance from a number of sources into our Grievance Mechanism Standard to ensure it is both practical and credible. A few examples of the types of community grievances we have received in recent years are: impacts to livelihoods during construction of Ambatovy, allegations of inappropriate hiring or contracting practices, and environmental impacts of operation and/or construction activities.

Currently, we have a formal community grievance mechanism in place at Ambatovy. It includes an external grievance committee, comprising respected members of local communities, which meets quarterly to review the grievance management process and resolutions, and to provide feedback and suggestions for improvement to management.

At our site in Fort Saskatchewan, we have a long-established informal process for responding to complaints from external parties and are in the process of finalizing the implementation of Sherritt’s Grievance Mechanism Standard. In Cuba, there is a state-run system where citizens can file complaints against an entity, organization or enterprise whose activities they feel are adversely affecting their well-being. Commissions are set up to investigate grievances and develop action plans to address them. Sherritt’s management team, or that of our Cuban partners, participates in the process to address any grievances related to our operations.

Our Human Rights Policy also articulates our commitment to the Convention on the Rights of the Child. Violation of children's rights is a fairly low risk in Canada and Cuba, but in Madagascar this risk is more significant. At Ambatovy, we have a zero-tolerance policy for child exploitation. This policy was drafted with the support of UNICEF, in response to an incident that occurred at Ambatovy several years ago. We also support youth-led peer awareness campaigns on child exploitation issues and HIV/AIDS in Madagascar. All contracts or agreements awarded to local suppliers include clauses requiring the strict respect of international rules on child labour. Ambatovy's Local Business Initiative regularly verifies that these requirements are upheld.

Sherritt does not mine cobalt in conflict areas. By monitoring third-party feed sources, Sherritt ensures cobalt mined from any conflict area does not enter our supply chain at any point.

PERFORMANCE

Third-party Review

In 2018, Sherritt's Fort Saskatchewan refinery underwent an external audit on its application of the Voluntary Principles on Security and Human Rights as well as UNICEF's checklist on Security and Children's Rights. Refer to this section for more information on the Voluntary Principles. A similar audit is planned for Ambatovy in 2019.

Human Rights Grievances

There were no human rights-related grievances reported by external stakeholders at any of our operating sites in 2018. Note that employee and labour grievances are captured under Employee Relations and Stakeholder Engagement.

Children's Rights

In Madagascar, where risks to children are present, Ambatovy has been particularly engaged with the Children's Rights and Business Principles to help put a children's rights lens on work with contractors and suppliers in the supply chain. As of 2017, more than 9,000 suppliers have committed to following our children's rights requirements, which include zero tolerance towards child sexual exploitation and child labour, among other concerns. Any supplier found to be in violation of these contractual requirements would be immediately terminated. Ambatovy developed a training program for suppliers and subcontractors on UNICEF's Children's Rights and Business Principles, which includes creating an action plan for respecting children's rights. The first round of training was rolled out before the end of 2018 and at time of writing this report, 14 sessions had been completed with approximately 150 employees designated by Ambatovy's supplier and contractor companies participating in the sessions. They will then share the knowledge and information gained with their colleagues in a cascade manner, which will cover over 6,000 supplier employees. The rationale for delivering this training was to ensure participants understood the content of Ambatovy's management system and policies and that undue risk regarding children can and should be avoided. In 2019, this training will be offered to Ambatovy employees as well.

Since risks to children were first identified during the construction of Ambatovy, much work has been done to ensure the rights of children are protected. In 2018, Ambatovy organized four workshops on the fight against child labour in communities near the mine (especially, children herding zebu or cattle, and pulling rickshaws in Moramanga), as part of Ambatovy's involvement with the child protection network in Moramanga. Additionally in 2018, Ambatovy audited 11 local vendors, mainly focused on the legal and social obligations of vendors which include commitments around human rights and child labour.

Sherritt was a participant in the UNICEF Canada-led Child Rights and Security Working Group established to focus on security-related impacts on children caused by the extractive sector. Other contributors include UNICEF, the Government of Canada, several global mining and energy companies, international non-governmental organizations, and other governments. In 2017, the Working Group published the checklist on Security and Children's Rights, designed to assist governments and companies in assessing the degree to which their security frameworks respect children's rights, and in early 2018, the Child Rights and Security Handbook, an implementation companion to the checklist, was launched.

We continue to provide assistance to child protection networks near our mine and plant sites in Madagascar in developing funding proposals for international donors. See this case study for more on our work to support children and youth in Madagascar.



Youth-related initiatives are part of Ambatovy's Zero Tolerance Program, established to protect children and fight against child sexual exploitation.

SUPPORTING CHILDREN AND YOUTH IN MADAGASCAR

Youth involvement is one of the cornerstones of the HIV/AIDS and sexually transmitted infection awareness campaigns that Ambatovy oversees in communities near our operating sites. Ten kiosks, constructed in partnership with the United Nations Children's Fund (UNICEF), provide local youth with a space to gather, exchange information and provide one another with support. The kiosks are managed by 20 peer educators – all trained by Ambatovy – who share information about HIV/AIDS and sexually transmitted infections. The kiosks are now under the management of the Regional Director Direction of Youth, which supports and coaches the young peer educators.

Last year, Ambatovy funded refresher training for the peer educators in the area around our operations and provided some equipment for the kiosks, like musical instruments and games.

The promotion and information sharing about child protection networks is done by Ambatovy staff in communication with regulatory authorities, visitors and community members on a regular basis.

These youth-related initiatives are part of Ambatovy's Zero Tolerance Program, established to protect children and fight against child sexual exploitation. All Ambatovy personnel, as well as contractors, have signed a policy document to affirm their commitment to this important effort.

In past years, in partnership with local NGOs and UNICEF, Ambatovy constructed schools and supported environmental education from which thousands of youth have benefitted. More recently, Ambatovy has been supporting school nutrition programs through the National Office for Nutrition, a governmental agency.



Demonstrating Environmental Responsibility

We understand that mining and energy production disturb the natural environment. Our general approach is to avoid environmental impacts wherever we reasonably can, and minimize, manage and remediate any remaining impacts. In this way, we can limit our impacts while seeking innovative ways to support environmental protection.

OUR 2018 PERFORMANCE:



Achieved an overall reduction of 5% in Scope 1 greenhouse gas emissions compared to 2017.

Recorded one high-severity environmental incident at Ambatovy, as per Sherritt's criteria for such occurrences, for the first time since the beginning of 2015.

Continued improvements in environmental data reporting, including air emissions, waste and water.

Reported a decrease of 18% in energy usage compared to 2017 by our Oil & Gas and Power operations. Consequently, Sherritt achieved an overall reduction of 11% in energy usage compared to the previous year.



Barry Hames, Manager, Product Stewardship

BARRY HAMES

For many years, Barry has been involved in global sustainability issues surrounding Sherritt's nickel and cobalt business. He has been involved in facets ranging from chairing our internal product stewardship committee, which ensures that our feeds and products are properly classified, packaged, labelled and shipped, to being Sherritt's representative working with the EHS committees of the international Nickel Institute and Cobalt Institute and their REACH Consortia. In these roles, Barry has been highly involved in the development and review of science and policy positions regarding metals, particularly in Europe. He has helped steer the development of new science on the environmental and human health impacts of these metals, and reviewed the science that has been commissioned as well as other materials that have progressed independently. Barry was heavily involved in the preparations for REACH in Europe going back to its implementation in 2006, as well as newer iterations such as K-Reach in Korea.

At first, Barry filled this role in addition to his day job as Analytical Laboratory Manager, but since 2012 he has been Manager, Product Stewardship. Barry was the Chair of the Cobalt REACH Consortium EHS Committee for some years. His work ethic, insight and level of contribution are highly regarded by his international colleagues. These are exemplified by his working nights to participate in all-day (Europe time) conference calls with enthusiasm. International colleagues have commented many times on not just the dedication, but the ability to stay focused for hours of discussion on rather dry and sometimes esoteric matters. This focus and dedication is key, however, to making sure that the right science is done, that the science is properly interpreted, and that policy positions are taken responsibly.

We, the global nickel and cobalt industry, and all of our external stakeholders are fortunate to have had the dedication of Barry to these matters for the last decade and more, and we thank him for his service.

“Barry Hames has supported the activities of the Nickel Institute for years. His active participation in Working Groups and Governance meetings has provided key input on Member Company needs throughout this period. Barry’s friendly demeanor and willingness to participate have made him a key industry representative to the Institute.”

– Hudson K. Bates, Ph.D., DABT, President, Nickel Institute

TAILINGS MANAGEMENT

MANAGEMENT APPROACH

Following recent tailings dam failures in Brazil and Canada – including our own pond failure at the Obed Mountain mine in Alberta in October 2013 – Sherritt began drafting an enterprise-wide Tailings Management Standard in 2017, which was finalized in 2018. The standard aligns with TSM’s Tailings Management Protocol, and supports our operating sites in fulfilling our commitment to designing, constructing, operating, decommissioning and closing all tailings facilities in such a manner that all structures are stable, all solids and water are managed within designated areas, and all management practices conform with regulatory requirements, sound engineering principles and good practice. This standard also takes into account lessons learned from a post-mortem review of the Mount Polley tailings pond failure conducted by the Mining Association of Canada and the latest guidance from the International Council on Mining & Metals. Sherritt continues to review and evaluate monitoring systems and risk assessments to ensure our approach is robust and current.

Tailings facilities exist at each of Sherritt’s two active Joint Ventures – Moa Nickel in Cuba and Ambatovy in Madagascar. In both cases, the tailings facilities are managed by the Joint Venture’s management, reporting to their respective boards. Both Joint Ventures employ a geotechnical engineer to provide oversight of design, construction and operation of the tailings facilities. Third-party engineering firms are utilized in the design and monitoring of tailings facilities at both sites. The design and operation of these tailings facilities meet or exceed all applicable regulatory requirements.

At the Ambatovy JV, a centreline design is used. Here, the tailings management facility was also designed to meet the requirements of the Canadian Dam Association, the International Commission on Large Dams, and the Mining Association of Canada’s Towards Sustainable Mining (TSM) Tailings Management Protocol. Ambatovy has a Tailings Management Advisory Board consisting of three technical experts to provide recommendations to management which are acted upon promptly. All monitoring of the dams indicate that the facility is stable.

At the Moa JV, an upstream design has been used throughout the mine life. Stability is monitored as per the operating practices manual. Based on internal and third-party reviews of structural integrity and management systems, the facility is operating to design specifications and is stable. Sherritt continues to work with the Cuban Partners, GNC, to move tailings management closer to international best practices, including implementation of the Mining Association of Canada’s Tailings Management Protocol.

As well, at Moa, a rehabilitation plan has been developed and is underway in a section that is no longer active.

PERFORMANCE

2018	Ambatovy	Fort Saskatchewan	Moa	Oil & Gas and Power
Total amount of overburden, rock, tailings and sludge (tonnes)	23,314,833	Not applicable	15,243,595	Not applicable

At our mining operation in Moa, we continued to work with our Cuban partners and industry experts to improve tailings and water management to better align with international best practice. As a new member of the Mining Association of Canada, we have begun implementing MAC’s Tailings Management Protocol at Moa and at Ambatovy.

The tailings management facility (TMF) at Moa is regularly reviewed internally and by third parties for structural integrity and effectiveness of management systems. Based on 2018 assessments, the facility is currently operating to design specifications. We continue to work with our joint venture partners to ensure employees have the required skills to manage the facility effectively. As it is nearing capacity, we have retained an internationally respected engineering firm to design an extension that will ensure we can continue to store tailings there until 2022. Permitting and detailed design work for the first stage of the extension was approved in 2016. Construction began in 2017, and in 2018 the first stage was completed. The extension is also subject to the Tailings Management Protocol.

We also began investigating options for tailings management so that we can continue to support mining operations in Moa in 2022 and beyond. Throughout this process, we will strive to minimize environmental impacts and meet international good-practice standards in tailings management.

At Ambatovy, the tailings management facility is a long-term construction project that involves the continuous raising of the perimeter dams to meet capacity needs. In 2018, engineering was completed on increasing pumping capacity. Once construction is complete, the TMF will provide sufficient storage capacity for the remaining mine life, which is approximately 30 years.

As are many mining companies globally, due to recent dam failures in Brazil and elsewhere, Sherritt is reviewing and evaluating monitoring systems and risk assessments to ensure our approach is more than robust. This work will continue into 2019.

There are no tailings produced at the Fort Saskatchewan or Oil & Gas and Power sites.

Update on Remediation of Obed Containment Pond Breach

As we reported in previous sustainability reports, on October 31, 2013, a breach occurred, due to a geotechnical slump, in an on-site water containment pond at the Obed Mountain mine, then owned by Sherritt, which resulted in a significant release of mud, clay, coal particles and approximately 670,000 m³ of water into nearby creeks and the Athabasca River. We quickly mobilized our response team, working with regulatory bodies, and began engaging extensively with First Nations and local stakeholders to keep them informed and to address their concerns. After the sale of our coal operations to Westmoreland Coal Company in April 2014, we retained the environmental remediation and financial obligations associated with the breach, and have continued to work co-operatively with the Alberta regulator to address the impacts of the incident.

In 2018, approval of the final remediation design was received from the Alberta Energy Regulator (AER) in April and Department of Fisheries and Oceans (DFO) in July. Remediation of the upper reaches began in mid-July; because of a shorter construction season due to the approval date, the remainder of the remediation works will be completed in 2019.

During 2018 we continued environmental monitoring of water quality, fish habitat, wildlife and vegetation. The region is showing high levels of natural restoration and dense vegetation growth. The data collected in 2018 continues to demonstrate that the breach and the resulting release of water and sediments had short-term physical impacts on water quality and fish habitat, and that there are no residual effects on water, aquatic habitat or fish in any of the nearby creeks or in the Athabasca River. The approved remediation design will provide aquatic habitat enhancements and stabilize reaches of the nearby creek that were physically impacted.

A more detailed account of our response and remediation activities can be found on www.obed.ca.

BIODIVERSITY AND LAND

MANAGEMENT APPROACH

Sherritt's operations are found in diverse locations, ranging from primary forests to island environments to industrial zones. Our approach to managing biodiversity is tailored to the context of each operating site. At assets found in highly sensitive ecosystems, such as our Ambatovy mine in Madagascar, we follow a strict mitigation hierarchy designed by the Business and Biodiversity Offsets Programme (BBOP), a multi-stakeholder initiative that seeks to develop best practice in biodiversity protection for developers of large greenfield projects. Ambatovy has been an active supporter of BBOP since its inception in 2006.

Ambatovy's approach to conservation also conforms to the requirements of Madagascar's regulator, the National Environment Office, and to the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability (2012 version), which includes a discrete standard on biodiversity conservation and sustainable natural resources management.

In 2009, Ambatovy established a Scientific Consultative Committee on biodiversity as part of its commitment to apply international conservation expertise and bring transparency to its biodiversity management activities. In 2018, the Committee included 13 national and international independent scientists renowned for their expertise in biodiversity, conservation and environmental management. The Committee convenes at least every two years – most recently at the end of 2017 – to facilitate an external evaluation of Ambatovy's implementation of the biodiversity management program and make recommendations for conserving Madagascar's unique biodiversity.

In Canada and Cuba, Sherritt conducts environmental baseline studies and impact assessments and implements biodiversity management plans as required by regulation. As a member of the Mining Association of Canada, we are working to implement the Towards Sustainable Mining Biodiversity Conservation Management Protocol at our operations. In addition, we are developing a minimum standard for biodiversity and land management as part of our Sustainability Framework that aligns with TSM and provides additional guidance to Sherritt's divisions. It will be practical and risk-based, and will provide us with a consistent set of requirements for identifying and managing biodiversity impacts.

Land Management

We recognize that the land entrusted to us is a valuable resource. We work with authorities and other organizations to manage and reclaim disturbed land during active mining and post operation. This is demonstrated by our longstanding record of reclamation and remediation activities, which have been covered in previous sustainability reports. Our active mining properties in Cuba and Madagascar progressively rehabilitate land and regularly monitor progress against rehabilitation plans with the regulatory authorities in both jurisdictions.

The Fort Saskatchewan site manages land issues within its government-approved operating permit, which includes discrete requirements for soil management. Our Oil & Gas and Power operating sites in Cuba routinely mitigate impacts of oil exploration and recovery activities when operations have ended. Drill sites are cleaned, topsoil is replaced and the land is returned to conditions similar to those that existed before drilling commenced. In accordance with the requirements of our operating permits, the land will be returned to the Cuban state after expiry of the term of the contract.

PERFORMANCE

Ambatovy's Biodiversity Management System

Ambatovy has a robust Environmental Management System (AEMS), including the Biodiversity Management System (ABMS) – which operationalizes many of the principles mentioned in the preceding description of our biodiversity management approach – and is externally audited to assess whether the plans are being implemented according to their original design criteria. The last audit was conducted in 2017 and data collection and validation were found to be acceptable; additional focus will now be on data integration and dissemination for the AEMS. In 2018, Ambatovy focused on the implementation of the AEMS mitigation process.

Species of Concern

Ambatovy has commitments to protect and conserve species of concern (SOC) within the lands under its direct control. Our mining operation is located within the Ambatovy-Analamay forest, and our mine lease is subdivided into the mine footprint, which contains our active operations, and the surrounding conservation zone.

The Ambatovy-Analamay forest area is within the Torotorofotsy Ramsar Convention site, which is an internationally significant wetland. The forest area forming our lease comprises 21.5 km² of high biodiversity value, featuring 1,700 species of vascular plants and 336 species of vertebrates. Over 53 plant species were classified as critically endangered (CR) or endangered (EN) following the International Union for the Conservation of Nature (IUCN) red listing in 2017–2018, of which 22 are orchid species and 31 non-orchid species. Ambatovy supports monitoring and mitigation activities for those identified species.

In 2018, we continued to introduce SOCs into the mine zone, and salvaged SOCs from the clearing zone directly in the mine footprint. Thanks in large part to this type of work, we were awarded the Syncrude Award for Excellence in Sustainable Development at the Canadian Institute of Mining, Metallurgy and Petroleum's annual convention in 2015.

Invasive Species

One of the most significant potential threats to areas of high biodiversity is the introduction of non-native, exotic and invasive species, which can rapidly adjust to new conditions and have an adverse effect on native biodiversity.

We have processes in place to monitor and control invasive species at the Ambatovy mine, plant and port sites. The following occurred in 2018:

- Norway rats: Extensive capture activities started in 2016; however, the program was put on hold in 2017 due to the outbreak of the pneumonic plague coinciding in timing and location with the planned program. After analyzing safety concerns, the program was relaunched in 2018.
- Crayfish: Crayfish control occurred during the year. Apart from capturing the crayfish in collaboration with local villagers, who are trained as capturers, we also organize campaigns to raise awareness about the crayfish and its impacts on agriculture, habitat and biodiversity.
- Invasive and exotic plants: An exotic species removal program took place over 7 hectares (ha) at the mine site, followed by ecological restoration of the cleared area in addition to the 11 ha cleared in 2017.
- Asian toads: There was a continued effort to remove Asian toads within the site footprint and the surrounding area. The toads are believed to have been introduced via an unidentified container from Southeast Asia at the Port of Toamasina, which is located near our plant site.

Response to Concerns over the Introduction of the Asian Toad

In 2015, two international non-governmental organizations approached Sherritt about the introduction of invasive Asian toads to Madagascar. They suggested that Ambatovy's shipping activities through the port may have inadvertently introduced the species and requested that we take a leading role in the overall response. We have examined this issue critically, and while our assessment does not support their conclusion, we have responded to their queries formally and have had several constructive discussions on this topic with representatives from these and other concerned organizations and institutions.

During the timeframe that the toad is speculated to have arrived in Madagascar, Ambatovy accounted for less than 5% of the Port of Toamasina's total traffic – and that percentage is even lower for shipments coming from the toad's zone of origin, according to our records and those we obtained from Madagascar's customs office.

Nevertheless, as a responsible actor that cares deeply about biodiversity management, we are committed to supporting the Government of Madagascar's leadership in addressing this significant threat. We have joined the government's national committee, which is composed of several stakeholders, to mitigate the impacts of the Asian toad. We also entered into a memorandum of understanding (MoU) with Madagascar's National Environment Office to carry out a joint eradication program that goes well beyond the scope of our own efforts to date. We appreciate the growing urgency to take broader measures and are hopeful that our contributions will lead to lasting results.

In 2017, eradication efforts were focused on the mine and plant sites, as well as the surrounding area. Ambatovy's staff also supported communication efforts and education regarding toad eradication to nearby communities.

In 2018, the NGO Madagascar Fauna and Flora Group was engaged and an MoU is currently under review to develop, manage and coordinate activities to support eradication the Asian toad. On the recommendation of Ambatovy's Scientific Consultative Committee, the company plans to contract an invasive species specialist to better advise how Ambatovy can support broader eradication efforts of the Asian toad population. In the interim, the University of Antananarivo's Department of Biology commenced toad collecting activities at the plant site, accommodation camps and surrounding areas.

Conservation Partnerships and Collaboration

We believe that there are material topics best addressed in partnership with experts and civil society who bring both credibility and additional expertise. Conservation at Ambatovy is one in particular where we have established mutually beneficial partnerships with leading organizations. For example, Ambatovy is involved with civil society organizations to assist in managing the offsets we have created to compensate for our disturbances. We engaged Conservation International (CI) to manage the Ankerana forest – our 5,715 ha offset located some 70 km northeast of the mine site. In 2018, Ambatovy continued to support CI's work financially and technically for conducting site patrols, developing income-generating activities, and carrying out awareness campaigns – all of which are necessary to maintain the habitat quality of the sites.

The Analamay-Mantadia Forest Corridor (CFAM) will be part of a proposed new protected area that will ensure habitat connectivity between existing conservation areas in the region including forests around the mine managed by Ambatovy, the Ankeniheny-Zahamena Corridor (CAZ), the Mantadia National Park and the Wetlands of Torotorofotsy. Formal protection of this corridor, spanning approximately 8,000 hectares, will result in the creation of one of the largest continuous tracts of protected forest in Madagascar. Ambatovy continues to support the establishment of this larger, new protected area.

Refer to this case study for more information about Ambatovy's partnership with Mitsinjo Association regarding a breeding program for a threatened, endemic frog species.

Biodiversity Management at Moa

Our open pit nickel mine near Moa, Cuba, is located approximately 15 km north of Alejandro de Humboldt National Park, a UNESCO World Heritage Site particularly known for its extensive suite of endemic species of flora. Moa Joint Venture has long partnered with the Cuban authorities for the restoration and protection of these lands. For more information, refer to this case study.

In 2017, the reforestation program in the park concluded and Moa received recognition from the environmental regulator, CITMA, for its achievements. In 2018, Moa supported the government by undertaking ecological monitoring activities of the reforested area. Early results showed a favourable evolution of rehabilitated areas; abundant species of flora and fauna inhabiting these areas under recovery were identified.

Biodiversity Management Elsewhere

In Canada, our refinery's impacts on biodiversity are minimal, given that it is located in an industrial zone within the city limits of Fort Saskatchewan. Our energy operations in Cuba also have minimal impacts on biodiversity, given the small footprint and nature of our activities. In 2017, no significant conservation activities were required or undertaken at these sites.

It is worth mentioning that our Block 10 oil drilling program, which began in 2016, is taking place adjacent to a protected mangrove site. To minimize our impacts, we are conducting the program from a previously disturbed footprint, while working in close consultation with Cuba's environmental regulator.

Land Management

In 2018, both Ambatovy and the Moa site practised progressive reclamation in accordance with their operating permits and commitments. The total amount of newly disturbed land in 2018 was lower than 2017 and rehabilitated land during the year was about 68% higher. This was mainly due to increased rehabilitation efforts at both Ambatovy and Moa. There were no changes to the operational footprint of the Fort Saskatchewan refinery or at our Oil & Gas and Power operations in Cuba.

The table below shows the amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated.

2018	Ambatovy	Fort Saskatchewan	Moa ¹	Oil & Gas and Power	Total
Total amount of land newly disturbed within 2018 (ha)	157.38	0	48.18	0	205.56
Total amount of land newly rehabilitated within 2018 to the agreed end use (ha)	11.87	0	20	Not applicable	31.87

¹ Data reported for Moa represents land disturbance that occurred from 1994 onwards – or the years that the Moa Joint Venture between Sherritt and the Cuban state has been in place. The data do not reflect any mining activity at the site that pre-dates the joint venture.



At Moa, we are committed to reclamation of areas disturbed by our mining activities, but also the rehabilitation of a nearby park reserve that was historically impacted.

REHABILITATION AND RECLAMATION IN MOA, CUBA

Decades before Cuba's Alejandro de Humboldt National Park became a UNESCO World Heritage Site in 2001, the state-owned predecessor of the Moa Joint Venture received a concession to develop a mineral deposit within the park. Preliminary, small-scale exploration work was carried out on this deposit, once in the 1970s and again in the 1990s. In the mid-1990s, the Cuban government declared the park to be a protected area, requiring any type of mining or industrial activities to cease.

Absolutely no exploration work of any kind has been carried out in the park since then. In 2008, the Moa Joint Venture officially relinquished its concession. About three years later, at a meeting with Cuba's National Council of Hydrographic River Basins, the Joint Venture agreed to evaluate the best approach to rehabilitating the impacted areas and to include this work in its annual environmental management plans going forward. Around that same time, the Park Authority was commissioned to carry out an impact assessment.

This collaboration ultimately led to the development of a long-term biodiversity management plan to restore the impacted areas in the park. This plan was executed collaboratively by the Moa Joint Venture, Cuban regulatory agencies and the Park Authority. It encompassed soil conservation; the creation of hydro regulation channels to restrain floodwater and prevent erosion; reforestation of endemic species such as the ocuje (*Calophyllum antillanum*), which is prized for producing a very hard, durable wood, and the Cuban oak; as well as other initiatives. In 2017, the rehabilitation work in Alejandro de Humboldt National Park concluded.

In addition to this important conservation work in the park, our reclamation team in Moa has been working for many years on restoring areas in and around the mine site, to meet the requirements outlined in our environmental permit. This restoration work includes testing new methods for erosion control and different plant species for survivability. The soil around Moa is quite acidic, meaning that not all vegetation can flourish there, but our highly educated team on the ground is experienced in reforestation and reconstruction for such areas.

Previous years have seen rehabilitation impacted by large storm events, most recently being Hurricane Irma in 2017, but 2018 proved to be a favourable year for planting, implementing erosion control and monitoring effectiveness of programs without the threat of poor weather. Activities during the year included removal of invasive plant species and garbage, new planting and pruning.

During 2018, 20 hectares were rehabilitated and maintenance work was conducted on previous existing plantations at approximately 445 hectares. The aim is to achieve the conditions required to return these sites to the country's forest estate, which in turn will allow the company to withdraw the lands successfully rehabilitated from the current mining concessions.



At our Ambatovy mine in eco-diverse Madagascar, even the smallest species are cared for, including the endemic golden mantella frog.

PROTECTING THE SMALLEST INHABITANTS WHERE WE OPERATE

In April 2017, Ambatovy reintroduced more than 1,500 golden mantella (*Mantella aurantiaca*), an endemic and endangered frog species, in the breeding ponds located in the conservation areas surrounding the mine site in partnership with Mitsinjo Association. After being bred at the Toby Sahona Center in Analamazaotra-Andasibe, the frogs were released into their new viable habitats in the Rural Communes of Andasibe, Ambohibary and Morarano. They will be subject to a three- to five-year follow-up monitoring program until a reproductive generation is reached.

For this program, Ambatovy works closely with various national and international partners as well as the Independent Engineers mandated by the project's lenders. This work contributes to our objective of achieving no net loss, and preferably a net gain, in biodiversity and the environment while strengthening our commitment to being a sustainable and responsible company in Madagascar. The reintroduction of the golden mantella frogs into the wildlife was covered extensively by the local and national media. A real success story for Ambatovy!

The work done during 2018 was dedicated to monitoring the reintroduction of the golden mantella frogs carried out in 2017 to ensure the newly introduced population remains healthy. Lessons learned during the 2017 program will help to inform subsequent breeding and reintroduction cycles. The program will continue for the next five years to ensure a viable population.



Employees across the company worked together to mark Sherritt's annual Sustainability Month in June.

MAKING SUSTAINABILITY MONTH AN ANNUAL TRADITION

In 2018, in an effort to broadly share Sherritt's commitment to sustainability and our performance and engage our employees in the topic, we once again celebrated Sustainability Month in June across all of Sherritt's divisions.

Sustainability Month aligned with World Environment Day (WED), celebrated globally on June 5. Last year's theme was "Beat Plastic Pollution". Our divisions took the theme to heart and thought of innovative and fun ways to connect employees to the work we do and the communities around our operations.

Examples of the types of initiatives and events that took place:

- A nature walk in the area surrounding our Fort Site to learn about the natural flora and fauna and environmental monitoring activities taking place;
- A volunteer day to support the work done by Habitat for Humanity on a nearly finished development in outside of Toronto benefitting families in need of affordable housing;
- A contest to gather ideas on how to incorporate innovative sustainable practices in the new corporate office which resulted in lessening the number of dishwashers for reduced water use and the incorporation of indoor plants for air quality and mental wellness;
- A showcase for employees of all the biodiversity to be found on site at Ambatovy;
- Sharing short sustainability videos highlighting sustainability challenges and having conversations with employees about current sustainability initiatives;
- Walking competition where employees tracked the distance they walked during the month;
- A children's art competition in Moa, Cuba;
- Lunch-and-learn sessions with internal and external experts presenting across the company.

In 2019, Sherritt will once again be participating in Sustainability Month and World Environment Day. The theme this year is focused on air pollution To learn about WED, [click here](#).

WATER

MANAGEMENT APPROACH

The growing global population is putting pressure on fresh water availability and quality, and these concerns are expected to increase due to climate change. We understand and share these emerging concerns. Water is central to our metallurgical process for producing nickel, and we manage it carefully. Where feasible, process water is recycled or reused within the process itself. Runoff is controlled through diversions and catchments to minimize any release to the environment. For each operating site, we conduct baseline studies, assess risks and engage stakeholders to inform them of our water management planning.

Pumping water for use in our processes takes a considerable amount of energy, and we are continually taking steps to identify how we can optimize our practices and minimize the amount of water and energy we use.

We also conduct monitoring to help ensure that we are not unduly contaminating surface water or groundwater resources with our process discharges. Stringent regulatory water quality limits apply to our discharges to protect the receiving environment, and our monitoring programs are designed to comply with the emission limit values in each jurisdiction, and to help detect any unanticipated problems and manage risk beyond regulatory obligations.

Our approach to water management varies across our operations, depending on technical requirements, local climate, water bodies and stakeholder interests. Building on the range of water management practices and initiatives in place, we are working towards the development of a corporate Water Standard that will apply across the company.

PERFORMANCE

Water Use

2018	Ambatovy	Fort Saskatchewan	Moa	Oil & Gas and Power	Total
Total water withdrawal (m ³)	25,718,190	2,650,000	15,078,280	4,524,316	47,970,786

Ambatovy reported 25.7 million m³ of water consumption in 2018, which is comparable to prior years. Water for our processes is withdrawn from a variety of sources at the mine, plant and port facilities, including the Ivondro River, the Mangoro River, Antsahalava Creek and groundwater wells. Potable water for the plant site originates from wells at the facility. Our water withdrawal is monitored quarterly by the regulator. In 2018, Ambatovy launched a water usage reduction project to optimize water usage on site but also to improve water management at the tailings facility. Weekly water balances are performed to track water consumption and outflow.

Erosion and silting of the Mangoro River unrelated to Ambatovy's mining activities, from which Ambatovy draws water for mining operations, is a risk we take seriously. It is in our interest to ensure the long-term viability of the river. The PRODAIRE project funded by JICA (Japan International Cooperation Agency), reported in 2017, promoted an integrated approach to rural development and environmental protection. When the project concluded, Ambatovy continued the reforestation activities along the banks of the Mangoro River with the support of a local NGO called Ezeka Vaovao.

Our Fort Saskatchewan site withdraws water from the North Saskatchewan River under provincial licenses for use in our processes. We purchase potable water from the local municipality. The total water withdrawal for the Fort Saskatchewan site in 2018 was slightly lower than previous years: 2.6 million m³, including 2.5 million m³ taken from the river and 0.1 million m³ of purchased potable water. We report our water withdrawal monitoring results to the provincial regulator on a monthly basis. Process effluent and stormwater (snowmelt/rainwater) that we collect on our site are treated to meet the contractual water quality guidelines. This water is then transferred to the municipal wastewater collection system, where it is treated further and then discharged into the surrounding environment along with wastewater from the wider municipality.

Our Moa site in Cuba withdrew approximately 15 million m³ of water for its processes in 2018. This is slightly higher than the previous two years and was due to processing requirements. Water is collected in our adjacent reservoir and treated before use.

Oil & Gas and Power reported a total water withdrawal in 2018 of 4.5 million m³, which is lower than that of 2017 mainly due to a decrease in production. Water is drawn primarily from saltwater sources and some municipal sources. Oil & Gas service rigs use recycled water only, resulting in a net effect of zero on the water supply.

Water Quality

In 2018 at Ambatovy, there continued to be elevated concentrations of manganese (Mn) in water that we discharge from our tailings management facility that sometimes exceeded the World Health Organization (WHO) criteria of 0.4 mg/l being used for Mn for Ambatovy's tailings management facility. Manganese at low concentrations poses only aesthetic concerns; that is, it imparts a discolouration to drinking water. At higher concentrations, it can have adverse health effects. To safeguard public health, we commissioned installation of a permanent potable water supply system. This was completed in 2017 and handed over to the local community. We also provided regular water quality updates to residents and the regulator. Based on the findings of a root cause analysis of the issue, we continued to implement corrective actions – as per the externally reviewed Manganese Action Plan – including building up tailings beaches to reduce the manganese before discharge and installing a permanent pumping house in order to regain compliance with our permit requirements.

At Fort Saskatchewan, we monitor water quality at several locations within the site's treatment system, and review the results to ensure compliance before the release of water into the municipal collection system. We reported our water quality results to the municipality monthly and to the Alberta regulator on an annual basis. There were no non-compliance events sourced to Sherritt during the year.

In 2018, Sherritt continued to participate in the Capital Region Water Management Framework's Steering Committee through the Northeast Capital Industrial Association (NCIA). The goals of the framework are to maintain or improve the quality of the water in the North Saskatchewan River, manage the impact on water quantity, and implement a water management framework that is science-based and world-class.

When we invested in Moa more than 20 years ago, we inherited a legacy water management issue, which has affected water quality in a nearby river. Over the years, we have been working with our Cuban partners and the regulatory agency to address this issue. In 2017, we agreed to a phased approach to developing long-term treatment options for water management. During the year, the first phase, relocating the effluent discharge to support the rehabilitation of the river and diminish impacts on the local community, was completed. In addition, Moa focused on erosion control in 2018 in areas around the mine to prevent some 6,500 m³ of sediments from reach the rivers and the bay of Moa. Some of the river works had positive impacts for the nearby community of La Veguita, too, as work completed in 2018 will help with flood control and prevent the loss of a bridge in the event of flooding.

There were no significant water quality issues recorded at Oil & Gas and Power in 2018. OGP is currently investigating a program to reduce its use of potable water.

WASTE

MANAGEMENT APPROACH

Sherritt produces two broad types of waste: mining waste and solid waste. Mining waste generally includes waste rock and tailings, produced as by-products. Solid waste consists of hazardous waste and non-hazardous waste. Hazardous wastes are identified by their chemical and physical properties, and their classification, handling, disposal and storage requirements are prescribed in regulations. Non-hazardous solid waste consists of materials that we use and produce that can be disposed of in municipal landfills, and is not considered material for the purposes of this report.

Regulations around waste management vary across jurisdictions and can be quite dependent on the supporting infrastructure in the region or country. Sherritt is currently developing a management standard to set minimum expectations for all operations regarding waste management, including disposal and recycling.

In the interim, we have included GRI waste indicators in the Performance section of this report, reflecting the tracking and management of waste occurring at Sherritt's sites.

PERFORMANCE

Waste production

2018	Ambatovy	Fort Saskatchewan	Moa	Oil & Gas and Power
Total waste	63,730 m ³ + 49,870 tonnes	8,479 tonnes	20,082 tonnes	381 tonnes
Waste recycled – includes recyclables sent off site (batteries, plastics, electronics, etc.)	1,016 m ³ + 49,523 tonnes	205 tonnes	954 tonnes	380 m ³ + 418 tonnes + 650 kg Batteries: 528 units Fluorescent bulbs: 294 Tires: 840
Waste sent to landfill	59,965 m ³	8,274 tonnes	13,558 tonnes	4,004 m ³ + 11 bins
Hazardous waste	82 m ³ + 1,300 pieces	5,501 tonnes	5,570 tonnes	nil

2018 is the first year that waste is included in Sherritt's Demonstrating Environmental Responsibility pillar for the purposes of reporting. It is expected the quality of disclosure on this topic will improve over time with the implementation of the forthcoming Waste Management Standard.

In Fort Saskatchewan, an increase over 2017 in both hazardous and total waste was observed in 2018. The increase in total waste was largely due to an increase in the number of capital projects, and associated demolition, at the Fort Site over the previous year. Much of the infrastructure at the Fort Site was constructed in the 1950s and has been dutifully maintained since, but as equipment and buildings reach the end of their useful life, phased demolition and reconstruction is taking place. Depending on the origin of the material within the site, some is treated as hazardous waste.

At Moa, the increase in hazardous waste is due to the increase in sulphur that leached from contaminated soil extracted from the sulphur manipulation area. Waste sorting improved, increasing the amount of recyclable waste collected. The overall quantity of waste sent to landfill increased due to an improvement in the control and quantification of waste at the site.



Engineering innovative solutions for our Cuban Power operations while cleaning up ocean debris.

OCEAN CLEANING AS WE GO IN CUBA

Sherritt's combined cycle power facility at Boca de Jaruco in Cuba takes in sea water for the purpose of cooling. In recent years, the seawater intake inlet has been inundated with a brown seaweed known as Sargassum. Sargassum has become a nuisance in the Caribbean due to larger than historically recorded blooms which impact sea-life and tourism particularly because the seaweed is thick and has a foul odour when it washes up on beaches. Unfortunately, seaweed is not the only debris impacting the coastline. Man-made objects, including plastic pollution, can also be prevalent depending on tides and weather conditions.

For Sherritt's operations, the Sargassum creates problems during water intake, fouling up integral equipment in the power facility that provides necessary power to the city of Havana. In order for operations to continue, a solution had to be engineered.

A seaweed intake channel barrier was installed to prevent the buoyant weeds from gaining access to the channel near our circulation pumps. Along with this intake channel barrier, a floating seawater basket has been implemented at one end of the barrier to allow the buoyant weeds to funnel into this basket. Once this basket is full it is then hoisted out of the water by means of a stationary hoist. Additional barriers, as well as a trash rake and screens, provide added protection from any debris making it past the initial barriers.

The seaweed and debris is then collected and hauled by truck to the local landfill and disposed of properly. For example, in one month, 12 truckloads of seaweed and garbage were removed from Cuba's waters. While access to debris-free water is an important operational consideration, we are proud to also positively impact the coastline adjacent to where we work.

ENERGY AND CLIMATE CHANGE

MANAGEMENT APPROACH

We operate an energy-intensive business. Energy consumption is a major input to our processes across the company, and energy-related costs constitute one of our largest unit operating costs. These realities mean that we are motivated to reduce energy consumption and maximize efficiencies at every stage of our production cycle, from mining and oil recovery through to processing, refining and shipping finished products, and generating electricity. Concerns about the possible impacts of climate change on the planet increase the urgency of this issue for us, and affirm our role in contributing to global efforts to reduce greenhouse gas (GHG) emissions.

We are implementing the Mining Association of Canada's Towards Sustainable Mining Energy and Greenhouse Gas Emissions Management Protocol across our operations and, in 2018, developed a corporate standard in alignment with TSM.

Air Quality

Managing air quality around our operations is an important element of our environmental programs company-wide. We are conscious of the potential impacts of our operations and take great care to ensure that all applicable air quality regulations are properly followed.

Air emissions generally comprise two types of sources. The first type includes specific discharges of gases from our process stacks and vents – such as sulphur oxides (SO_x), hydrogen sulphide (H₂S) and nitrogen oxides (NO_x). When emitted into the air, these compounds can pose risks to human health and lead to environmental degradation. The second type of air emission includes small airborne particles generated from activities in the open environment, called particulate matter (PM). PM is predominantly produced as a result of traffic on unpaved roads at our facilities, excavation activities at our mines, and fertilizer production at our refineries. We have strict safeguards in place at all sites to minimize the risk of air releases and regularly review and revise processes to minimize the release of PM through our activities.

In recent years, Sherritt has made continuous improvements in the management of air emissions. Investments have been made in aging infrastructure, engineering projects have been launched to eliminate identified point sources, and initiatives have been put in place across the business to ensure exceedances are properly managed and mitigated. Continuous emissions monitoring is in place at the Fort Site and emissions reporting continues to improve at Ambatovy and in Cuba. Efforts are underway to implement ISO 14001 and process safety management systems to ensure that significant emissions risks are identified and controlled and air quality management continues to improve. In 2019, Sherritt will launch an Air Standard as part of our Sustainability Framework.

PERFORMANCE

GHG Emissions and Energy Consumption

2018	Ambatovy	Fort Saskatchewan	Moa	Oil & Gas and Power	Total
Scope 1 GHG emissions (kt CO ₂ e)	1,716	317	606	1,418	4,057
Scope 2 GHG emissions (kt CO ₂ e)	0	58	52	0	110

GHG emissions at Ambatovy, for the mine, plant and port facilities, were estimated at a combined total of 1,716 kilotonnes (kt) of CO₂ equivalent during 2018, representing a 5% decrease over 2017 emissions. As there is a lack of large-scale power available in Madagascar, the use of coal for power generation at Ambatovy accounts for the majority of the GHGs produced. Ambatovy consumed 14,517,981 gigajoules (GJ) of energy in 2018 from a mix of coal-fired power plant and fossil fuel burned. The large increase over previous years is the result of improved reporting around coal and fossil fuel consumption for plants and mobile equipment. In 2018, Ambatovy continued to take steps to reduce the use of light vehicles on site and optimize the use of electric vehicles as a means of reducing emissions. Refer to this case study to learn more.

The Government of Alberta's Carbon Competitiveness Incentive Regulation came into effect on January 1, 2018. This new regulatory framework impacts the management of emissions related to climate change. Prior to 2018, greenhouse gas (GHG) emissions were regulated under the Specified Gas Emitters Regulation. Currently, under this regulation, GHG emissions that exceed an Output Based Allocation (OBA) set by the Government of Alberta are subject to the purchase of credits (either fund credits, offset credits, or emission performance credits) in order to meet compliance. Fund credits have been set at a cost of:

- 2019 and 2020 emissions = \$30/tonne CO₂e;
- 2021 emissions = \$40/tonne CO₂e; and
- 2022 emissions and thereafter = \$50/tonne CO₂e.

In 2018, Fort Saskatchewan site reported GHG emissions of 317 kt of CO₂ equivalent, which is slightly lower than 2017 emissions. Additionally, Fort Saskatchewan purchased 10 kt of credits for its 2018 emissions to comply with provincial regulations. Fort Saskatchewan recorded total energy consumption (including purchased electricity) of 4,972,800 GJ in 2018, which is a slight decrease over previous years.

At Moa, we produced 606 kt of CO₂ equivalent during 2018; this amount is comparable to the previous year. We consumed a total of 5,942,357 GJ of energy in 2018, including generated and purchased electricity. This represents a 10% reduction over the previous year. Moa was able to achieve these reductions due to the completion of a 2,000 tonnes/day sulphuric acid plant in 2016, which allows us to produce more of our own acid as an input to our process and reduce the amount of acid we need to import. 2018 was the second full year of operation for the acid plant.

Oil & Gas and Power (OGP) reported the production of 1,418 kt of CO₂ equivalent during 2018 from its Boca de Jaruco, Puerto Escondido and Varadero facilities. This is historically consistent with what was reported in previous years. Our Oil & Gas and Power operations reported a decrease in energy usage of 18% compared to 2017, totalling 25,739,140 GJ; this reduction can be attributed to a decrease in production as production sharing contracts in our oil and gas business ended and natural reservoirs declined. OGP also flared 56,393.3 e³m³ of hydrocarbons associated with its oil production processes during the year, representing almost half of that flared in 2017. OGP's preventative maintenance program ensures optimal operation of our equipment, and we conduct quarterly monitoring of any emissions from our key sources to verify proper combustion. Our Oil & Gas operations have additional reporting metrics under the Global Reporting Initiative; please refer to the Performance section for this information.

Since 2007, Energas has generated well over one million Clean Development Mechanism (CDM) credits at the Varadero combined cycle power generation facility in recognition of its low GHG emissions relative to other sources of electricity in Cuba. While there are many benefits to the program, the relative administrative costs are significant and, due to Sherritt's financial constraints, our participation has diminished in recent years. Read this case study for more information on our efforts to obtain CDM credits over the last few years.

Scope 2 emissions refer to indirect emissions generated from the purchase of electricity. The majority of power consumed by Sherritt is generated on site, due to the remote nature of our operations and/or the limited availability of grid power in host jurisdictions. Therefore, Scope 2 emissions will always be of a lower order than those of Scope 1.

Air Quality

In 2018, Sherritt experienced nine reportable air quality-related incidents: eight at Ambatovy and one at Fort Saskatchewan, all of which were low severity with no lasting impacts. No employees or community members were harmed while these incidents occurred or while they were addressed. Both Moa and Ambatovy were focused on reducing fugitive emissions in 2018.

2018	Ambatovy	Fort Saskatchewan	Moa	Oil & Gas and Power
Air emissions – NO _x (tonnes)	1,990	1,205	1,571	6,147
Air emissions – SO _x (tonnes)	6,010	66	13,424	28,800
Air emissions – TPM (tonnes)	12,881	84	Not reported	Not reported

Our sources of emissions to the atmosphere are regulated under requirements in the various jurisdictions where we operate. In Madagascar, we improved reporting parameters in 2018 so as to be able to report emissions as total mass rather than a concentration. Ambatovy emissions include: SO₂ from the acid plant, ammonia from refinery scrubbers and vents, H₂S from the mixed-sulphide and hydrogen sulphide plants, NO_x from fossil fuel use (from gensets, the coal-fired power plant and mobile equipment), and PM with a diameter of less than 10 microns from stockpiles, the power stacks and roads. Several transformation plan projects are currently ongoing at the plant site that focus on safety, reliability and production improvements but that will also have important impacts on air emissions.

Our 2018 emissions at Fort Saskatchewan are consistent with historical levels. Most of the NO_x and SO_x emissions come from our utility generation (natural gas combustion) and fertilizer production (ammonia and sulphuric acid production). Ammonia is released primarily from ammonia scrubbers in the metals refinery, which uses an ammonia-based leaching process. The PM is generated primarily from the production of ammonium sulphate fertilizer and from traffic on unpaved roads. Additional information on air quality in Fort Saskatchewan can be found on the Fort Air Partnership website.

In Cuba, Moa's NO_x and SO_x emissions are generated from the sulphuric acid plant and the powerhouse. The 2018 volumes represented an increase from 2017, due to an increase in the amount of fuel used. During the year, a new Operating Standard was approved by the Environment Ministry for Moa Nickel which includes limits around air emissions. OGP's NO_x and SO_x emissions also showed an increase from the previous year which is partly attributed to the gas turbine at Puerto Escondido, which ran double the number of hours compared to 2017.



Energas Varadero's combined cycle generating facility produces lower GHG emissions for each gigawatt hour (GWh) of electricity than other facilities.

CLEAN DEVELOPMENT MECHANISM CREDITS IN CUBA

Energas S.A., the electricity generating joint venture enterprise operated by Sherritt in Cuba, installed a system that uses waste exhaust heat to generate steam and produce electricity (called a combined cycle generating unit) at its Varadero facility in 2003. In 2007, this unit was granted Clean Development Mechanism (CDM) status under the provisions of the Kyoto Protocol by the United Nations Framework Convention on Climate Change (UNFCCC). While the international framework containing the rules governing the CDM expired in 2012, the continuance of the CDM post-2012 has been supported through a commitment by certain regional and domestic emission-trading markets to allow entities to use certified emission reductions to meet their compliance obligations under these systems.

Energas Varadero facility produces lower GHG emissions for each gigawatt hour (GWh) of electricity than other facilities, contributing to the reduction of GHG emissions in Cuba. By the end of 2014, 1,533 kilotonnes of carbon dioxide emission reductions had been documented for the Kyoto credits. Of these, only 343.12 kilotonnes' worth of credits have been issued, mainly due to delays in verification and approvals. An additional 638.39 kilotonnes have been approved and are ready for issuance, with 184.78 in the approval process for future issuance. At the end of that same year, a further 366.78 kilotonnes covering the reporting periods of 2012 (172.21 kilotonnes), 2013 (127.16 kilotonnes) and 2014 (67.41 kilotonnes) were documented on a preliminary basis.

The first Energas CDM project at Varadero was approved to receive credits over a seven-year monitoring period. To continue receiving CDM credits, Energas must apply to the UNFCCC for renewal for the Varadero facility. We will make a decision on whether to proceed with this renewal on the basis of current economics, revised processes and any benefits or drawbacks associated with the registration of our second facility that would qualify – the recently built Boca de Jaruco combined cycle power generation site.



Investing in efficient and sustainable transportation leads to many cost, environmental and safety benefits for our sites.

SUSTAINABLE TRANSPORTATION ON SITE

Since 2015, Ambatovy has made an effort to switch out diesel fuelled trucks and busses for environmental vehicles. Ambatovy now has 95 electric busses and trailers, pick-ups and other vehicles in service, which has allowed it to remove over 400 diesel pick-ups from use. For example, Ambatovy uses electric busses for transporting workers and stakeholders around the plant site in Madagascar, rather than having one to four employees use trucks. The benefits of electric transportation are many. The busses are inexpensive to run and maintain, as they do not consume any diesel or lubricants but instead use electricity produced at the plant. They save the company on fuel and maintenance costs. Electric vehicles do not create harmful emissions, and use solar panels to extend their charge. Maintenance is limited to keeping the busses clean, greasing the suspension and checking the battery water levels on a weekly basis. Electric busses are also safer since their speed is limited to 30 km/hour and their large windows ensure a high degree of visibility; drivers can clearly spot nearby pedestrians and other potential road hazards.

This emission-reducing initiative has already yielded a range of cost, safety and environmental benefits for the operations.

At our Fort Site, employees have been using bicycles to get from one area of the plant to another for years. There are approximately 200 bicycles on site at any given time, which are cared for and maintained by the site's maintenance department. The bikes provide an alternative mode of transport for our employees on site, and employees are able to move efficiently and safely.

ENVIRONMENTAL LIABILITIES, CLOSURE AND RECLAMATION

MANAGEMENT APPROACH

We take seriously our responsibility to provide adequate financial resources to address the closure of our properties once reserves have been depleted.

As part of the permitting process, mining and energy companies are now required to prepare closure plans with associated cost estimates, and to provide host governments with financial assurance to cover the costs of environmental remediation in case the company is no longer able to complete the work. In addition to these regulatory requirements, international accounting and securities exchange rules require public companies to account for the reasonably expected liabilities associated with the closure of mining and energy properties. These estimates, like those provided to host governments, are based on the closure plans and assumptions contained therein.

We comply with regulatory requirements regarding closure planning and related environmental rehabilitation obligations, cost estimates and financial assurance in each of the jurisdictions where we operate. We also meet the requirements of the Ontario Securities Commission, which obliges publicly listed companies in Ontario to estimate and disclose their environmental rehabilitation provisions. We review these provisions on a quarterly basis. Whenever possible, we engage in the progressive reclamation of our properties over the life of the operation, rather than initiate such activities at the time of closure.

PERFORMANCE

The current estimate of Sherritt's share of total anticipated future closure and reclamation costs to be incurred over the life of the company's various assets and investments is approximately \$145.5 million (excluding operating expenses). The increase in anticipated costs over 2017 is mainly a result of changes in estimates rather than the completion or expansion of rehabilitation obligations.

In 2018, we continued to carry out our environmental liability obligations related to the containment pond breach at the Obed Mountain mine, a non-operational coal mine in Alberta that we owned at the time of the incident in 2013. Our remediation work is described under Tailings Management.

Closed Properties

As part of our acquisition of Dynatec Corporation in 2007, we inherited three now-closed assets from Highwood Resources Ltd.:

1. **Mineral King**, a former lead-zinc and barite mine and processing facility near Invermere, British Columbia. In 2014, Sherritt completed the reclamation work plan as required by the provincial regulator. Portals for accessing the mine were covered and secured, coverage of the tailings pond with topsoil was completed, access roads were pulled back, and designated areas were seeded and fertilized. A 2015 inspection by British Columbia's regulator required additional work on the portals and closure of the glory hole. The work was originally planned for 2017 but was delayed due to weather. It was completed in 2018. Once the completion of all closure plan requirements is verified by the government, Sherritt intends to sell the property.

2. **Parsons**, a former barite mine and processing facility near Parson, British Columbia. In 2014, we completed the regulator's reclamation work plan, which involved a general clean-up, monitoring, seeding and the removal of an invasive species. Once vegetation is re-established and land certification requirements are met, we will take steps to release the property to the provincial government. We expect the release of the bond and the return of the property to the government to occur in 2019.
3. **Canada Talc**, a former talc mine in Madoc, Ontario, and processing facility near Marmora, Ontario, and associated claims areas. In 2012, remediation of the mine was completed and the processing facility was sold. The Ontario regulator retained a security deposit for further surface and groundwater sampling and geotechnical monitoring, which occurred in 2017; however, in early 2019, further sampling and monitoring was requested and so the planned request to release security will be delayed until completion and approval by the regulator.

Current Operations

All of our mining assets that are currently operational have more than 20 years of resources and production capacity in their lifecycles. Each has up-to-date closure plans that meet host jurisdiction regulations and cost estimates that we believe reasonably and appropriately address the liabilities at each site.

In 2018, Ambatovy continued its work on a mine restoration strategy, including developing comprehensive cost estimates. The operation also engages in planning discussions on a quarterly basis with our finance department about projected environmental rehabilitation obligation costs. External consultants supported the development of cost liability estimates during 2018; those estimates will be finalized in 2019.

At Fort Saskatchewan, our closure plan incorporates a set of robust considerations accounting for both likely and unlikely obligations that we may need to address, and our current cost estimates cover the reasonable obligations.

For our OGP operating sites, all assets will revert back to the Cuban state for closure, as outlined in our permits and related agreements.

For information on our reclamation activities in 2018, please refer to Performance in Biodiversity and Land.



Engaging Stakeholders and Benefitting Communities

Effective stakeholder engagement enables us to build and strengthen social license. We work to establish and maintain productive relationships with our stakeholders and to maximize the shared benefits of our activities. Through our work, we aim to contribute to long-term prosperity and position ourselves as a partner of choice.

We take a thoughtful, sincere and ethical approach to engaging with our stakeholders and catalyzing the development of sustainable communities. We recognize that a significant part of our role is to help build human and institutional capacity wherever we operate so that local communities can achieve their development goals.

OUR 2018 PERFORMANCE:



Participated in more than 609 community meetings and 189 government meetings across Sherritt.

Recorded 118 grievances, about half of which were one community complaint recorded by 51 separate individuals.

Continued to support a road safety program by UNICEF for children in Cuba.

Generated more than \$1 billion in economic benefits for host communities and countries.

Made our first significant royalties payment at Ambatovy after Madagascar put in place an appropriate regulatory framework for administration of royalties.



Jorge Garcia Campo, Manager, Corporate Social Responsibility

JORGE GARCIA CAMPO

Jorge Garcia Campo, who has been with Sherritt for 13 years, has the principal responsibility of working with the Cuban government and local communities to allocate the Cuban Community Investment budget each year. Previous to that, he had many years' experience as a researcher, purchasing director and vendor, bringing to the job a unique perspective regarding the connections between procurement, opportunity and community development.

Jorge maintains positive relationships with regulators and community leaders in Moa, Mantanzas, Santa Cruz del Norte, Varadero and Havana to ensure Sherritt's funds are utilized where they are needed most and will have the most positive impacts for local communities around our operations.

When asked what Jorge felt was unique about Sherritt's community investment program in Cuba, he said that the existence of a structure and regulations that define the program between Sherritt, a private enterprise, and the state, Cuba, means that collaboration occurs at all levels of the government from local municipal actors all the way up to country leaders setting development priorities. These mandated interactions actually foster long-term working relationships that allow for follow-up on measured progress in the communities where we are investing because the government partners are equally committed to achieving results.

Jorge says his favourite part of the job is the opportunity to take on programs that will have benefits for whole communities including children, the elderly, sick and impoverished. In particular, Cuba has been struck with a number of meteorological events in recent years, including strong hurricanes, and Sherritt has been well positioned to support recovery.

“We believe Sherritt's investment program is unique in that we do not donate currency, but instead work closely with the Cuban government to procure goods that align with their development priorities; however, much of this work is done through a keen understanding of what those needs are and relationship-building skills which Jorge has demonstrated an exemplary aptitude for over his years at Sherritt.”

– Jennifer Prospero, Manager of Sustainability, Toronto

STAKEHOLDER ENGAGEMENT

MANAGEMENT APPROACH

Stakeholder engagement is critical for establishing a mutual understanding of one another's needs, interests, aspirations and concerns. That perspective is a key input for making decisions to support business objectives related to growth, risk management and operational excellence, and for collaborating to address local stakeholder priorities. Simply put, constructive stakeholder relationships are essential to securing and maintaining our social license to operate and creating mutually beneficial outcomes.

Our approach to stakeholder engagement is to systematically identify our stakeholders and engage with them through ongoing dialogue, sharing information about our business, responding to questions, listening to their observations and acting to address their concerns, as appropriate.

In general, we prioritize our level of engagement with different stakeholder groups based on their proximity to – and interest in – our activities and their ability to influence our business. At the operational level, the practical outcome of this prioritization is that our workforce, business partners, local communities and host governments tend to be our most important stakeholder groups. The diagram below shows our key stakeholder groups at both the corporate and operational levels.



Our engagement tactics vary based on the nature of the interaction and the stakeholder groups involved. For instance:

- We engage regularly with local communities and employees through formal meetings and town halls, small group and one-on-one interactions, surveys and grievance mechanisms.
- We work closely with our business partners through governance bodies and ongoing discussions to address material issues and opportunities.

- Our procurement and marketing teams are in constant communication with our suppliers and customers to ensure smooth operations and customer satisfaction.
- Our investor relations department manages proactive and reactive interactions with investors, analysts and media, always in accordance with securities requirements.
- We meet with government officials in our home country and operating jurisdictions to build relationships, manage regulatory affairs and advocate on policy issues of importance.
- We manage partnerships with developmental NGOs and respond to advocacy groups, as needed.
- We take an active role in various industry associations, to advance sector-wide concerns, align with broader expectations, gain a broader perspective on industry, and contribute to innovation.

Corporate Standards to Support Stakeholder Engagement

We have specific requirements for engaging investors, media, government and employees; however, to ensure there is a consistent approach to stakeholder engagement across the company, our Stakeholder Engagement Standard applies enterprise-wide. The standard describes our expectations for stakeholder identification and mapping, annual engagement planning, engagement processes and practices, how to record dialogue, and how to respond to feedback and views received from stakeholders.

An important aspect of engaging with our stakeholders and building social license is listening and responding to community concerns and incidents. Our ongoing community relations activities are designed to capture and resolve most of these issues before they escalate. But for those issues that do, it is important to have a credible community grievance mechanism in place. As described under Human Rights, all sites have a mechanism in place. We have a company-wide Grievance Management Standard to provide clear expectations on how we collect, classify, investigate, respond to and close out operational-level community grievances.

Diverse Operating Environments

Although we see the value in taking a structured and consistent approach to stakeholder engagement at all of our sites, the breadth and depth of engagement activities varies, given the disparate nature of each of our operating environments. Our Fort Saskatchewan refinery has been in operation since 1954 and is located within the city limits of a well-developed urban area near Alberta's capital. It is situated within an industrial zone with several other heavy-industry businesses. Local residents are familiar with the nature of industrial activities, including their benefits and potential risks. Because of this level of awareness and understanding, and our mature relationships in the community, we can take a very targeted approach to our engagement activities with the community, government and industry. Watch this video to learn more about life in Fort Saskatchewan.

In Cuba, we have two longstanding joint ventures with state-owned entities, and have an economic association with the government to operate our oil and gas business. As such, our engagement is focused on our partners and the central government. For community investment initiatives, we work closely with provincial and municipal governments and with donors and non-governmental organizations that have a presence on the island. We see opportunities to build on our good relations with the government to ensure that our evolving approach to engagement aligns with the Cuban operating environment, which itself is becoming more accessible to foreign investors.

A robust stakeholder engagement program takes place at Ambatovy, given its size and location in the biodiverse and impoverished country of Madagascar. Ongoing dialogue through several channels with local residents, the host government and a variety of civil society organizations has been, and continues to be, important in building mutual understanding, managing expectations, and earning and maintaining our social license.

PERFORMANCE

Community Relations

	Ambatovy	Fort Saskatchewan	Moa	Oil & Gas and Power	Total
Number of community meetings	556	38	3	12	609

We continue to engage regularly with the communities near our operating sites in all of our jurisdictions. We took part in 609 community meetings in 2018, and are pleased to report that there were no significant community incidents or disruptions during the year.

Ambatovy held a total of 556 community meetings during the year. Significant themes included Ambatovy’s operations, impacts and benefits to Madagascar; local governance; royalties distribution planning; human rights; grievance management; resettlement and land use around the mine; rumours and misinformation; public health and safety awareness; water quality; community-based environmental conservation; and security awareness. All of these topics were addressed in the context of the presidential election campaign in Madagascar, which dominated public discourse over the course of the year.

Fort Saskatchewan participated in a total of 38 community meetings in 2018. This participation included direct engagements with municipal authorities, educational institutions, charitable organizations and industry; open houses; and multi-stakeholder meetings such as those led by the Northeast Capital Industrial Association. These interactions provide us with insights into the cultural, social, political and industrial fabric of the community, as its aspirations and concerns evolve.

We also make special efforts to stay connected with former employees. As the refinery has been operating for more than 60 years, there are many multi-generational families of workers – as well as “alumni” – living in the area who remain interested in the company and who serve as our informal ambassadors. For many years, we have been contributing to the Sherritt Seniors’ Club, whose membership consists of Sherritt retirees based in Fort Saskatchewan. They take tremendous pride in their years at Sherritt and are among the company’s greatest ambassadors. As a token of appreciation, Sherritt supports an annual Club dinner, where senior management has the opportunity to interact informally with this important stakeholder group and provides an update on the company.

In Cuba, we participated in 15 meetings involving municipal and provincial authorities in Moa and the communities near our Oil & Gas and Power facilities. Meetings primarily related to the planning, execution and review of community development projects. Much like Fort Saskatchewan, Moa is an industrial town. Most of the local population works in the mining industry in some way. Throughout the year, the Moa Joint Venture supports – and participates in – cultural, sporting and other community events in Moa. A weekly newsletter produced by workers at the Moa site has been in circulation since 1979 and is very well read by the local community.

Community Grievances

In 2018, Ambatovy received 110 community grievances. Of the 110 grievances received, 106 were related to impacts on livelihood and land access, predominantly rice fields impacted by construction activities, land acquisition and other issues. In response to the key issue of impacted rice fields, Ambatovy worked to restore rice paddies, where possible, and compensated farmers for their losses. The remaining four grievances were categorized as environmental or other.

The Fort Site received one community grievance related to a noise complaint which was investigated and closed.

Last year, Sherritt received 82 community grievances. The increase in 2018 is directly attributable to an instance in which 51 landholders at Ambatovy filed the same grievance together and were counted individually. Barring this anomalous event, overall concerns regarding the project continue to decrease compared to Ambatovy's construction years, continue to decrease due to the success of face-to-face consultations, significant progress on the completion of rice field restoration (which was a considerable issue during construction), as well as the increasing maturity and stability of our operations.

No other community-related grievances were reported to the organization.

Government Relations

In 2018, government relations activities focused on building key relationships and addressing regulatory and political risks and opportunities in the jurisdictions where we operate. During the year, there were national campaigns and elections in both Cuba and Madagascar, resulting in new leadership and changes in government officials in both jurisdictions. Throughout the year, we met regularly with high-ranking representatives of national, provincial, regional and local governments, state-owned enterprises, diplomatic missions and multilateral organizations. Priorities included:

- Engaging with newly appointed officials within the Cuban and Madagascar governments and maintaining relationships to advance mutually beneficial projects, secure approvals for regulatory matters, and support developmental priorities.
- Addressing governance challenges in Madagascar to ensure laws and regulations are respected and remain stable and predictable, especially during the 2018 presidential election campaign.
- Advocating for climate change regulations in Alberta that are science-based and fair to trade-exposed industries.
- Continuing discussions with the regulator on the Fort Saskatchewan site's operating permit renewal, which has been extended only to January 2020 due to resourcing constraints of the provincial regulator.
- Advocating for approvals of community development projects and funding for Cuba and Madagascar.
- Building and maintaining relationships with the Alberta and Canadian governments.
- Encouraging stronger Canada-Cuba and Canada-Madagascar relations.

Additional information on our political and regulatory risks can be found in our Annual Information Form, including an overview of how we are affected by the U.S.'s Cuba embargo and the Helms-Burton Act, which, among other things, prohibit us from doing business in the U.S. or with American entities.

Partnerships

Partnerships with non-governmental organizations (NGOs) and other civil society organizations continue to play a key role in our approach to addressing stakeholder issues and opportunities. Over the years, we have enjoyed mutually beneficial relationships with NGOs in Madagascar, Canada and Cuba.

In 2016, Ambatovy partnered with the United Nations in Madagascar, signing a joint declaration to co-operate in areas of common interest, including social and economic development priorities of the Alaotra-Mangoro and Atsinanana regions and improving the standard of living of local populations. Both parties have worked for a number of years in the fields of child protection education, HIV/AIDS awareness and prevention, and emergency preparedness. In 2018, this included consultation with UNICEF in Madagascar on Children's Rights and Business training for suppliers.

Sherritt partnered with UNICEF Canada to deliver a road safety program in Cuba, where the leading cause of death among young people is traffic accidents. The partnership, announced publicly in early 2018, provides three years of funding for the initiative. [Read more about it here.](#)

In 2018, Ambatovy continued its partnership with Search for Common Ground (SFCG), a well-respected peacebuilding and conflict transformation NGO. The focus of the partnership has been on the following:

- To enhance the capacity of Ambatovy staff and local community members to engage in constructive, solution-oriented dialogue, in order to build trust and improve mutual comprehension among both groups so they can work through issues of concern more effectively, and
- To strengthen stakeholder understanding of the role of local authorities and communities in advancing good governance, and the role of government and other actors (NGOs, industry, etc.) in building sustainable communities and supporting participatory development, with the aim of enhancing the broader capacity for achieving community development aspirations. [Read more about the work of SFCG here.](#)

In 2018, Sherritt's Fort Site partnered with WinSETT and other industry participants on a research study to improve diversity and inclusion. [Read more about our work in 2018 on workplace inclusion here.](#)

Multi-Stakeholder Initiatives and Associations

In 2018, we participated in a number of multi-stakeholder initiatives and industry associations to engage in constructive dialogue and/or strategic activities with stakeholders who share a common interest in the issues that matter to our business. Below is a list of the groups in which we participated last year. Significant topics they pursued included application of voluntary standards, understanding and influencing regulatory developments in various jurisdictions, sharing and developing best practices, improving governance in the sector, identifying emerging trends, opportunities and risks, and broadening networks and perspectives.

- American Chamber of Commerce in Madagascar
- Business and Biodiversity Offsets Programme (C, S, \$)
- Business Council of Canada
- Calgary Petroleum Club
- Canadian Council on Africa (G)
- Chambre des Mines de Madagascar (G, S, C)
- Cobalt Institute (G, S, C)
- Devonshire Initiative (S)
- Diadem Group
- Extractive Industries Transparency Initiative (G, S, C)
- Fertilizer Canada (S, C)
- Fort Air Partnership
- Fort Saskatchewan Chamber of Commerce
- Groupement des Entreprises de Madagascar (G, S, C, \$)
- Groupement des Entreprises de Toamasina
- London Benchmarking Group Canada
- Mining Association of Canada (G, S, C)
- Nickel Institute (G, S, C)
- Northeast Capital Industrial Association (G, S, C)
- Northeast Region Community Awareness and Emergency Response (G, S, C)
- Prospectors & Developers Association of Canada (C, S)
- Syndicat des Industries de Madagascar (G, S, C)
- Voluntary Principles Initiative (S)
- Western Canadian Shippers' Coalition
- The Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT) (C, \$)

G – Held a position on the governance body in 2018

C – Participated in projects or committees in 2018

\$ – Provided substantive funding beyond routine membership dues in 2018

S – Views membership as strategic

“As the MLA representing Fort Saskatchewan-Vegreville, it’s incredibly important to be speaking with our industry partners that are within Alberta’s Industrial Heartland, including Sherritt International.

It is critically important to understand local issues from a variety of stakeholder perspectives including the company’s perspective, so I can communicate with the provincial government about issues that may arise from past, present and future policy decisions. Sherritt and its people have helped to provide input on many issues that impact operations including, but not limited to, the Canada Alberta Government Job Grant, Environmental Regulations, Health and Safety legislation, industry competitiveness and technologies development.

Working together in a collaborative fashion is how we achieve a greater understanding of the challenges and opportunities for Alberta, and allows us to work to find innovative solutions.”

**– Jessica Littlewood, former Member of the Legislative Assembly (MLA),
Fort Saskatchewan–Vegreville**



Pictured here, Fort Saskatchewan refinery employees have raised over \$800,000 for the local United Way chapter since 2012.

SPIRIT OF SHERRITT PROGRAM

In 2018, Sherritt's Fort Site continued to roll out the Spirit of Sherritt program, launched in 2017, which is composed of two initiatives: the Giving Program and the Volunteer Program.

What does the Spirit of Sherritt mean to our employees? "The Spirit of Sherritt program enables the company to support various registered charities and not-for-profits our employees care about. The program demonstrates how the company lives its 'Purpose and Promises' by actively supporting our employees volunteer efforts in our local communities, honouring the company's rich history." – Poonam Madan, Senior Advisor, Sustainability, Fort Saskatchewan refinery.

The Giving Program allows employees to apply for a \$250 donation to a charity for which they have volunteered a minimum of 40 hours of their personal time. The Volunteer Program allows eligible employees to use a maximum of one work day per year to volunteer during work hours. A number of criteria must be satisfied in order to qualify, and exclusions exist for individuals, religious or political organizations or activities, and for-profit initiatives, for example.

Over the course of the year, Sherritt's Fort Site donated \$2,800 in recognition of employees who volunteered their own time to non-profit and charitable causes in their local communities (outside of work hours), and over 160 hours of company time. Examples of places employees volunteered or donated to include local food banks, children's health, STEM education, the arts, and community or youth sporting associations.

In 2018, Sherritt's corporate office employees continued to support Make-a-Wish Canada. This year was particularly special, as a young Ontario girl had one wish, to visit a mine! In partnership with Goldcorp, Sherritt funded the unique wish (the first time that Make-a-Wish had ever granted a mining wish!) with \$10,000 raised by employees. Goldcorp hosted our Wish Kid at one of their Canadian sites. Read more about the special occasion here.



Search for Common Ground's radio show helps to manage potential conflict and build trust between community and industry in an interactive and entertaining way.

CREATING A COMPANY-COMMUNITY DIALOGUE

In Madagascar, Search for Common Ground (SFCG), a non-profit with the mission to end conflict, has worked with Ambatovy for a number of years to foster participatory and two-way dialogue between the company and the community. The reason for engaging with a peace-minded civil society organization is their specialized focus on consensus-building. In Madagascar, like many places in the world, misinformation and rumours can lead to conflict and mistrust. For Ambatovy, it has always been critical to maintain open dialogue to share operational updates and news but also to receive feedback. Refer to this section for more information on grievance management in particular.

SFCG has been involved in the organization of participatory theatre events, joint community initiatives, and mini “town hall meetings” in several communities near our operations. The most unique and popular dialogue tool has been “Miandrindra Maraina (“In Search of Dawn”), which is a radio soap opera produced by SFCG with support from Ambatovy. The show, now in its third season, uses actors (including Ambatovy employees who volunteer for fun!) to communicate key messages in a fun and interactive way. The show is aired on local radio stations in Toamasina and Moramanga. Episodes address topics like community life, mining company presence, citizen participation and good governance, among others.

In 2018, as an example of the partnership that has evolved between the two organizations, a staff member from Ambatovy's Sustainability team participated at the ICMM Forum on Partnerships and Collaboration for Sustainable Development in London. The President of SFCG, along with Ambatovy, presented on strengthening company-community relations to build trust, in a session called “Partnering to Promote Peace, Stability and Inclusive Economic Development”.

COMMUNITY DEVELOPMENT

MANAGEMENT APPROACH

Now more than ever, stakeholders – from local communities to host-country governments and civil society organizations – expect to experience tangible benefits and improvements to their standard of living from natural resource extraction and processing. This is particularly true in jurisdictions where economic development has been lagging, infrastructure is lacking and human development indices are low.

Managing the expectations of local stakeholders, particularly in less-developed jurisdictions, is paramount. When a large business enters an undeveloped jurisdiction, there are often expectations that it will solve many, if not all, of the area's inherent socio-economic challenges. We are committed to helping improve the lives of people near our operations, while relying on host-country governments to discharge their obligations regarding basic services, particularly in the areas of health, education and infrastructure.

Because of the diverse operating contexts of each of our sites, local community development priorities vary dramatically. As such, we have adopted a flexible approach to community development, while at the same time establishing company-wide guidance that ensures our values and expectations are preserved. In each jurisdiction, our investment decisions strive to support:

- Socio-economic development
- Public health and safety
- Natural and cultural heritage

In addition, our Community Investment Standard aligns with evolving good practice to maximize the value of our contributions, both to the recipients and to our business. (The standard was assessed by London Benchmarking Group (LBG) Canada as part of the design process.) It requires that we establish employee-led community investment review committees (CIRCs) at divisional/site and corporate levels to provide governance and oversight of decision-making. We take great care to avoid real or perceived conflicts of interest and to ensure spending complies with our business ethics and anti-corruption policies. All community investment reporting is now assured by LBG Canada on an annual basis.

PERFORMANCE

Economic Benefit Footprint

When evaluating the overall financial impact that our presence delivers at local and national levels, we measure our economic benefit footprint, which includes payment of taxes, royalties and regulated fees to governments; the procurement of goods and services at the local and national levels; payment of local salaries, wages and employment benefits; and community investment spending. In 2018, our operations generated more than \$1 billion in economic benefits to local communities and host governments around the world. The following table presents a breakdown of our economic benefit footprint for the year.

Indicator Components (CDN \$)	Ambatovy ¹	Fort Saskatchewan	Moa ¹	Oil & Gas and Power ¹	Total Sherritt
Payments to governments	56,269,617 ²	14,767,265	60,981,037	21,233,725	153,251,645
Local/national procurement	327,544,037	131,845,242 ³	145,643,403	32,670,454	637,703,137
Local salaries, wages and benefits	37,396,968	108,631,869	54,963,983	12,838,872	213,831,692
Community investment ⁴	644,144	35,891	261,191	332,071	1,273,297
Economic benefit footprint ⁵	421,854,766	255,280,267	261,849,614	67,075,122	1,006,059,771

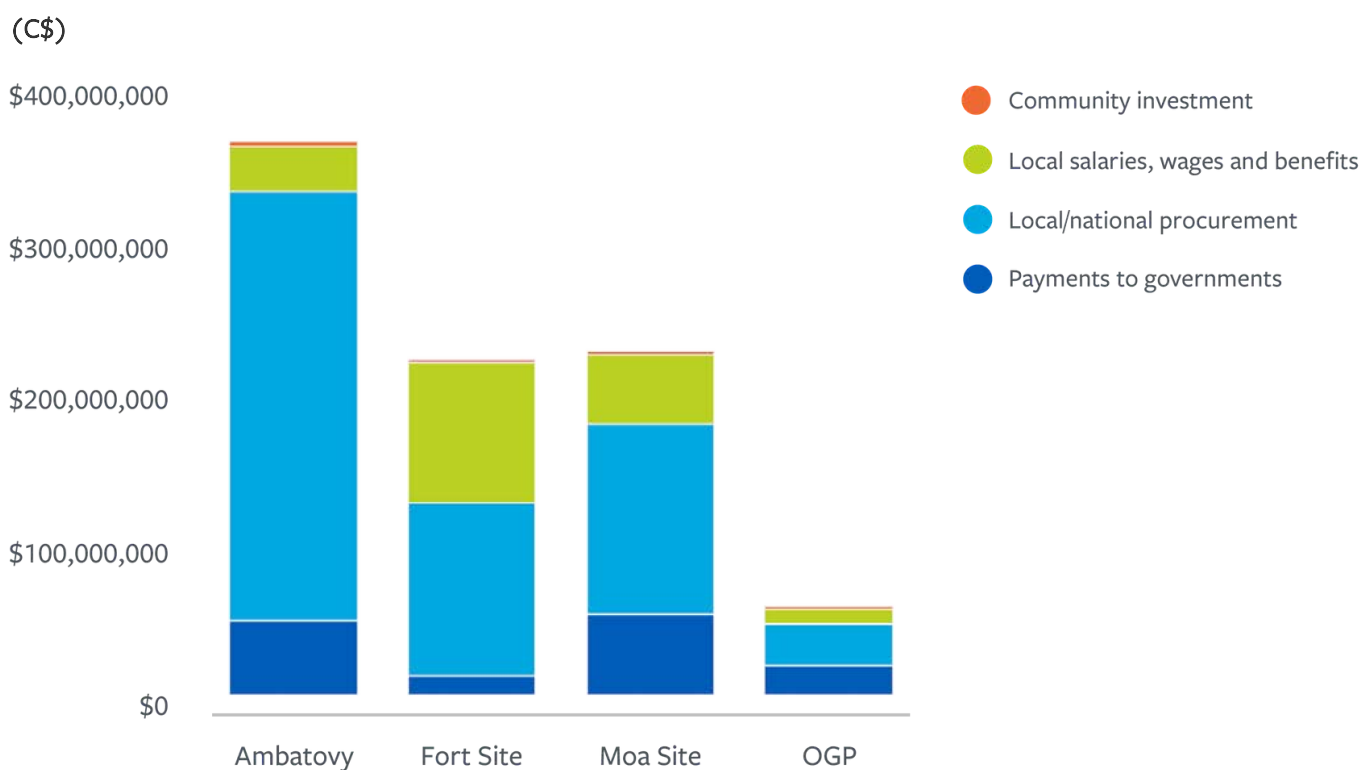
¹ Reported in USD; converted using Bank of Canada's 2018 average exchange rate of 1.2957.

² At Ambatovy, the first lump sum payment of royalties was made in 2018 following the establishment of legislation for the disbursement of royalties in Madagascar.

³ Procurement is calculated at the national level for all except Fort Saskatchewan, which refers to the Greater Edmonton Area.

⁴ Includes in-kind valuations.

⁵ This calculation includes the sum of the value of spending on local suppliers, local salaries and wages, payments to government, and community investment. All are reported on a 100% ownership basis.



Approximately 63% of our benefit footprint results from the purchase of goods and services from local- and national-level suppliers serving our operations. Given that Madagascar did not have a large-scale mining industry in place prior to our arrival, the Ambatovy Joint Venture has invested great effort in developing a local supply chain. The Ambatovy Local Business Initiative (ALBI) provides support to local businesses and entrepreneurs through training, mentoring and capacity-building programs. ALBI was created to fulfill Ambatovy's "buy locally, hire locally" policy. To this end, ALBI is fully integrated within Ambatovy's Supply Chain Management Department to identify local businesses capable of responding to company and market needs. By maximizing local procurement, Ambatovy provides a much-needed impetus to the Malagasy economy and to entrepreneurs. Read about ALBI's work in this case study to learn about a small but promising ALBI-funded project involving wood recycling.

Local salaries and wages account for our second most significant contribution, reflecting the importance of our sector in raising the standard of living and creating wealth in communities adjacent to our operating sites – in both developed and developing jurisdictions – through well-paying jobs.

Our payments to governments represent a significant contribution to host countries and communities. We strive to ensure that these payments are openly and transparently reported, so that our contributions to national, regional and local governments are recognized, and to encourage accountability for the spending of those funds, which should go towards building essential infrastructure and increasing access to education and healthcare, especially for populations near our operations. As a Supporting Company of the Extractive Industries Transparency Initiative (EITI), we are committed to the transparent reporting of payments to governments. Refer to this website for more information on Madagascar's implementation of EITI.

In Madagascar, Ambatovy has participated over the last several years in a collaborative approach with other national and international stakeholders to develop a mechanism to distribute royalty payments to local communities. In 2018, the government enacted the appropriate legislation to allow for disbursement of royalties, and the first payment was made (which was a culmination of dues as per the operating agreement). Read this case study to learn more about the process.

Community Investment

Community investment expenditures represent a small percentage of our total economic benefit footprint, but we endeavour to achieve maximum local impact with those dollars spent or donated. The vast majority of Sherritt's community investment continues to go towards socio-economic development in all jurisdictions where we are present. Where possible and in alignment with the priority indicated in Canada's Feminist International Assistance Policy, as well as our own strategic priority focus on diversity, Sherritt also donated to initiatives that incorporated a gender lens to both the analysis of the issue and preferred outcomes.

Overall, Sherritt's total amount allocated towards community investment continued to decrease in 2018. Since construction began over 10 years ago, Ambatovy has accounted for an overwhelming majority of our overall community investment. This is due to the significant community development needs in Madagascar. Ambatovy's central mechanism for investing in communities is the Social Investment Fund (SIF), a \$25 million allocation established in 2012 in partnership with the Government of Madagascar. The SIF supports several projects, such as updating public institutions, like schools and electrical generators; and building new ones, like markets and roadways. In order to qualify for SIF funding, projects require support from beneficiary communities, the government and Ambatovy. Now, nearly all of the 17 approved SIF projects were marked completed. The conclusion of the Social Investment Fund in the near future will be a significant milestone in Ambatovy's community commitments. Ambatovy remains committed to meaningful civil society partnerships and direct community investment with the greatest positive impact in our areas of operation.

In Cuba, for a number of years we have been providing about half a million dollars in annual funding for important projects relating to public health and safety, transportation, sanitation, education and culture in communities adjacent to our operations, as part of our longstanding commitment to sharing prosperity with the Cuban people. Every project we fund is directly linked to Cuba's national, provincial and local development priorities. We believe that Cuba provides a model in development planning for other jurisdictions, and we are proud to support the country's efforts. Refer to this case study for additional information on our contributions to Cuba in 2018.

At the Fort Saskatchewan site and in Calgary and Toronto, where we have administrative offices, community investment is much less significant and is used to support employee engagement, philanthropy and meeting the needs of the less fortunate. Refer to this case study for more information on our Spirit of Sherritt program.

Sherritt was a supporting sponsor of *Courage and Passion: Canadian Women in the Natural Sciences*, an exhibit at the Canadian Museum of Nature in Ottawa, Ontario, which aims to inspire young women to pursue careers in science. The museum, which is particularly popular with school groups in the nation's capital, ran the exhibit from July 2018 to March 2019. In addition, Sherritt also once again sponsored the International Women in Resources Mentorship Programme with the aim of providing female mentees in industry with a productive mentoring relationship, the purpose of which is to retain future leaders and create a more diverse pipeline. Sherritt sponsored employee participation in the program for the second year in a row.

In 2017, Sherritt signed a three-year partnership with UNICEF Canada to support the Child Road Traffic Injury Prevention Program in promoting road safety among young people. Read more here, including a 2018 program update.

Employee Volunteerism and Giving

Sherritt employees have long been active participants in the communities where we operate, both during and outside of work hours. Sherritt's Community Investment Standard further encourages and better organizes employee volunteerism through a variety of delivery options. The result has been a significant increase in both the amount of volunteer hours and the recording of hours already occurring on a regular basis.

In 2018, Moa recorded over 3,237 hours of employee volunteer time during work hours. Employees at the Moa site contributed to saving lives through the employee blood donation program, and gave back to the local community, for example, through the maintenance of roads and community gardening.

As a result of the Spirit of Sherritt program, Fort employees donated 162 hours of company time to non-profit and charitable causes that were meaningful to them, and the Fort Site donated \$2,800 to causes supported by employees who volunteered their own time. Through an annual employee giving initiative at the Fort Saskatchewan site, employees elected to donate a portion of their pay to the United Way, supporting various local charities. As of 2018, Sherritt's employees had donated over \$800,000 over five years. The Fort Site employees also supported Let's Talk Science in 2018, including volunteering at events for youth focusing on Science, Technology, Engineering and Mathematics (STEM) at the University of Alberta.

Sherritt's head office for OGP is located in Calgary, Alberta. For over 10 years, OGP has partnered with Alberta Children's Hospital to host a golf tournament fundraiser. In 2018, nearly \$90,000 was raised, bringing the multi-year total to over \$900,000 raised by employees and vendors to purchase expensive medical equipment. In addition, employees raised over \$27,000 for Alberta's annual Ride to Conquer Cancer.



Ambatovy's ALBI program continued to grow in 2018, supporting local service provider capacity to then support Ambatovy's operations, and creating positive local economic impacts in Madagascar.

LOCAL BUSINESS INITIATIVES AT AMBATOVOY

Ambatovy is committed to maximizing economic returns to our local communities. We have implemented a range of programs and have made support tools available to local businesses and entrepreneurs so they can provide Ambatovy with goods and services that meet our standards for procurement and quality. The Ambatovy Local Business Initiative (ALBI) was created during construction to support our commitment to buy locally. In 2018, the amount spent for purchases from local businesses was \$327.5 million. Every year, the program, through increased capacity building and identification of new local supplier options, increases the project's local spending.

Examples of locally sourced materials include pallets used for shipping nickel and cobalt as well as uniforms distributed to our employees. The exact number of jobs created to indirectly support Ambatovy's procurement needs is difficult to calculate – however, we know that almost 500 jobs were created to build wood pallets, manufacture uniforms, and recycle plastic, tires and wood.

Ambatovy developed an Agricultural and Livelihood program to support 240 local subsistence farmers in procuring goods for Ambatovy's sites and for the wider market with partner support. Examples include fish farming, beekeeping, poultry farming, and a community granary.

Ambatovy has also been focusing on a hyper-local recruitment strategy in the areas immediately adjacent to the mine site, to allow for unskilled labourers to gain work experience and to strengthen company-community relations. This is in parallel with Ambatovy's overall recruitment strategy which has resulted in 93% Malagasy employees.



Ambatovy is helping catalyze discussions on transparency and the equitable distribution and use of funds generated by our business.

ROYALTIES GOVERNANCE AT AMBATOVY

Ambatovy has been involved in the Tsaratantana (Good Governance) Project over the last number of years to develop a credible mechanism for royalty distribution at the community level. The project is overseen by a steering committee with representatives from various Malagasy government ministries, as well as from the Chamber of Mines and the Extractive Industries Transparency Initiative in Madagascar. The project's aim was to provide recommendations to the national government on how best to distribute the royalties it receives from our business to the local jurisdictions that are impacted by our presence, and now to ensure these funds are managed effectively, transparently and sustainably to help these communities achieve their aspirations.

Following the adoption by the Malagasy government of the two enabling acts and an inauguration event in Toamasina in July, Ambatovy was able to make its royalties payment, as required by the mining code. A payment of approximately \$18,000,000 USD was made on August 31 to the General Treasury of Toamasina for royalties accrued from Q4 2012 to Q2 2018, to be allocated to two Regions and 20 Communes.

Ambatovy is part of a support group on local governance that also comprises government departments, local authorities, civil society organizations and donors. The objective of the group is to provide guidance, advice and support to the beneficiaries, and to help mobilize resources and expertise in order to strengthen their capacities towards the good governance of their mining royalties. In addition, a local NGO called Saha is working on capacity-building directly with the Communes. Saha has much experience and is well regarded for its work in the areas of decentralization, local development and good governance.



In 2017, we invested \$500,000 in community projects across Cuba, including supporting the recovery efforts after Hurricane Irma.

COMMUNITY INVESTMENT IN CUBA

Since we began operating in Cuba more than 20 years ago, we have always invested in the development of communities near our sites. In the mid-2000s, this effort, referred to as the Cuba Community Investment Program, took on a more formal structure and approach. Sherritt began working with local and provincial governments in Cuba to develop an annual community investment plan for purchasing equipment and goods to meet local development needs that aligns with national development priorities, today known in Spanish as the Lineamientos. The Cuban authorities arrange for the installation or use of these items by local state-run agencies and organizations. This approach serves as a great example of effective community development planning, with highly capable local leaders setting clear development goals for their communities that a company like ours supports. Sherritt is the only foreign investor in Cuba that has such a program in place.

Over the years, we have made several millions of dollars' worth of investments to support a range of community development initiatives in Cuba, including a project to provide public lighting along the streets in communities near our OGP facilities. Those efforts improved visibility along many roads during the evening, contributing directly to public safety.

In 2018, we invested more than \$450,000 in community projects across Cuba. The funds supported community development projects in Moa, the municipality adjacent to our nickel mining joint venture, and Cardenas and Santa Cruz del Norte, communities near our Oil & Gas and Power facilities. Investments included the procurement of lighting and air conditioning units for public institutions including Moa's hospital, road repair and community gardening equipment, and spare parts and maintenance for equipment donated in previous years. These investments contribute to the quality of life of the Cuban people in communities around our operations.

In addition, two local health clinics in Moa were refurbished from empty concrete shells to usable buildings that can service the broader community for any medical needs not requiring hospital care.

A photograph of two female scientists in a laboratory. They are both wearing blue lab coats and safety glasses. The scientist on the left is wearing blue gloves and is pouring a yellow liquid from a white plastic jug into a glass flask held by the scientist on the right. The scientist on the right is smiling. A semi-transparent dark grey box with the word 'Performance' in white text is overlaid on the top left of the image.

Performance

This report was prepared in accordance with the GRI Standards (Core option) and showcases how we support international principles relating to sustainable development. All data is based on the calendar year, and all references to currency are in Canadian dollars, unless otherwise noted.






About Sherritt

Sherritt International Corporation, based in Toronto, Canada, is a world leader in the mining and refining of nickel from lateritic ores with operations in Canada, Cuba and Madagascar. The company is the largest independent energy producer in Cuba, with extensive oil and power operations on the island. Sherritt licenses its proprietary technologies and provides metallurgical services to commercial metals operations worldwide. The common shares of the Corporation are listed on the Toronto Stock Exchange, trading under the symbol “S”, and are widely held by both institutional and retail investors.

FIVE-YEAR SUSTAINABILITY GOALS

In 2018, Sherritt launched a suite of five-year sustainability goals. These strategic goals incorporate our external commitments and focus on areas that advance and protect our interests and support Operational Excellence. They are intended to complement and supplement – not duplicate – priority efforts already underway. With input from the divisions, and executive team approval, these goals will shape priorities, long-range planning, and investments in sustainable development across all of Sherritt’s operations. Division-level plans are articulated in the following table. In future years, we will report on our performance against these plans.

SUSTAINABILITY GOALS	STATUS IN 2018
<p>1. Achieve Level A requirements in TSM protocols across all operations.</p> 	<p>2018 was Sherritt’s first full year of TSM implementation with sites completing Self-Assessments against the protocols to understand where each Division scores from C to AAA.</p>
<p>2. Strengthen our safety culture, behaviour and performance.</p> 	<p>Health and safety performance continued to improve in 2018 across the company. Divisions are setting specific targets for performance based on current state.</p>
<p>3. Improve water, energy and emissions management across operations.</p> 	<p>Each of our operating sites has specific opportunities around environmental performance to target. In 2018, sites undertook assessments of the possibilities based on available resources.</p>

SUSTAINABILITY GOALS

STATUS IN 2018

4. Create community benefit footprints that support local priorities and the SDGs.



During the year, the Divisions continued to align their community investments with the Community Investment Standard, Sherritt's priority SDGs and the priorities of the regions in which we operate. In 2019, targets will focus on broadening activities beyond community investment to a more fulsome approach to benefit footprint.

5. Be recognized as a "supplier of choice" for responsibly produced, high-quality products.



Our focus in 2018 was on ensuring robust management systems are implemented across Divisions so that Sherritt can continuously improve the evidence we can offer customers and other stakeholders of our responsible mining and refining practices.

6. Improve diversity at all levels throughout the company.



The focus in 2018 was undergoing a current-state analysis of both our employee population and our policies and procedures to aid in developing a framework to support our goal, to be launched in 2019.

The first year of implementation mainly focused on necessary planning and baseline work to be able to set targets at the divisional level to achieve the goals. Performance will be reported in the 2019 Sustainability Report and in subsequent years in the Performance section of this report.

GRI INDEX

We have aligned our report with the Global Reporting Initiative’s GRI Standards Guide. See www.globalreporting.org for more information.

GENERAL STANDARD DISCLOSURES

GRI Indicator	Description	Location	SDG
Organizational profile			
102-1	Name of the organization	About Sherritt	
102-2	Activities, brands, products and services	About Sherritt	
102-3	Location of headquarters	About Sherritt – Map/Description	
102-4	Location of operations	About Sherritt – Map/Description	
102-5	Ownership and legal form	About Sherritt	
102-6	Markets served	About Sherritt – Divisions/Products	
102-7	Scale of the organization	About Sherritt – Key Indicators 2018 Annual Report	



INFORMATION ON EMPLOYEES AND OTHER WORKERS

Disclosure Components	Canada	Cuba ²	Madagascar	Other ³	Total Sherritt
Full-time					
Men	656	2,320	3,121	5	6,102
Women	158	192	452	11	813
Unknown	-	-	-	-	-
Part-time					
Men	16	-	-	-	16
Women	11	-	-	-	11
Unknown	-	-	-	-	-
Permanent					
Men	672	2,320	3,121	5	6,118
Women	169	192	452	11	824
Unknown	-	-	-	-	-
Temporary¹					
Men	4	3	5,672	1	5,680
Women	2	-	621	1	623
Unknown	57	-	-	-	57
<p>¹ Temporary employees included consultants or positions currently filled by contractors. Ambatovy has a temporary workforce included in reporting.</p> <p>² Includes the office in Havana, Sherritt and GNC employees at Moa, as well as employees of the entities which make up the Oil & Gas and Power businesses (including Energas).</p> <p>³ "Other" includes our Bahamian marketing office, which services the Moa JV, and OGP Spain.</p>					

102-9

Supply chain

About Sherritt – Our Supply Chain





102-10

Significant changes to the
organization and its supply
chainAbout Sherritt –
Divisions/Products

102-11

Precautionary Principle or
approachDemonstrating Environmental
Responsibility


102-12	External initiatives	<p>Operating Ethically</p> <p>Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Performance – Multi-Stakeholder Initiatives and Associations</p> <p>Our Approach – Sustainability Framework – Management Systems</p> <p>Our Approach – Sustainability Goals</p>	
102-13	Membership of associations	<p>Operating Ethically</p> <p>Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Performance – Multi-Stakeholder Initiatives and Associations</p> <p>Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Performance – Partnerships</p>	
Strategy			
102-14	Statement from senior decision-maker	CEO Message	
102-15	Key impacts, risks and opportunities	<p>CEO Message</p> <p>2018 Annual Report – Management’s Discussion and Analysis</p>	
Ethics and integrity			
102-16	Values, principles, standards and norms of behaviour	<p>Our Approach</p> <p>Operating Ethically</p>	
102-17	Mechanisms for advice and concerns about ethics	Operating Ethically – Business Conduct – Management Approach	

Governance

102-18 Governance structure Our Approach – Governance

Stakeholder engagement

102-40 List of stakeholder groups Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Management Approach

102-41 Collective bargaining agreements View Data Table 



PERCENTAGE OF TOTAL EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate	Total Sherritt
Percentage of total employees covered by collective bargaining agreements	100% of national employees	53.78% ¹	In Cuba, all organized labour considerations are mandated by the Cuban state and many systems and tools common in other jurisdictions are not employed there. There were no grievances reported by expatriate or Canada-based employees.		Not applicable	83% ²

¹ Hourly employees as a percent of total employees at the Fort Site, only.

² Calculated as a % of headcount, permanent employees, excluding Cuba local nationals.

102-42 Identifying and selecting stakeholders Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Management Approach



102-43 Approach to stakeholder engagement Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Management Approach

102-44	Key topics and concerns raised	Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Performance Providing a Safe and Rewarding Workplace – Employee Relations – Performance Operating Ethically – Human Rights – Management Approach
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Reporting practice

102-45	Entities included in the consolidated financial statements	2018 Annual Report – Overview of the Business
102-46	Defining report content and topic Boundaries	Our Approach – Materiality About This Report
102-47	List of material topics	Our Approach – Materiality
102-48	Restatements of information	
102-49	Changes in reporting	About This Report
102-50	Reporting period	About This Report
102-51	Date of most recent report	About This Report
102-52	Reporting cycle	About This Report
102-53	Contact point for questions regarding the report	About This Report
102-54	Claims of reporting in accordance with the GRI Standards	About This Report
102-55	GRI content index	This table, the GRI Content Index
102-56	External assurance	About This Report

MANAGEMENT APPROACH DISCLOSURES

GRI Indicator	Description	Location	SDG
103-1	Explanation of the material topic and its Boundary	Our Approach – Materiality	
103-2	Number of grievances filed, addressed, and resolved	View Data Table 	

NUMBER OF GRIEVANCES FILED, ADDRESSED, AND RESOLVED

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate	Total Sherritt
Labour practices						
Total number of grievances about labour practices filed through formal grievance mechanisms during the reporting period	18	33	In Cuba, all organized labour considerations are mandated by the Cuban state and many systems and tools common in other jurisdictions are not employed there. There were no grievances reported by expatriates or Canada-based employees.		-	51
Of the identified grievances about labour practices, how many were addressed during the reporting period?	18	33			-	51
Of the identified grievances about labour practices, how many were resolved during the reporting period?	18	15			-	33
Total number of grievances about labour practices filed prior to the reporting period that were resolved during the reporting period	0	8			-	8
Internal						
Labour grievances filed through formal grievance mechanisms during the reporting period	18	33	In Cuba, all organized labour considerations are mandated by the Cuban state and many systems and tools common in other jurisdictions are not employed there. There were no grievances reported by expatriates or Canada-based employees.		-	51
Discrimination	-	5			-	5
Other	-	-			-	-
External						
Environment	3	1			-	4
Livelihood/land access	108 ¹	-			-	108
Human rights	-	-			-	-
Social or community	-	-			-	-
Other	6	-			-	6
¹ Note that 51 landholders at Ambatovy filed the same grievance together and were counted individually.						

ECONOMIC PERFORMANCE

GRI Indicator	Description	Location	SDG
Material Topic: Economic Performance			
103	The management approach and its components	Our Approach – Materiality Operating Ethically – Economic Performance	



View Data Table

DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED¹

CDN \$ millions, for the year ended December 31, 2018

Disclosure Components	Ambatovy	Moa JV and Fort Site	Oil & Gas and Power	Corporate and Other	Total Sherritt
Revenues	101.20	498.10	92.10	10.50	701.90
Costs					
Operating costs (costs of sales) excludes depreciation, employee costs and community investments disclosed below	71.22	259.60	41.27	9.17	381.26
Employee wages and benefits	13.60	106.40	25.30	17.70	163.00
Spending on capital	15.30	37.00	27.30	1.70	81.30
Payments to governments ²	6.80	75.75	9.85	0	92.36
Community investment ³	0.08	0.30 ⁴	0.33 ⁴	0.33 ⁵	1.04
Total economic value distributed	106.95	479.05	104.05	28.90	718.96
Economic value retained or invested (pre-calculated as "Direct economic value generated" less "Economic value distributed")	(5.75)	19.05	(11.95)	(18.40)	(17.06)

¹ These figures reflect Sherritt's ownership share in 2018 and reporting for the Moa Joint Venture and Fort Saskatchewan facility are combined to align with other financial disclosures.

² Includes fines and penalties, where appropriate.

³ Includes cash investments, employee time during working hours, and in-kind valuations.

⁴ OGP and Moa JV valuation for community investment is allocated on 100% basis to Sherritt.

⁵ Includes program management costs of the community investment program for direct Sherritt employees only.

Note: There may be some discrepancies between Sherritt's economic disclosures and the [ESTMA](#) filing, due to differences in reporting scope and definitions.

201-4 Financial assistance received from government Operating Ethically – Economic Performance

View Data Table 

FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT¹

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total monetary value of financial assistance received by the organization from governments, by country ²	-	\$132,428	-	-

¹ See section “Overview of Our Business” in our [Annual Report](#) for information on whether, and the extent to which, governments are present in the shareholding structure.

² These figures are based on a 100% ownership structure.

Material Topic: Market Presence

103 The management approach and its components Engaging Stakeholders and Benefitting Communities – Community Development

2018 Annual Report

202-2 Proportion of senior management hired from the local community Engaging Stakeholders and Benefitting Communities – Community Development



View Data Table 

PROPORTION OF SENIOR MANAGEMENT HIRED FROM THE LOCAL COMMUNITY AT SIGNIFICANT LOCATIONS OF OPERATION

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate
Percentage of senior management ¹ at significant locations of operation that are hired from the local ² community	11%	95%	98%	54%	100%

¹ Definition: Manager (of a group), Director, Controller, Senior Counsel, VP, SVP, CFO, COO, President or CEO.

² “Local community” refers to national-level hiring at Ambatovy and Cuban sites and to the Greater Edmonton and Toronto Areas for the Fort Site and Corporate, respectively.

Material Topic: Indirect Economic Impacts

103 The management approach and its components Engaging Stakeholders and Benefitting Communities – Community Development

2018 Annual Report

203-1 Infrastructure investments and services supported About Sherritt – Our Supply Chain

Engaging Stakeholders and Benefitting Communities – Community Development – Performance – Economic Benefit Footprint

Engaging Stakeholders and Benefitting Communities – Community Development – Performance – Community Investment



View Data Table

INFRASTRUCTURE INVESTMENTS AND SERVICES SUPPORTED

Disclosure Components	Ambatovy	Fort Saskatchewan	Cuba
Extent of development of significant infrastructure investments and services supported Current or expected positive or negative impacts on communities and local economies	<p>In 2018, Ambatovy built one building in Moramanga (the Moramanga Court) and provided 57 portable radios and 11 base radio stations with accessories to the Toamasina Civil Protection Unit.</p> <p>Those projects were defined and made with the government and communities in order to empower communities. They need to play a key role in their own development process.</p>	<p>There were no significant investments in infrastructure in 2018.</p>	<p>In Cuba, Sherritt has invested in public infrastructure through its Community Investment program, including, among other things, street lighting; sanitation and construction equipment; roads; transportation services; and equipment for hospitals, schools and retirement homes.</p> <p>OGP: Two submersible water pumps with control panels and accessories for supporting potable water distribution; a sewer cleaner, high pressure, mounted on a trailer, for servicing municipality sewage pipeline blockage; chainsaws, trimmers and lawn mowers, STIHL brand, for the green-area maintenance of the municipality.</p>

203-2

Significant indirect economic impacts

Engaging Stakeholders and Benefitting Communities – Community Development – Performance – Economic Benefit Footprint



SI-1

Economic benefit footprint

Engaging Stakeholders and Benefitting Communities – Community Development – Performance – Economic Benefit Footprint



View Data Table

ECONOMIC BENEFIT FOOTPRINT

(CDN \$ millions)

Disclosure Components	Ambatovy ¹	Fort Saskatchewan	Moa Site ¹	Oil & Gas and Power ¹	Total Sherritt
Payments to governments	56.27 ²	14.77	60.98	21.23	153.25
Local/national procurement ³	327.54	131.85	145.64	32.67	637.70
Local salaries, wages and benefits	37.40	108.63	54.96	12.84	213.83
Community investment ⁴	0.64	0.04	0.26	0.33	1.27
Economic benefit footprint ⁵	421.85	255.29	261.84	67.07	1,006.05

¹ Reported in USD; converted using Bank of Canada's 2018 average exchange rate of 1.2957.

² At Ambatovy, the first lump sum payment of royalties was made in 2018 following the establishment of legislation for the disbursement of royalties in Madagascar.

³ Procurement is calculated at the national level for all except for the Fort Site, which refers to the Greater Edmonton Area.

⁴ Includes cash investments, employee time during working hours, and in-kind valuations.

⁵ This calculation includes the sum of the value of local suppliers, local salaries and wages, payments to government, and community investment. All reported on a 100% ownership basis.

Material Topic: Procurement Practices

103


The management approach and its components

Engaging Stakeholders and Benefitting Communities – Community Development

204-1

Proportion of spending on local suppliers

Engaging Stakeholders and Benefitting Communities – Community Development – Performance – Economic Benefit Footprint

View Data Table PROPORTION OF SPENDING ON LOCAL SUPPLIERS¹

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Percentage of the procurement budget used for significant locations of operation spent on suppliers local ¹ to that operation	41%	79%	35%	31%

¹ “Local suppliers” refers to the national level for Madagascar and Cuba and to the Greater Edmonton Area for the Fort Site.


Material Topic: Anti-Corruption

103

The management approach and its components

Operating Ethically – Business Conduct

205-2 Communication and training about anti-corruption policies and procedures Operating Ethically – Business Conduct – Performance

View Data Table 

COMMUNICATION AND TRAINING ABOUT ANTI-CORRUPTION POLICIES AND PROCEDURES

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate
Total percentage of employees to whom the organization’s anti-corruption policies and procedures have been communicated and who have been trained on these policies and procedures, broken down by employee category and region ¹	95% of existing employees and 91% of new employees in 2018	100% ³	100% ³ All contracts that empower suppliers to represent Sherritt are to include appropriate contractual safeguards to ensure compliance with our Anti-Corruption Policy. Contractors are not required to do training at this time.		100% ³
The total percentage of governance body members who have received training on anti-corruption, broken down by region (training includes being communicated to) ²	100%	100%	100%	100%	100%

¹ Only Sherritt workers in Canada, Madagascar, as well as expatriates are currently eligible for training. Training for other joint venture partners and workers is not within scope of Sherritt’s policy. We are, however, exploring opportunities to provide a high-level presentation on anti-corruption to Cuban nationals, so they have greater awareness of Canadian and international standards in this evolving area.

² Those eligible for this training include Sherritt’s Board of Directors and Sherritt employees who sit on boards of subsidiary companies or joint ventures. Non-Sherritt representatives are not within scope of the policy’s training requirements.

³ Sherritt has revised its onboard procedure to include anti-corruption training and certification of the anti-corruption policy for all new salaried employees. This change will be put into effect concurrently with the rollout of the updated anti-corruption training module in the second quarter of 2019.

ENVIRONMENTAL PERFORMANCE

GRI Indicator	Description	Location	SDG
Material Topic: Energy			
103	The management approach and its components	Demonstrating Environmental Responsibility – Energy and Climate Change	



View Data Table

ENERGY CONSUMPTION WITHIN THE ORGANIZATION

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total fossil fuel consumption (GJ)	14,517,981 ¹	4,276,800	5,734,851	24,578,899
Total electricity consumption (GJ)	1,803,906	561,000	207,506	1,160,240
Total waste fuel consumption (GJ)	–	135,000	–	–
Total coal consumption (GJ)	11,792,861	–	–	–
Total fuel consumption from renewable fuel sources (solar, wind, etc.)	–	–	–	–
Heating consumption	–	–	–	–
Cooling consumption	–	–	–	–
Steam consumption (tonnes)	4,915,837	–	4,074,908	–
Electricity sold (MWh)	–	–	–	2,426,546
Heating sold	–	–	–	–
Cooling sold	–	–	–	–
Steam sold (GJ)	–	93,000	–	–

¹ Includes energy consumption from coal (provided by the site) and estimates of fossil fuel consumption based on higher heating value conversion factors for diesel, LPG (propane) and naphtha.

Material Topic: Water

103 The management approach and its components Demonstrating Environmental Responsibility – Water

303-1 Water withdrawal by source Demonstrating Environmental Responsibility – Water – Performance



[View Data Table](#)

WATER WITHDRAWAL BY SOURCE¹

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total water withdrawal (m ³)	25,718,190.1	2,651,320.0	15,078,280.0	4,524,316.0
Surface water, including water from wetlands, rivers and lakes (m ³)	25,104,363.1	2,547,252.0	13,936,059.0	–
Saltwater (m ³)	–	Not applicable	–	4,465,876.0
Groundwater (m ³)	613,827.0	–	–	–
Rainwater collected directly and stored by the organization (m ³)	–	–	–	–
Waste water from another organization (m ³)	–	–	–	1,465.0
Municipal water supplies or other water utilities (m ³)	–	104,068.0	1,142,221.0	58,440.0

¹ Data are collected from meters and some estimates; collection methodologies differ between sites.



[View Data Table](#)

WATER RECYCLED AND REUSED

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total volume of water recycled (m ³)	3,520,380	-	4,693,690	25,712 ¹
Total volume of water recycled and reused as a percentage of total water withdrawal	13.7%	-	31%	0.6%
Reclaimed water use (m ³)	-	-	-	-
Process water use (m ³)	10,900,000 ²	2,650,000	14,390,000	203,612
Cooling water inflow (m ³)	3,000,000	1,260,000	1,120,395	3,975,558

¹ OGP only started to capture water for recycling in 2018.

² 2018 figures represent both the plant and mine site; compared to 2017 in which only the plant site figures were available.

Material Topic: Biodiversity

103 The management approach and its components Demonstrating Environmental Responsibility – Biodiversity and Land

304-1 Operational sites owned, leased, managed in or adjacent to protected areas and areas of high biodiversity value outside protected areas Demonstrating Environmental Responsibility – Biodiversity and Land – Management Approach
 Demonstrating Environmental Responsibility – Biodiversity and Land – Performance



304-2 Significant impacts of activities, products and services on biodiversity Demonstrating Environmental Responsibility – Biodiversity and Land – Management Approach
 Demonstrating Environmental Responsibility – Biodiversity and Land – Performance



304-3 Habitats protected or restored Demonstrating Environmental Responsibility – Biodiversity and Land – Performance

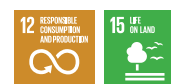


View Data Table

HABITATS PROTECTED OR RESTORED

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total size of protected areas (ha)	24,133 ha of conservation areas ¹	Not applicable	Not applicable	Not applicable
¹ Includes Torotorofotsy Wetlands, Analamay-Mantadia Forest Corridor (CFAM), Ankerana Forest.				

MM1 Amount of land disturbed or rehabilitated Demonstrating Environmental Responsibility – Biodiversity and Land – Performance



View Data Table

AMOUNT OF LAND (OWNED OR LEASED, AND MANAGED FOR PRODUCTION ACTIVITIES OR EXTRACTIVE USE) DISTURBED OR REHABILITATED

Disclosure Components	Units	Ambatovy	Fort Saskatchewan	Moa Site ¹	Oil & Gas and Power	Total Sherritt
Total amount of land disturbed and not yet rehabilitated	ha	2,034.29	100	602.28 ²	42	2,778.57
Total amount of land newly disturbed within the reporting period	ha	157.38	–	48.18	0	205.56
Total amount of land newly rehabilitated within the reporting period to the agreed end use	ha	11.865	–	20	Not applicable	31.87
Total land rehabilitated since start of project – estimate	ha	120.365	Not applicable	675	Not applicable	795.37

¹ Data reported for Moa represents land disturbance that occurred from 1994 onwards – or the years that the Moa Joint Venture between Sherritt and the Cuban state has been in place. The data do not reflect any mining activity at the site that pre-dates the joint venture.

² Last year, only the mine site was reported (approximately 200 ha). 2018 data is inclusive of the mine site, plant site, roads, port, etc.

MM2

Sites requiring biodiversity management plans

Demonstrating Environmental Responsibility – Biodiversity and Land – Performance



View Data Table

SITES REQUIRING BIODIVERSITY MANAGEMENT PLANS (BMP)

Disclosure Components	Units	Ambatovy	Fort Saskatchewan ¹	Moa Site	Oil & Gas and Power ¹
Total number of operations requiring biodiversity management plans	#	1 ²	Not applicable/under development	1	Not applicable/under development
Number of total operations that have been assessed under the criteria as in need of a BMP	#	5	Not applicable	1	Not applicable
Percentage of total operations that have been assessed under the criteria as in need of a BMP	%	100	Not applicable	100	Not applicable
Of the number of operations in need of a BMP, the number that have a BMP in place and operational	#	1	Not applicable	1	Not applicable
Of the number of operations in need of a BMP, the percentage that have a BMP in place and operational	%	100	Not applicable	100	Not applicable

¹ No regulatory obligations requiring a BMP; however, since Sherritt is implementing TSM, these sites are developing site-level BMPs.

² Ambatovy's BMP includes five sites: Mine footprint, Mine conservation zone (Ambatovy-Analamay forest), Ankerana offset site, Torotorofotsy offset site, CFAM offset site.

Material Topic: Emissions

103

The management approach and its components

Demonstrating Environmental Responsibility – Energy and Climate Change

305-1

Direct (Scope 1) GHG emissions

Demonstrating Environmental Responsibility – Energy and Climate Change – Performance



[View Data Table](#)

DIRECT (SCOPE 1) GHG EMISSIONS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Total
Scope 1 emissions (kt CO ₂ e)	1,716	317	606	1,418	4,057
Sources included in the GHG emissions calculation	CO ₂ , CH ₄ , N ₂ O	CO ₂ , CH ₄ , N ₂ O	CO ₂ , CH ₄	CO ₂ , NO _x , SO _x , SO ₂	-
Other site-specific indicators	-	10 kt of credits purchased	-	-	-

305-2

Energy indirect (Scope 2) GHG emissions

Demonstrating Environmental Responsibility – Energy and Climate Change – Performance



[View Data Table](#)

ENERGY INDIRECT (SCOPE 2) GHG EMISSIONS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Total
Scope 2 emissions (kt CO ₂ e)	-	58 ¹	52 ¹	-	110

¹ Purchased grid electricity.

NITROGEN OXIDES, SULFUR OXIDES AND OTHER SIGNIFICANT AIR EMISSIONS

Disclosure Components	Ambatovy ¹	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Air emissions – NO _x (tonnes)	1,990.7	1,205	1,571	6,147
Air emissions – SO _x (tonnes)	6,009.9	66	13,424	28,800
Air emissions – TPM (tonnes)	12,881.0	84	Not reported	Not applicable
Air emissions – Persistent organic pollutants (tonnes)	Not reported	–	Not applicable	Not applicable
Air emissions – Volatile organic compounds (tonnes)	Not reported	9.7 ²	Not applicable	Not reported
Air emissions – Hazardous air pollutants (tonnes)	Not reported	10.4 ²	Not applicable	Not reported
Source or emission factors	US EPA Air Emissions Factors	US EPA Air Emissions Factors	US EPA Air Emissions Factors	Measured by Gamma ⁴

¹ In Madagascar, our current monitoring system records air emissions as a concentration rather than a total mass (which is what we monitor at our other operations), and we base our ambient air quality observations at ground level. So we are unable to normalize these data across Sherritt. The reported values do not include the emissions from flares and mobile equipment used on sites. Calculation methods and inventory for POP, VOCs and HAP are still under development.

² Increase in reported volume this year as stack-point emissions are available and included in calculation for report. Stack-point emissions were not available in time for the report in 2017. Since the time of the report, the 2017 numbers have been revised to show a volume of 10.4 metric tonnes (vs 0.5 as shown here).

³ HAP value includes VOCs that now include stack-point emissions data that were not included in 2017 (as explained above) and therefore the HAP value in this report. H₂S also increased this year due to better quantification/methodology.

⁴ OGP works with Gamma, operating on behalf of the Cuban environmental regulator CITMA, on matters of environmental monitoring.

Material Topic: Effluents and Waste

103

The management approach and its components

Demonstrating Environmental Responsibility – Tailings Management

Demonstrating Environmental Responsibility – Waste



View Data Table

WASTE BY TYPE AND DISPOSAL METHOD

Disclosure Components	Ambatovy ¹	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total waste (tonnes)	63,730 m ³ + 49,870 tonnes	8,479	20,082	381
Waste recycled – includes recyclables sent off site (batteries, plastics, electronics, etc.) ¹	1,016 m ³ + 49,523 tonnes	205	954	380 m ³ + 418 tonnes + 650 kg Batteries: 528 units Fluorescent bulbs: 294 Tires: 840
Waste sent to landfills (tonnes)	59,965 m ³	8,274	13,558	4,004 m ³ + 11 bins
Hazardous waste (tonnes)	82 m ³ + 1,300 pieces	5,501	5,570	0

¹ Waste recycled – same units of items collected were added up. Methodology and reporting expected to improve for 2019.



View Data Table

SIGNIFICANT SPILLS

Disclosure Components	Ambatovy ¹	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Total Sherritt
Total number of recorded significant spills ¹ (#)	1	–	–	–	1
Total volume of recorded significant spills (m ³)	Not available but met internal criteria	–	–	–	–

¹ Significant spill – spill that is included in the organization’s financial statements, for example due to resulting liabilities, or is recorded as a spill by the organization.

MM3

Total amounts of overburden, rock, tailings and sludge and their associated risks

Demonstrating Environmental Responsibility – Tailings Management – Performance



View Data Table

TOTAL AMOUNTS OF OVERBURDEN, ROCK, TAILINGS AND SLUDGE AND THEIR ASSOCIATED RISKS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Total Sherritt
Total amounts of waste rock (tonnes)	2,037,000	Not applicable	152,787	Not applicable	4,264,824
Total amounts of overburden (tonnes)		Not applicable	2,075,037	Not applicable	
Total amounts of liquid tailings and sludge (tonnes)	21,277,833	Not applicable	13,015,771	Not applicable	34,293,604

Material Topic: Environmental Compliance

103

The management approach and its components

Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation

307-1

Non-compliance with environmental laws and regulations

Demonstrating Environmental Responsibility – Water – Performance



Demonstrating Environmental Responsibility – Tailings Management – Performance

Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation – Performance

View Data Table

NON-COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate
Significant fines and non-monetary sanctions in terms of:					
Total monetary value of significant fines (millions)	-	-	-	-	-
Total number of non-monetary sanctions (#)	-	-	-	-	-
Cases brought through dispute resolution mechanisms – fines (millions)	-	-	-	-	-
Cases brought through dispute resolution mechanisms – non-monetary sanctions (#)	-	-	-	-	-

HIGH-SEVERITY ENVIRONMENTAL INCIDENTS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate
Number of high-severity environmental incidents ¹ (#)	1	-	-	-	-
Comments	<p>A leak was reported in one of the pressure release valves of the pipeline leading from the TMF to the ocean outfall.</p> <p>Local streams were contaminated with manganese above the WHO criteria of 0.4 mg/l. Drinking water supply of six villages located downstream was impacted and mitigation measures were undertaken.</p>	-	-	-	-

¹ A “high-severity environmental incident” is an incident that results in a significant or lasting effect to the environment as follows:

- Unlicensed release of >10,000 litres of hydrocarbons or toxic solution to water or ground.
- Unlicensed air emission that causes a significant off-site impact, including evacuation, damage, use impairment, illness, or other impact to neighbouring facilities or the public.
- The upset or shutdown of a community wastewater treatment facility or contamination of a drinking water supply.
- Significant wildlife fatalities (such as a fish or amphibian kill).
- Unplanned closure or restriction of public transportation routes.
- Any act triggering a subsequent investigation and/or order by a regulatory agency, other than routine follow-up.

REPORTABLE ENVIRONMENTAL INCIDENTS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Total Sherritt
Number of environmental incidents ¹ (#)	8	1	0	1	10
Comments	Air, water and ground quality related incidents. The majority were low severity with no lasting impacts.	Air quality related incident, of low severity with no lasting impacts.	–	Ground quality related incident, of medium severity with no lasting impacts.	No employees or community members were harmed while these incidents occurred or while they were addressed.
¹ A “reportable environmental incident” is a permit or licence exceedance or non-compliance for air, water or ground that requires reporting to a regulatory agency. This includes administrative non-compliance incidents.					

SOCIAL PERFORMANCE: LABOUR PRACTICES

GRI Indicator	Description	Location	SDG
Material Topic: Labour/Management Relations			
103	The management approach and its components	Providing a Safe and Rewarding Workplace – Employee Relations	

402-1

Minimum notice periods regarding operational changes

Providing a Safe and Rewarding Workplace – Employee Relations – Management Approach



View Data Table

MINIMUM NOTICE PERIODS REGARDING OPERATIONAL CHANGES

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Minimum number of weeks' notice typically provided to employees and their elected representatives prior to the implementation of significant operational changes that could substantially affect them	20 days	2 weeks (not specified in collective agreement)	2 months (standard requirement of state-run employment agency) and additional guidance provided by Cuba's Ministry of Labour and Social Security	2 months (standard requirement of state-run employment agency) and additional guidance provided by Cuba's Ministry of Labour and Social Security

MM4

Number of strikes and lock-outs exceeding one week's duration, by country

Providing a Safe and Rewarding Workplace – Employee Relations – Performance



View Data Table

NUMBER OF STRIKES AND LOCK-OUTS EXCEEDING ONE WEEK'S DURATION, BY COUNTRY

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate
Total number of strikes and lock-outs that exceeded one week's duration during the reporting period, by country	-	-	-	-	-

Material Topic: Occupational Health and Safety

103

The management approach and its components

Providing a Safe and Rewarding Workplace – Health and Safety

Providing a Safe and Rewarding Workplace – Public Safety

403-2

Types of injury and rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities

Providing a Safe and Rewarding Workplace – Health and Safety – Performance



View Data Table

TYPE OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS AND ABSENTEEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES¹

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power		Corporate	Total Sherritt
				O&G	Power		
Number of work-related fatalities							
Employees	-	-	-	-	-	-	-
Contractors and other workers	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-
Number of lost time injuries							
Employees	Data are only reported as total	-	2	-	-	-	4
Contractors and other workers		-	1	-	1	-	2
Total		2	-	3	-	1	-
Total recordable injury (TRI) index³							
Employees	Data are only reported as total	0.26	0.09	0.34	0.92	-	0.15 ²
Contractors and other workers		-	0.13	0.91	1.13	-	0.25
Total		0.12	0.21	0.10	0.50	0.96	-
Lost time injury (LTI) index							
Employees	Data are only reported as total	-	0.09	-	-	-	0.03 ²
Contractors and other workers		-	0.13	-	1.13	-	0.17
Total		0.02	-	0.10	-	0.24	-
<p>¹ All sites are applying the U.S. Occupational Safety & Health Administration (OSHA) general recording criteria. Reference Standard 29 CFR section 1904.7. The Sherritt standard is aligned to this system of rules. We did not track occupational disease rate in 2018 and we currently do not track these data by gender.</p> <p>² LTI index = # LTI * 200,000/SUM (exposure hours for the year)</p> <p>³ Minor (first-aid level) injuries are not included in TRI index.</p> <p>“Employees” include: Sherritt and GNC employees seconded to the Moa Joint Venture (100% basis); local employees of Sherritt seconded to the Ambatovy Joint Venture (100% basis) and others working at Ambatovy; employees of the entities through which the Corporation carries on its Oil & Gas business and employees of Energas.</p> <p>“Contractors and other workers” include: Contractors and other workers not included in the “Employees” category.</p>							

SI-4

Emergency preparedness

Providing a Safe and Rewarding Workplace – Public Safety – Performance



View Data Table

EMERGENCY PREPAREDNESS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power	Corporate
Sites with crisis communication plans	Y	Y	Y	Y	Y
Sites with crisis/emergency preparedness and response plans	Y	Y	Y	Y	Y

Material Topic: Diversity and Equal Opportunity

103

The management approach and its components

Providing a Safe and Rewarding Workplace – Employee Relations

405-1

Diversity of governance bodies and employees

Providing a Safe and Rewarding Workplace – Employee Relations – Performance



View Data Table

DIVERSITY OF GOVERNANCE BODIES AND EMPLOYEES

Disclosure Components	Total Sherritt
Percentage of individuals within the organization's governance bodies (board members)	
Male	75%
Female	25% ¹
Under 30 years old	–
30–50 years old	12.5%
Over 50 years old	87.5%
Minority groups ¹	Not reported
¹ Board members who self-identify as Aboriginal, as persons with a disability, or as a visible minority as defined in Canada's <i>Employment Equity Act</i> .	




Disclosure Components ¹	Canada ²	Ambatovy	Cuba
Percentage of employees			
Male	79.88%	87.4%	92%
Female	20.12%	12.6%	8%
¹ Includes Sherritt employees and Cuban local national (LN) employees.			
² Includes permanent employees for the Fort Site, OGP Calgary, and Corporate office.			


Disclosure Components ^{1,2}	Ambatovy	Oil & Gas and Power	Corporate ⁴	Metals (Fort Site only) ⁵	Commercial and Technologies
Percentage of employees					
Under 30 years old	18.02%	3.5%	7.8%	15.4%	2.8%
30–50 years old	74.95%	48.3%	60.8%	45.9%	50%
Over 50 years old	7.02%	48.3%	31.4%	38.8%	47.2%
¹ Includes Sherritt employees and Cuban local national (LN) employees.					
² Sherritt does not currently track percentage of minority groups for our divisions; however, note that local employment is the majority at all of our sites globally.					
³ Does not include Spain, consultants or LNs.					
⁴ Does not include consultants or LNs.					
⁵ Excludes Moa.					

SOCIAL PERFORMANCE: HUMAN RIGHTS

GRI Indicator	Description	Location	SDG
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Material Topic: Non-Discrimination

103	The management approach and its components	Providing a Safe and Rewarding Workplace – Employee Relations	
406-1	Incidents of discrimination and corrective actions taken	Providing a Safe and Rewarding Workplace – Employee Relations – Performance	  

[View Data Table](#) 

INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Number of incidents of discrimination on grounds of race, colour, sex, religion, political opinion, national extraction, or social origin as defined by the ILO, or other	–	5	Incidents of discrimination in Cuba are handled by the state employment agency that provides Sherritt’s businesses and joint ventures on the island-nation with workers. The employment agency will require the involvement of Sherritt and/or its joint venture partners in discrimination cases, as appropriate. Such involvement has occurred in previous years.	

Material Topic: Freedom of Association and Collective Bargaining

103	The management approach and its components	Providing a Safe and Rewarding Workplace – Employee Relations	
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407-1

Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk

Providing a Safe and Rewarding Workplace – Employee Relations – Performance



View Data Table

OPERATIONS AND SUPPLIERS IN WHICH THE RIGHT TO FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING MAY BE AT RISK

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Measures taken by the organization in the reporting period intended to support rights to exercise freedom of association and collective bargaining	Collective bargaining agreement signed and applicable since June 2018.	Unionized employees are represented by Unifor Local 530A. In April 2016, a three-year agreement came into effect.	All Cuban employees hired through national agency.	

Material Topic: Child Labour

103	The management approach and its components	Operating Ethically – Human Rights
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408-1

Operations and suppliers at significant risk for incidents of child labour

Operating Ethically – Human Rights – Management Approach

Operating Ethically – Human Rights – Performance



View Data Table

OPERATIONS AND SUPPLIERS AT SIGNIFICANT RISK FOR INCIDENTS OF CHILD LABOUR

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
<p>Measures taken by the organization in the reporting period intended to contribute to the effective abolition of child labour</p>	<p>Included in any contract clause to be signed off by any new contractor prior to start of work, and also included in the vendor audit questionnaire as a mandatory verification. Any vendor who violates this clause will be terminated immediately.</p>	<p>In Canada, the use of child labour is prohibited under labour laws. In 2018, Sherritt underwent a third-party human rights assessment, which included children’s rights.</p>		<p>In 2015, Cuba ratified the ILO’s <i>Worst Forms of Child Labour Convention</i> which calls for the prohibition and elimination of the worst forms of child labour, including slavery, trafficking, the use of children in armed conflict, the use of a child for prostitution, pornography and illicit activities (such as drug trafficking) as well as in hazardous work. Cuban legislation prohibits child labour and establishes 17 years old as the minimum age of employment.</p>

Material Topic: Security Practices

103	The management approach and its components	Providing a Safe and Rewarding Workplace – Site Security
		Providing a Safe and Rewarding Workplace – Site Security – Case Studies

410-1	Security personnel trained in human rights policies or procedures	Providing a Safe and Rewarding Workplace – Site Security – Management Approach
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[View Data Table](#)

SECURITY PERSONNEL TRAINED IN HUMAN RIGHTS POLICIES OR PROCEDURES

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Percentage of security personnel who have received formal training in the organization's human rights policies or specific procedures and their application to security	75%: Full-time 100%: Private security service providers (contractors) 100%: Government security forces	100%		Security is provided by the Cuban state and Sherritt has no authority over its training.

Material Topic: Human Rights Assessment

103	The management approach and its components	Operating Ethically – Human Rights
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412-1	Operations that have been subject to human rights reviews or impact assessments	Operating Ethically – Human Rights – Performance
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[View Data Table](#)

OPERATIONS THAT HAVE BEEN SUBJECT TO HUMAN RIGHTS REVIEWS OR IMPACT ASSESSMENTS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Total number of operations that have been subject to human rights reviews or human rights impact assessments in country	1	1	1	1
Percentage of operations that have been subject to human rights reviews or human rights impact assessments in country	100%	100%	100%	100%

SOCIAL PERFORMANCE: SOCIETY

GRI Indicator	Description	Location	SDG
Material Topic: Local Communities			
103	The management approach and its components	Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement Engaging Stakeholders and Benefitting Communities – Community Development	

413-1

Operations with local community engagement, impact assessments, and development programs

Engaging Stakeholders and Benefitting Communities – Community Development – Performance



View Data Table 

OPERATIONS WITH LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS AND DEVELOPMENT PROGRAMS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Percentage of operations with				
Implemented local community engagement, impact assessments and development programs	✓	✓	✓	✓
Social impact assessments, including gender impact assessments, based on participatory processes	✓	-	-	-
Environmental impact assessments and ongoing monitoring	✓	✓	✓	✓
Public disclosure of results of environmental and social impact assessments	✓	-	-	-
Local community development programs based on local communities' needs	✓	✓	✓	✓
Stakeholder engagement plans based on stakeholder mapping	✓	✓	✓	✓
Broad-based local community consultation committees and processes that include vulnerable groups	✓	-	-	-
Works councils, occupational health and safety committees and other employee representation bodies to deal with impacts	✓	✓	-	-
Formal local community grievance processes	✓	✓	In Cuba, there is a state-run system where citizens can file complaints against an entity, organization or enterprise whose activities they feel are adversely affecting their well-being.	
Implemented local community engagement impact assessments and development programs	✓	✓	-	-

SI-5 Number of community meetings

Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement – Performance

[View Data Table](#) 

NUMBER OF COMMUNITY MEETINGS

Disclosure Components	Ambatovy	Fort Saskatchewan	Moa Site	Oil & Gas and Power
Number of community meetings	556	38	3	12

Material Topic: Artisanal and Small-Scale Mining

MM8 Number and percentage of company operating sites where artisanal and small-scale mining takes place on, or adjacent to, the site; the associated risks and the action taken to manage and mitigate these risks


[View Data Table](#) 



NUMBER AND PERCENTAGE OF COMPANY OPERATING SITES WHERE ARTISANAL AND SMALL-SCALE MINING TAKES PLACE ON OR ADJACENT TO THE SITE; THE ASSOCIATED RISKS AND THE ACTION TAKEN TO MANAGE AND MITIGATE THESE RISKS

Disclosure Components	Ambatovy
Where ASM takes place on or adjacent to company sites, or presents risks to the company's operations	<p>Small-scale sites of artisanal gold and gemstone mining have been observed along the pipeline at Ambatovy. This activity presents certain social risks and threatens the integrity of our pipeline; however, the size and scale of this activity has been very small and the risk is low. This activity is not at all comparable with the larger-scale artisanal mining activities happening near mines in other parts of Africa and elsewhere.</p> <p>Ambatovy is working with local authorities to sensitize communities to the potential risks and dangers of these activities and to identify alternatives to enhance income and revenue. Ambatovy collaborates with authorities regarding this matter, particularly if activities impact protected areas. In 2018, Ambatovy continued to observe small-scale, intermittent exploitation; however, the risk remained very low.</p>

Material Topic: Resettlement

MM9 Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process View Data Table 



SITES WHERE RESETTLEMENTS TOOK PLACE, THE NUMBER OF HOUSEHOLDS RESETTLED IN EACH, AND HOW THEIR LIVELIHOODS WERE AFFECTED IN THE PROCESS

Disclosure Components	Ambatovy	Moa Site
Sites where resettlement of a community occurred	-	-
Number of households involved in any resettlement program	-	-
Number of individuals involved in any resettlement program	-	-
Consultation processes and measures put in place to re-establish the affected community, to mitigate any impacts of relocation, and the outcomes in terms of livelihoods, including sustainable land use	No resettlement occurred in 2018. Throughout the year, there were ongoing discussions with communities near the mine lease area about future resettlement plans. Any resettlement is done in strict adherence to the International Finance Corporation (IFC) Performance Standards, and guidelines set by Madagascar’s national regulatory body.	No resettlement occurred in 2018.
Significant disputes related to resettlement and the processes employed to resolve outstanding issues	-	-

Material Topic: Closure Planning

103 The management approach and its components Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation

MM10

Number and percentage of operations with closure plans

Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation – Performance



View Data Table

NUMBER AND PERCENTAGE OF OPERATIONS WITH CLOSURE PLANS

Disclosure Components	Units	Ambatovy	Fort Saskatchewan ¹	Moa Site	Oil & Gas and Power
Operations within the division that have closure plans	%	100	100	100	OGP sites revert to the Cuban state upon closure.
	#	1	1	1	OGP sites revert to the Cuban state upon closure.

¹ As part of the provincial operating approval, a closure plan outlining approaches on reclamation and/or remediation is required. In 2017, the Fort Site developed an appropriate plan for the site. This plan was included in the Operating Approval renewal application submitted in 2018.

Material Topic: Oil & Gas

OG1

Volume and type of estimated proven reserves and production

2018 Annual Information Form (page 22)

OG4

Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored

View Data Table



NUMBER AND PERCENTAGE OF SIGNIFICANT OPERATING SITES IN WHICH BIODIVERSITY RISK HAS BEEN ASSESSED AND MONITORED

Disclosure Components	Oil & Gas
Criteria used to define priority sites for biodiversity conservation and where significant biodiversity risk requires Biodiversity Action Plans to be in place	As regulated
Biodiversity Action Plan methodology (e.g., definitions, baseline assessments, management plans, protected areas, endemic species' habitats, endangered species)	As regulated
Report the total number and percentage of significant operating sites where biodiversity risk has been assessed	5 sites currently 100%
Number and percentage of significant operating sites exposed to significant biodiversity risk	–
Number and percentage of significant operating sites exposed to significant biodiversity risk in which Biodiversity Action Plans have been implemented and monitored	–

OG5

Volume and disposal of formation or produced water

View Data Table 



VOLUME AND DISPOSAL OF FORMATION OR PRODUCED WATER

Disclosure Components	Oil & Gas
Total volume of produced water	444,203 m ³
Volume and percentage of produced water by disposal method (including re-used, recycled, re-injected)	430,100 m ³ re-injected
Strategies and criteria for disposal and treatment, and standards used for quality of produced water discharged, including hydrocarbon and salinity	Metered
Volume of hydrocarbon discharged within produced water is not measured at this time.	

OG6

Volume of flared and vented hydrocarbon

View Data Table 



VOLUME OF FLARED AND VENTED HYDROCARBON

Disclosure Components	Oil & Gas
Volume of flared hydrocarbon	56,393 e ³ m ³
Volume of continuously flared hydrocarbon broken down by country	56,393 e ³ m ³
Volume of vented hydrocarbon	-
Volume of continuously vented hydrocarbon broken down by country	-

OG7


Amount of drilling waste and strategies for treatment and disposal

View Data Table 



AMOUNT OF DRILLING WASTE (DRILL MUD AND CUTTINGS) AND STRATEGIES FOR TREATMENT AND DISPOSAL


Disclosure Components	Oil & Gas
Total amount of drill mud and cuttings (in tonnes) produced using non-aqueous drilling fluid	Sherritt - 0 m ³ Cupet - 842 m ³
Total amount of drill mud and cuttings (in tonnes) produced using aqueous drilling fluid, by disposal method	842 m ³
Treatment, disposal and minimization strategies	Evaporation pond for liquids. Solids are reclaimed, treated and land farmed.

OG11 Number of sites that have been decommissioned and sites that are in the process of being decommissioned View Data Table 



NUMBER OF SITES THAT HAVE BEEN DECOMMISSIONED AND SITES THAT ARE IN THE PROCESS OF BEING DECOMMISSIONED

Disclosure Components	Oil & Gas
Number of sites (broken down into offshore and onshore) and total land area of sites (onshore only) for both active and inactive sites	-
Criteria for defining inactive sites	End of contract
Percentage of active sites that have decommissioning plans in place	Assets are transferred to state partner at end of contract
Decommissioning approach (e.g., plans for land owners, labour transition, finance, community infrastructure, environment remediation and government sign-off, post-decommissioning monitoring and aftercare)	Assets are transferred to state partner at end of contract
Complaints on outstanding local community issues or government notices on decommissioning	Not applicable

OG13 Number of process safety events, by business activity View Data Table 



NUMBER OF PROCESS SAFETY EVENTS, BY BUSINESS ACTIVITY

Disclosure Components	Oil & Gas
Number of Tier 1 process safety events with narrative per API RP 754 definitions and reported per business activity (refining, upstream, etc.)	None
Number of Tier 2 process safety events with narrative per API RP 754 definitions and reported per business activity (refining, upstream, etc.)	None
Report on asset integrity monitoring and maintenance program, including progress against actions identified	Yearly ultrasonic thickness (UT) program in place to test wall thickness.

UNITED NATIONS GLOBAL COMPACT (UNGC)

Please see www.unglobalcompact.org for more information on the UNGC.

UN Global Compact Principles Reference	Location/Description
<p>PRINCIPLE 1: HUMAN RIGHTS</p> <p>Businesses should support and respect the protection of internationally proclaimed human rights.</p>	<p>Operating Ethically – Human Rights</p> <p>102-41</p> <p>406-1</p> <p>410-1</p> <p>412-1</p> <p>413-1</p>
<p>PRINCIPLE 2: HUMAN RIGHTS</p> <p>Businesses should make sure that they are not complicit in human rights abuses.</p>	<p>Operating Ethically – Human Rights</p> <p>Providing a Safe and Rewarding Workplace – Site Security</p> <p>Case Study – Implementing the Voluntary Principles in Madagascar</p>
<p>PRINCIPLE 3: LABOUR</p> <p>Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.</p>	<p>Providing a Safe and Rewarding Workplace – Employee Relations</p> <p>102-41</p> <p>402-1</p> <p>407-1</p> <p>MM4</p>
<p>PRINCIPLE 4: LABOUR</p> <p>Businesses should uphold the elimination of all forms of forced and compulsory labour.</p>	<p>Operating Ethically – Business Conduct</p> <p>Providing a Safe and Rewarding Workplace – Employee Relations</p>

UN Global Compact Principles Reference	Location/Description
<p>PRINCIPLE 5: LABOUR</p> <p>Businesses should uphold the effective abolition of child labour.</p>	<p>Our Approach – Sustainability Framework – Management Systems</p> <p>Operating Ethically – Human Rights</p> <p>408-1</p> <p>Case Study – Supporting Children and Youth in Madagascar</p>
<p>PRINCIPLE 6: LABOUR</p> <p>Businesses should uphold the elimination of discrimination in respect of employment and occupation.</p>	<p>Providing a Safe and Rewarding Workplace – Employee Relations</p> <p>102-8</p> <p>202-2</p> <p>405-1</p> <p>406-1</p>
<p>PRINCIPLE 7: ENVIRONMENT</p> <p>Businesses should support a precautionary approach to environmental challenges.</p>	<p>Demonstrating Environmental Responsibility</p> <p>302-1</p> <p>303-1</p> <p>305-1</p> <p>305-2</p> <p>305-7</p> <p>MM2</p> <p>MM8</p> <p>MM10</p> <p>Case Study – Award for Excellence in Sustainable Development</p> <p>Case Study – Protecting the Smallest Inhabitants Where We Operate</p> <p>Case Study – Rehabilitation and Reclamation in Moa, Cuba</p>

UN Global Compact Principles Reference	Location/Description
<p>PRINCIPLE 8: ENVIRONMENT</p> <p>Businesses should undertake initiatives to promote greater environmental responsibility.</p>	<p>Demonstrating Environmental Responsibility</p> <p>302-1</p> <p>303-1</p> <p>304-1</p> <p>304-2</p> <p>304-3</p> <p>305-1</p> <p>305-2</p> <p>305-7</p> <p>306-3</p> <p>307-1</p> <p>MM1</p> <p>MM2</p> <p>Case Study – Award for Excellence in Sustainable Development</p> <p>Case Study – Protecting the Smallest Inhabitants Where We Operate</p> <p>Case Study – Rehabilitation and Reclamation in Moa, Cuba</p> <p>Case Study – Making Sustainability Month an Annual Tradition</p>
<p>PRINCIPLE 9: ENVIRONMENT</p> <p>Businesses should encourage the development and diffusion of environmentally friendly technologies.</p>	<p>Case Study – Clean Development Mechanism Credits in Cuba</p> <p>Case Study – Sustainable Transportation on Site</p> <p>Case Study – Ocean Cleaning as We Go in Cuba</p>
<p>PRINCIPLE 10: ANTI-CORRUPTION</p> <p>Businesses should work against corruption in all its forms, including extortion and bribery.</p>	<p>Operating Ethically – Business Conduct</p> <p>102-16</p> <p>205-2</p>

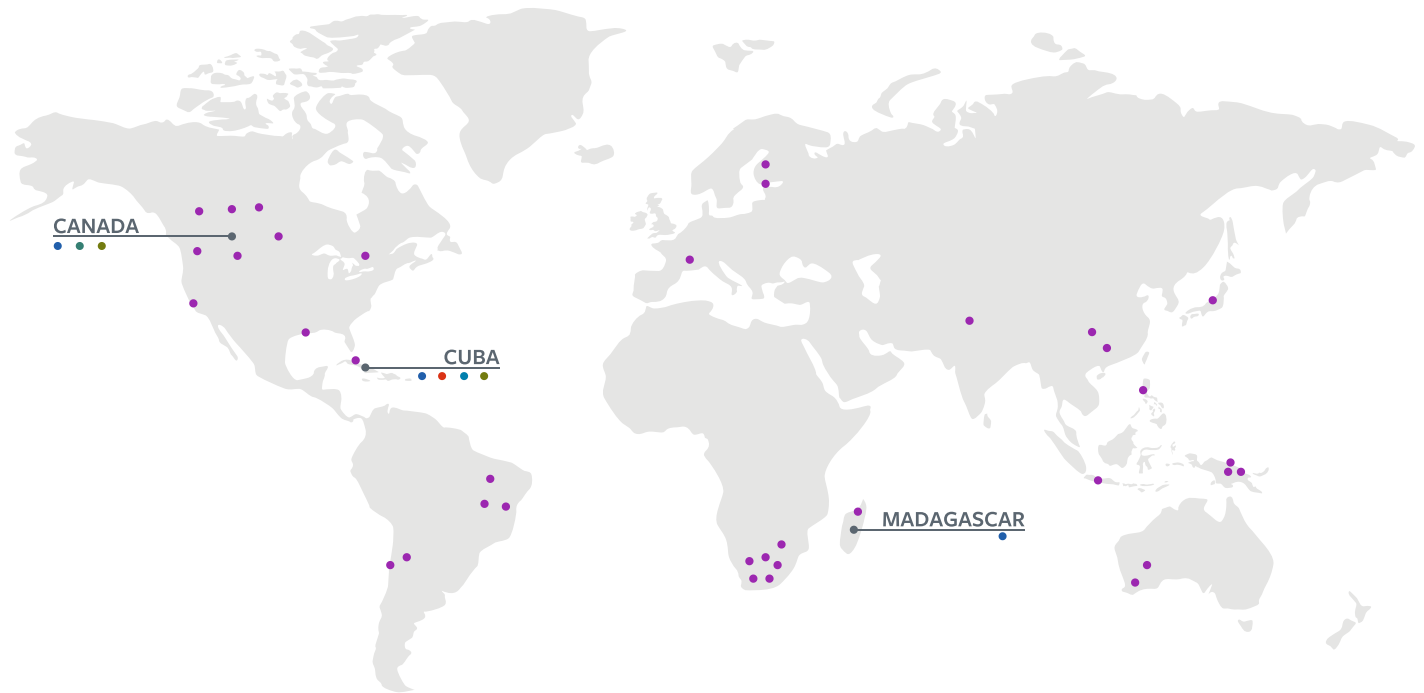
THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

Please see www.oecd.org for more information on the OECD.

OECD	Location
OECD IV. Human Rights	Operating Ethically – Human Rights
	102-41
	406-1
	410-1
OECD V. Employment and Industrial Relations	412-1
	Providing a Safe and Rewarding Workplace – Employee Relations
	102-8
	202-2
OECD VI. Environment	405-1
	Demonstrating Environmental Responsibility
	303-1
	304-3
	305-1
	305-7
	306-3
	307-1
MM1	
MM2	

OECD	Location
OECD VII. Combatting Bribery, Bribe Solicitation and Extortion	Operating Ethically – Business Conduct 205-2
OECD VIII. Consumer Interest	2018 Annual Information Form 2018 Financial Report
OECD IX. Science and Technology	About Sherritt – Divisions/Products 2018 Annual Information Form – Section 3.4
OECD X. Competition	Operating Ethically – Business Conduct 2018 Annual Information Form – Section 3.7
OECD XI. Taxation	Engaging Stakeholders and Benefitting Communities 201-1 2018 Annual Information Form – Section 3.7

MAP/DESCRIPTION



METALS	OIL & GAS
POWER	TECHNOLOGIES
OFFICES	<p>● COMMERCIAL OPERATIONS DEVELOPED WITH SHERRITT TECHNOLOGIES</p>

Incorporated in 1927 as Sherritt Gordon Mines Limited, Sherritt has deep Canadian roots; it is one of the oldest Canadian-owned metals producers still in operation. Refer to “Sherritt’s History”, below, for more information.

SHERRITT'S HISTORY – KEY DATES AND EVENTS

1927



Sherritt Gordon Mines Limited is incorporated to develop resources, principally base metals.

1930

Sherridon Development Company is formed to provide services and build the Town of Sherridon, Manitoba.

1931

Sherridon mine production begins, shipping copper concentrate to the new nearby Hudson Bay copper smelter.

1941



First significant discovery of nickel at Lynn Lake, Manitoba.

1946

Sherridon mining and milling equipment is transferred to a new nickel mine site at Lynn Lake.

1947

Sherritt begins to fund the University of British Columbia (UBC) to experiment with hydrometallurgical techniques for ore processing.

1948

UBC discovers a direct ammonia leach method that has the potential to simplify the processing of nickel concentrates.

1949

Sherritt builds a pilot plant in Ottawa to further develop the ammonia leach process.

1950

Sherritt builds a second pilot plant, incorporating the hydrogen-reduction process pioneered by Chemical Construction Corp.

1951

Sherritt provides partial funding for the Canadian National Railway (CNR) to construct a railway line from Sherridon to Lynn Lake. Sherritt builds a third pilot plant in Ottawa to finalize the design for a commercial refinery. Closure of the Sherridon mine takes place.

1952

Construction begins on the refinery at Fort Saskatchewan, Alberta. The site was chosen for its abundant supplies of water and natural gas (required to make the ammonia for the refinery), its location on the CNR line and availability of skilled labour.

1953

Ore production from the Lynn Lake mine begins and concentrate is shipped by rail from Manitoba to Alberta.

1954

Construction and start-up of the nickel refinery, including production facilities for by-product fertilizer, are completed at Fort Saskatchewan.

1955

Sherritt's research division is transferred from Ottawa to Fort Saskatchewan; pilot plant equipment is transferred to form the basis of a cobalt refinery. Inland Chemicals builds a 100 tonnes/day sulphuric acid plant to supply the Fort Saskatchewan refinery.

1957

Sherritt buys hydrometallurgical technology patents from Chemical Construction, including those used in the Moa facility, then still under construction.

1961

Sherritt develops a coinage business, starting with shipments of nickel blanks from Fort Saskatchewan's rolling mill to the Royal Canadian Mint. Within a decade, the rolling mill is producing coin blanks for multiple countries as well as commemorative medallions. Sherritt conducts its first external technologies project, developing a nickel process for Marinduque Iron Mines in the Philippines.

1962–65

Sherritt expands its ammonia plant, constructs two urea production trains (120 and 150 tonnes/day), and expands into the phosphate fertilizer business with a new phosphate plant at the Fort Saskatchewan site, using phosphate rock imported from Florida.

1967

Sherritt licenses its process for acid pressure leaching of nickel-cobalt sulphides to Outokumpo in Finland.

1968–69

Sherritt starts construction on the Fox copper mine and the Ruttan copper-zinc mine in Manitoba.

1969

Sherritt licenses its ammonia pressure leach process for nickel concentrates and mattes to Western Mining Corp. in Australia, and its acid pressure leaching process for PGM-bearing nickel-copper mattes to Impala Platinum in South Africa. Sherritt starts pilot testing its laterite leach process for the Marinduque project.

1970–73

Shipment of concentrates from the Fox mine and the Ruttan mine begins.

1974

Production begins of refined nickel from the Surigao nickel laterite project in the Philippines (the mine was on Dinagat Island and the refinery on Nonoc Island), under license from Sherritt. This is the first commercial production of refined nickel directly from laterite ores.

1976

Closure of the Lynn Lake mine takes place. Sherritt's nickel refinery becomes a toll processor. Sherritt purchases Thio-Pet Chemicals, a producer of hydrogen sulphide used in the Fort Saskatchewan refinery. Sherritt begins producing nickel-bonded steel coinage products and ultrafine cobalt powder.

1978

Sherritt produces medals and commemorative medallions for the Commonwealth Games.

1979

Sherritt presents the City of Fort Saskatchewan with a clock tower to celebrate 25 years of operation. Sherritt begins production of cobalt-samarium powder for rare-earth magnets.

1980

Sherritt debottlenecks the sulphuric acid plant to achieve a production rate of 600 tonnes/day. (Subsequent work through the 1990s/2000s results in an 800 tonnes/day operation.)

1981

The first zinc pressure leach plant, at Cominco in Trail, British Columbia, is commissioned. Other facilities follow over the next 12 years at Kidd Creek in Ontario, Ruhr-Zink in Germany and Hudson's Bay Mining and Smelting in Manitoba. New NBS coinage plant opens, increasing capacity by a factor of five. TuffStuds enters commercial production.

1982

Commissioning of Rustenburg matte leach refinery takes place in South Africa, under license from Sherritt.

1983

Sherritt commissions a new world-scale (1,000 tonnes/day ammonia, 900 tonnes/day urea) nitrogen fertilizer plant in Alberta. Impala Platinum cobalt refinery in South Africa and Kidd Creek zinc pressure leach facility in Canada are commissioned, under license from Sherritt.

1985

Fox mine closes. Sherritt creates and floats SherrGold, retaining a 60% interest. Start-up of Western Platinum matte leach refinery in South Africa occurs, under license from Sherritt.

1986

Metals refinery celebrates one billion pounds of cumulative nickel production. Start-up of SherrGold's MacLellan gold mine occurs. The Surigao nickel refinery is officially closed.

1987

The aureate-bonded nickel coinage plant opens, contracted to supply Canadian "loonie" dollar coin blanks. Sherritt acquires United Chemical Company. Ruttan mine is sold to Hudson's Bay Mining and Smelting.

1988

The company sells its interest in SherrGold and is renamed Sherritt Gordon Limited. Ultrafine copper pilot plant is commissioned.

1989

Sherritt and the governments of Alberta and Canada create Westaim, a co-operative venture designed to develop new advanced-materials technologies. NBS coinage plant capacity is doubled. Ultrafine copper commercial plant is commissioned.

1990

Major investor Ian Delaney leads a successful proxy contest for control of Sherritt.

1991

Sherritt acquires Canada Northwest Energy Limited, a Calgary-based producer of oil and natural gas. The company begins acquiring feed from a nickel mine in Moa, Cuba, for the Fort Saskatchewan refinery.

1993

Sherritt Gordon Limited is renamed Sherritt Inc. Sherritt completes an extensive refurbishment and expansion of its Fort Saskatchewan nickel and cobalt refinery to allow for efficient processing of mixed sulphides from Moa, Cuba.

1994

Sherritt acquires fertilizer assets from Imperial Oil Limited and becomes the largest producer of nitrogen and phosphate fertilizers in Canada and one of the largest fertilizer producers in the world. Sherritt extends its nickel and cobalt refining business into a vertically integrated mining/refining business in a joint venture with the General Nickel Company of Cuba.

1995

Sherritt Inc. creates Sherritt International Corporation, an independent Canadian public company. Sherritt Inc. retains the fertilizer business, Canadian oil and gas properties and the specialty metals and technology businesses.

1996

Sherritt Inc. changes its name to Viridian Inc., which merges with a wholly owned subsidiary of Agrium Inc. Sherritt International acquires certain utilities, fertilizer and other assets in Fort Saskatchewan, from which it produces and sells fertilizer, and supplies inputs and utilities to the nickel and cobalt refinery.

1997

Sherritt acquires Dynatec International Ltd. and merges it with Sherritt's metallurgical consulting business, creating Dynatec Corporation, which is spun out as a separate public company.

1998

Sherritt creates Sherritt Power Corporation, which constructs and operates power generating facilities in Cuba through a one-third ownership in Energas S.A.

2000

The Fort Saskatchewan site stops effluent discharge to the river; effluent flows to the Alberta Capital Region Wastewater Treatment Facility via the City of Fort Saskatchewan's collection system.

2001

Sherritt and a partner acquire Canada's largest coal producer, Luscar Ltd., creating the Luscar Energy Partnership.

2003

The Luscar Energy Partnership acquires the Canadian thermal coal assets of Fording Inc. The Fort Saskatchewan site's ammonium phosphate plant is converted to produce granular ammonium sulphate.

2004

Sherritt celebrates 50 years of operation at the Fort Saskatchewan refinery. Through its minority interest in Energas, Sherritt begins construction on an 85 MW expansion in Cuba.

2005

The Fort Saskatchewan refinery celebrates 2 billion pounds of cumulative nickel production. A 2 million tonne expansion of the Coal Valley mine is announced; construction is completed the next year.

2006

The Metals expansion project is initiated at Moa, Cuba. At Energas, an 85 MW power expansion is completed and a new 65 MW expansion begins.

2007

Sherritt acquires Dynatec Corporation, including its 40% ownership in the Ambatovy Nickel Project. Sherritt Technologies is formed, including the former Dynatec Metallurgical Technologies operations, to utilize and license the Corporation's 50-plus years of hydrometallurgical research, development and commercial process implementation. The 65 MW power expansion is completed in Cuba.

2008

The 150 MW power expansion at Boca de Jaruco in Cuba commences. Sherritt suspends expansion activities due to the global financial crisis.

2011

Construction at Ambatovy is completed.

2012

Production of finished nickel and cobalt commences at Ambatovy.

2014

Sherritt achieves commercial production at Ambatovy. Sherritt sells its coal business.

2015

Sherritt achieves a production test milestone (running at 90% capacity for 90 straight days) and financial completion at Ambatovy.

2017

Sherritt celebrates 90 years in business in Canada.

DIVISIONS/PRODUCTS

Over the course of 2018, Sherritt had three operating divisions, as well as a corporate office and a commercial and technologies group. These operations are accounted for in our financial and sustainability reporting.

Entity	Operations, Products and Markets
Metals	<ul style="list-style-type: none"> • Ambatovy Joint Venture in Madagascar (12% ownership and operator) – nickel and cobalt mining, processing and refining for international markets. Watch this video to learn more about the Ambatovy operation. • Moa Joint Venture (50% ownership) <ul style="list-style-type: none"> ◦ Moa, Cuba – nickel and cobalt mining and processing. ◦ Fort Saskatchewan, Alberta, Canada – nickel and cobalt refining for international markets. • Fort Saskatchewan (100% ownership) – ammonia, sulphuric acid and utilities for the Moa Joint Venture’s nickel and cobalt production, and ammonium sulphate fertilizer (a by-product of nickel and cobalt production) for the western Canadian market. Watch this video to learn more about the Fort Saskatchewan operation.
Oil & Gas	<ul style="list-style-type: none"> • Oil & Gas in Cuba (100% ownership) – exploration and production for Cuba’s energy needs.
Power	<ul style="list-style-type: none"> • Energas, S.A. in Cuba (33.3% ownership) – electricity production from natural gas for Cuba’s electricity needs.
Corporate and Technologies	<ul style="list-style-type: none"> • Corporate Office in Toronto – corporate administration and management. • Technologies – provides technical support, marketing and bulk commodity procurement services to Sherritt’s operating divisions and identifies opportunities for the Corporation as a result of its international activities and research and development activities.

A more detailed overview of our business and corporate structure can be found in our 2018 Annual Information Form. Sherritt now has a 12% interest in the Ambatovy Joint Venture. Subject to the terms of the Ambatovy Operating Agreement and the direction of the Ambatovy Executive Committee, Sherritt is the operator of the mine and refining facilities and has as its principal partners Sumitomo Corporation (Sumitomo) and Korea Resources Corporation (KORES). Sherritt’s 2018 Sustainability Report includes Ambatovy’s management approaches and performance. In future years, stakeholders may expect a transition in reporting scope that is related to the financial and operational materiality of Ambatovy to Sherritt International Corporation.

In this report, references to “we” or “Sherritt” are to Sherritt International Corporation together with its subsidiaries and joint ventures, and our management approaches and performance are subject to and in accordance with the terms of our joint venture and operating agreements, and include approaches taken by Sherritt International Corporation and the boards, executive committees and management of our subsidiaries and joint ventures.

2018 KEY INDICATORS

Financial

(CDN \$ millions, except per share data, as at December 31)	2018	Change
Combined revenue ⁽¹⁾	\$701.9	(23)%
Adjusted EBITDA ⁽¹⁾	\$144.2	(4)%
Combined free cash flow ⁽¹⁾	\$(7.5)	88%
Net earnings (loss) from the period	\$(64.2)	(122)%
Net loss from continuing operations per share	\$(0.21)	(120)%
Cash, cash equivalents and short-term investments	\$207.0	2%

¹ For additional information, please see the Non-GAAP Measures section of the Management's Discussion and Analysis in our 2018 Financial Statements.

Production

- Nickel: 63,893 tonnes (100% basis)
- Cobalt: 6,086 tonnes (100% basis)
- Oil: 4,839 barrels of oil equivalent per day
- Electricity: 781 gigawatt hours (33 1/3% basis)

People

- Full- and part-time employees and permanent contractors: 6,942 (including the Cuban workforce at Moa)
- Temporary workforce: 6,360 (mainly long-term suppliers working at Ambatovy)

OUR SUPPLY CHAIN

Sherritt is thinking more and more about what it means to “supply a sustainable future” and the role commodities play in manufacturing and consumer products. Like most commodity producers, we play the role of a value-adding producer in a long supply chain. We require significant goods and services as inputs (the upstream supply chain) to develop bulk products, which we sell to customers that produce finished products for consumers (the downstream supply chain).

As the table below demonstrates, many of our products contribute materially to global sustainable development. For instance, we provide energy to the Cuban people, we produce fertilizer for agricultural development, and our high-quality metals are used in clean-technology infrastructure and products such as alloys for renewable power applications, batteries for electric and hybrid electric vehicles, buildings, airplanes, household goods and appliances, medical devices and much more. For more information on how nickel is used in society, visit the Nickel Institute’s website.

Business	Key Inputs	Sherritt’s Contribution	Key Customers
Metals	Energy products, sulphuric acid, sulphur, limestone, engineering/technical expertise	Mining, processing and refining to produce finished nickel and cobalt and a fertilizer by-product	<ul style="list-style-type: none"> • Car-component manufacturers • Steel producers • Battery producers • Agricultural producers
Oil & Gas	Current technological drilling practices	Drilling and extraction of oil	<ul style="list-style-type: none"> • CUPET, Cuba’s national oil company, for national energy needs
Power	Raw natural gas	Processing of gas to produce electricity and by-products, such as condensate and liquefied petroleum gas	<ul style="list-style-type: none"> • UNE, Cuba’s electricity utility, for the national grid • CUPET, for industrial processes and domestic needs

Refer to Operating Ethically for a description of how Sherritt applies anti-corruption and human rights requirements to its supply chain.

ABOUT THIS REPORT

This report describes our sustainability performance for the calendar year January 1, 2018 through December 31, 2018. We report on an annual basis, with any material sustainability information included in our quarterly disclosures through the course of the year.

We have structured this report to align with our Sustainability Framework. For each pillar, we disclose our management approach and performance in relation to our material issues. This report was prepared in accordance with the Global Reporting Initiative's Standards (Core option). A full Global Reporting Initiative index and performance table can be found here.

The 2018 Sustainability Report has not been externally assured.

To contact Sherritt regarding our sustainability performance, email sustainability@sherritt.com

