

sherritt

2012
SUSTAINABILITY
REPORT



Our Sustainability Commitment

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.

Learn more about our [Sustainability Framework](#)



Safe and Rewarding Workplace

Sherritt's global workforce is expanding as we transition development projects to mine operations. Embedding a strong health and safety culture is a top priority.

Learn more about [Safe and Rewarding Workplace](#)



Operating Ethically

Our current areas of focus are human rights and anti-corruption, where we are strengthening policies, procedures, training and supplier requirements.

Learn more about [Operating Ethically](#)



Environmental Responsibility

Sherritt is a leader in biodiversity initiatives at greenfield sites. At the Ambatovy Joint Venture in Madagascar, we invest more than US\$1 million annually in biodiversity conservation.

Learn more about [Environmental Responsibility](#)



Engaging Stakeholders and Benefitting Communities

At the Sulawesi nickel project in Indonesia, we established village committees to encourage community participation during early-stage exploration.

Learn more about [Engaging Stakeholders and Benefitting Communities](#)

Learn more about Sherritt's [Sustainability Performance](#).

Approach

In 2012, we developed the Sherritt sustainability framework to provide a more focused and practical approach to prioritizing, managing and measuring sustainability performance.

Learn more about our [Key Sustainability Priorities](#)

Sustainability Framework

Our framework consists of a core commitment to sustainability and a series of issue-specific commitments, which are supported by management systems with policies, procedures and processes to guide planning, implementation, measurement, reporting and assurance of sustainability efforts across Sherritt.

Sustainability Commitment

Sherritt 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.

Providing a Safe and Rewarding Workplace

Health and Safety

Commit to zero harm: zero fatalities, injuries, and work-related illnesses among employees and contractors.

Public Safety

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

Rewarding Workplace

Provide a rewarding workplace that engages and develops our 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 all 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 practice 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 impact; 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 enduring relationships based on mutual trust, respect and transparency.

Transparency

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

Community Benefits

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

About Sherritt

Sherritt is a world leader in the mining and refining of nickel from lateritic ores, with projects and operations in Canada, Cuba, Indonesia and Madagascar. The Corporation is the largest thermal coal producer in Canada and 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 mining and refining operations worldwide. The Corporation's common shares are listed on the Toronto Stock Exchange under the symbol "S".

Divisions

Through its operating divisions – **Metals, Coal, Oil and Gas**, and **Power** – and the **Technologies group**, Sherritt has a presence in Canada, Cuba, Madagascar and Indonesia, as well as a non-operating interest in assets in Pakistan and Spain.

- Metals produces nickel and cobalt for international markets, and fertilizer for agricultural operations in Canada and internationally.
- Most of Coal's production comes from our Prairie Operations, whose mines are located adjacent to the electric power plants they supply in Western Canada. Some higher-grade coal is produced at our Mountain Operations in the foothills of Alberta and transported by train to Canada's Pacific coast for shipment to international markets.
- Oil that Sherritt produces in Cuba is sold to the Cuban state. Cuba's national oil company provides gas to the Energas Joint Venture (a Cuban joint venture equally held by Sherritt's Power Division, Cuba's national oil company and Cuba's national electricity agency), which produces electricity that is sold to the Cuban state.
- Technologies supports Sherritt projects and operations, provides project evaluations, feasibility studies and process-demonstration test work to other companies. It also licenses its commercially proven technologies to mining sites around the world.

Locations

Canada

Coal

- Coal Valley, Alberta
- Genesee, Alberta¹
- Highvale, Alberta²
- Obed Mountain, Alberta
- Paintearth, Alberta
- Sheerness, Alberta
- Whitewood, Alberta²
- Bienfait, Saskatchewan (mine, Char plant and Activated Carbon Joint Venture)
- Boundary Dam, Saskatchewan
- Poplar River, Saskatchewan

Metals

- Moa Joint Venture, Fort Saskatchewan, Alberta (refinery and office)

Technologies

- Fort Saskatchewan, Alberta (laboratories and office)

Offices

- Toronto, Ontario (Corporate)
 - Edmonton, Alberta (Coal)
 - Calgary, Alberta (Oil and Gas and Power)
-

¹ Sherritt owns 50% of the equipment and facilities at Genesee. Sherritt is responsible for all equipment operation and maintenance.

² In 2012, Highvale mine was operated by Sherritt on a contract basis. Production at Whitewood ceased in the second quarter of 2010, with reclamation activities continuing. In January 2013, Sherritt and the owner of Highvale and Whitewood mines reached an agreement to return both operations to owner control.

Cuba

Metals

- Moa Joint Venture, Cuba (mine)

Power

- Boca de Jaruco, Cuba
- Puerto Escondido, Cuba
- Varadero, Cuba

Oil

- Cuba, various sites

Office

- Havana, Cuba (Corporate)

Spain

Oil

- Spain, various sites (Sherritt does not operate these assets)

Pakistan

Oil

- Pakistan, various sites (Sherritt does not operate these assets)

Madagascar

Metals

- Ambatovy Joint Venture, Madagascar

Energy

- Ambohimambola II, Madagascar³

³ The Ambohimambola II generating station in Madagascar is leased to Madagascar's national electricity company.

Indonesia

Metals

- Sulawesi Project, Indonesia (nickel exploration project)

Our Workforce

In 2012, Sherritt employed, directly or through a subsidiary or affiliate, almost 8,600 people on a permanent basis. This was an increase of approximately 12% over 2011 and was largely due to the Ambatovy JV's growing personnel requirements for operations. We also supported the employment of over 6,200 people working for contractors (97% of those at the Ambatovy JV) for a total workforce of over 14,800 people. The total number of contracted workers in 2012 decreased by almost 4,800 compared to 2011, reflecting Ambatovy's continued transition from the contractor-heavy construction phase to an operations phase that requires a smaller but longer-term workforce.

Sixty-one percent of Sherritt's Canadian workforce is represented by seven separate bargaining units. These include workers in both our Metals and Coal Divisions.

In Cuba, Sherritt hires its employees from the state in a similar fashion to contracted workers. In our reporting, we include them as Sherritt employees because they work full-time at our facilities under our direct supervision. Over 95% of our Cuban workers are represented by unions that are affiliated with Cuba's political party structure at the local, provincial and national levels.

Local workers in Madagascar are not unionized, but 100% are represented by the employee worker delegates and Employee Work Council, which are two independent organizations that function in similar ways to unions:

- The employee worker delegates are elected personnel who have a legal mandate to raise and solve, with management, individual and/or collective grievances that arise from the workplace.
- The Employee Work Council is formed from elected personnel, whose legal mandate is to be informed or consulted by management on general issues relating to work, including technology development, work conditions, work-time organization, professional qualification and classification, and compensation programs.

These two organizations provide workers with an active oversight of grievances, working conditions, compensation and professional development to ensure their rights are protected at Ambatovy in ways similar to those in the North American collective-bargaining process.

The Sulawesi Project in Indonesia is still at a very early stage of development. It has a very small staff, mostly composed of professional experts. For this reason, it is still too early to consider collective bargaining.

Additional information about the Corporation and its products can be found in our 2012 Annual Information Form available at www.sedar.com or on our website.

Key Sustainability Priorities

Priority	2012 Progress	Future Focus
Build on Sherritt's history of operating responsibly to develop a corporate-wide sustainability culture and management approach	<ul style="list-style-type: none"> Developed Sherritt's sustainability framework with input from cross-divisional and cross-functional consultations, leveraging long-standing practices and experience 	<ul style="list-style-type: none"> Build awareness and understanding of the framework among employees and external stakeholders Strengthen internal and external sustainability networks
Integrate sustainability into business processes	<ul style="list-style-type: none"> Assessed business risks and opportunities, along with stakeholder concerns, to identify material sustainability issues for Sherritt (to develop the framework) 	<ul style="list-style-type: none"> Create strong linkages between the sustainability framework and risk management, long-term planning and strategic initiatives for Sherritt's divisions and corporate functions
Embed sustainability into the highest levels of our corporate structure and into Board governance	<ul style="list-style-type: none"> Created executive-level position of Senior Vice President, responsible for developing and executing Sherritt's sustainability agenda Expanded mandate of the Board's Environment, Health and Safety Committee to include Sustainability 	<ul style="list-style-type: none"> Continuously improve internal reporting on sustainability performance to support oversight and governance
Align sustainability guidance with leading practices	<ul style="list-style-type: none"> Aligned the framework with standards from the natural resources industry, lending institutions, global transparency and human rights initiatives, and our peers 	<ul style="list-style-type: none"> Embed key elements of the Mining Association of Canada's Towards Sustainable Mining initiative and the Voluntary Principles on Security and Human Rights into sustainability guidance and management systems Incorporate leading practices from particular Sherritt divisions into corporate-wide guidance

Learn more about specific sustainability priorities relating to the [workplace](#), [ethics](#), [the environment](#) and [stakeholders](#).

Framework Development

Our new sustainability framework guides the prioritization, management and measurement of sustainability performance. It is designed to embody and address the following considerations:



Sherritt's sustainability framework was designed to address the sustainability issues most material to the achievement of the Corporation's goals and future business needs. To develop the framework, we undertook a structured materiality assessment. Information on the materiality process can be found in the [Materiality](#) section.

Drawing on this materiality assessment and a review of current and emerging sustainability standards from around the world, we developed commitment statements to address each material issue. The resulting sustainability framework was reviewed, refined and approved through a process involving executive team meetings, workshops with divisions and departments, and cross-divisional subcommittees to consider specific issues.

The framework provides a comprehensive set of commitments describing how we manage sustainability issues. Starting in 2013, the framework will be rolled out and embedded across the business. This will include working with each division to develop goals, targets, key performance indicators and action plans to manage and measure our performance in each commitment area.

The sustainability framework is not considered to be a static document. While designed to shape our long-term performance, the issue-specific commitments will be reassessed periodically as our business and performance expectations evolve.

Materiality

In 2012, we identified Sherritt's material sustainability issues during the development of our sustainability framework.

Our process began by identifying a list of sustainability issues important to our business. We generated this list by reviewing our corporate documents and processes (e.g., risk registers, management systems, corporate policies, codes and sustainability initiatives) and by conducting a review of current and emerging sustainability issues facing the natural resources sector, as identified in peer company sustainability reports and international sustainability standards and initiatives.

A materiality assessment was completed by analyzing each issue based on two criteria: level of expected business impact and degree of stakeholder interest. Expected business impact was analyzed in a facilitated workshop involving a task force of employees with experience in managing a range of issues across Sherritt's divisions. Stakeholder interest was analyzed based on publicly available information on stakeholder priorities and viewpoints in categories, including media, investors, non-governmental organizations and Aboriginal peoples. (A broad list of our stakeholders can be found [here](#).) Both business impact and stakeholder interest were rated using a qualitative four-point scale.

The issues with the highest combined ranking of expected business impact and stakeholder interest were characterized as "material" for Sherritt and became the focus for the development of the sustainability framework. As the framework is introduced, used and enhanced, the issues will be reviewed regularly to ensure emerging issues are properly identified in a timely manner.

Sherritt's most material sustainability issues were identified and addressed in the individual commitments in the [sustainability framework](#).

Governance

Sherritt's Board of Directors includes an Environment, Health, Safety and Sustainability (EHS&S) Committee, which assists the Board in its oversight of environment, health and safety (EH&S) and sustainability issues. (The pre-existing EH&S Committee was expanded in 2012 to include sustainability.) The [mandate](#) of the EHS&S Committee can be found on our website.

Corporate-level oversight of EHS&S functions is provided by the Corporate Affairs and Sustainability Department (CA&S) and the Corporate Director of EH&S.

CA&S is led by a Senior Vice President, who informs the Corporation and the Board on matters of government relations and sustainability. The Senior Vice President, CA&S participates in EHS&S Committee meetings to speak to issues around Sherritt's relations with the governments of the jurisdictions where we operate or have an interest; as well as any issues pertaining to the communities around our projects and operations, and specific interest groups or stakeholders with whom Sherritt engages. Functionally, the Senior Vice President, CA&S is responsible for managing key government and stakeholder relationships, as well as coordinating the development, implementation and integration of Sherritt's sustainability commitments and related management systems.

The Corporate Director, EH&S has direct accountability to the EHS&S Committee of the Board. This individual informs the Board of health and safety results, any environmental concerns and other related material issues within the divisions each quarter. Functionally, the Corporate Director, EH&S coordinates company-wide reporting with EH&S management within each division, ensuring that Sherritt's EH&S policies are properly reflected in all divisions. The Corporate Director is also responsible for ensuring that the Corporation is aware of the current and potential regulatory issues pertaining to the environment that may have an impact on Sherritt's operations.

Division leaders participate in EHS&S Committee meetings alongside the Senior Vice President, CA&S and Corporate Director, EH&S to provide insight into on-the-ground EHS&S issues. This approach gives the committee direct access to EHS&S information at both the operating and corporate levels of the organization.

Risk Management

Each of Sherritt's operations manages a variety of local risks to achieve an acceptable level of overall business risk. Some of these risks are associated with EHS&S activities. Sherritt recognizes the inherent risks associated with working in the natural resources sector and works to minimize them by adhering to a defined set of policies and procedures.

The Board's [Audit Committee](#) reviews financial and non-financial information regarding the Corporation and its operations. A key tool used by the Board in its oversight is the Risk Assessment (RA) Report, which is compiled annually. The RA Report provides a comprehensive review of the business and the strategic risks facing the Corporation. This review includes an assessment of current and potential risks and indicates a level of concern for each, based on the likelihood of occurrence and the severity of impact.

Risks assessed or accounted for include those associated with commodity markets, project development, transportation, political and economic impacts, financial changes, technologies, access to resources and availability of required workers. A range of risks associated with different stakeholders is included, as are governance, security and operational issues.

Board governance and risk management play a key role in addressing sustainability issues. Please visit Sherritt's [website](#) or www.sedar.com for additional information on the corporate governance practices and organization of our Board of Directors and an extensive discussion of our risks.

About This Report

Our 2012 Sustainability Report is a full report on Sherritt’s sustainability performance during the past year (our previous full report covered 2010; and for 2011, we issued a summary report with updated data). The 2012 report focuses on key areas of interest for Sherritt’s stakeholders – namely, our workplace, ethics, the environment and our communities.

Our Stakeholders

Sherritt’s stakeholders include current and prospective employees and their representatives, shareholders, the financial community where we raise capital, communities that support our operations, various levels of government in our operating jurisdictions, partners with whom we work and customers. Stakeholders also include others who may have an interest in Sherritt, such as the media, investment analysts and various local, national and international non-governmental organizations.



Report Structure and Scope

The report is now organized around the overarching and issue-specific commitments outlined in our sustainability framework, representing a further development of our reporting process.

The framework is founded on a set of commitments that Sherritt is working towards and, as such, the full rollout and development of goals, targets and key performance indicators is still underway. Sherritt’s approach to reporting will continue to evolve as the framework is integrated across our operations.

The report includes information on parts of the Corporation over which Sherritt has operational control in Canada, Cuba and Madagascar, as well as relevant activities at our exploration project in Indonesia. All information on joint ventures (JVs) or partnerships is provided on a 100% ownership basis. No adjustment is made for percentage of ownership. For the purposes of this report, we have provided general information by division within the sustainability framework’s structure. Where possible, we have reported separately on major operating JVs to provide a more complete picture of progress at our operations.

Significant Changes during the Reporting Period

To fully recognize the significance of the end of commissioning and start of operations at the Ambatovy JV, it is important to take into consideration the following 2012 events, which had an impact on our sustainability performance:

- On April 4, 2012, the Corporation announced that all of the systems in the high-pressure acid leach area at the Ambatovy JV were either in operation or start-up.
- On September 13, 2012, the Corporation announced that the JV had received a six-month authorization to commercially operate its processing plant while the Government of Madagascar conducted a review of the processing plant. Subsequently, on March 12, 2013, the Minister of Mines confirmed Ambatovy's right to continue operating in accordance with the Operating Permit.
- In September 2012, the Ambatovy JV produced its first finished nickel and cobalt briquettes from the refinery.

Message from the President and Chief Executive Officer

Sustainability at Sherritt means operating responsibly and doing things the right way. This principle has always guided our company and is embedded in our approach to safety, the environment, governance, and stakeholder engagement. It also drives long-term value by contributing to sound risk management, positioning Sherritt for future growth and promoting continuous improvement across our company.

In 2012, we took three important steps to ensure that our structure and standards reflect our commitment to sustainability. At the Board level, we amended the mandate of the Environment, Health & Safety Committee to include broader oversight of sustainability concerns. At the executive level, we created a new Senior Vice President position responsible for sustainability, reporting directly to me. Lastly, we established a sustainability framework through a process of intensive consultations with internal and external stakeholders. The framework provides clarity on our commitments in sustainability areas and sets a foundation for demonstrating how we operate responsibly and measure performance.

The commissioning and start-up last year of our Ambatovy nickel and cobalt operation in Madagascar was an important achievement for Sherritt. It has become a reference point for how major mining operations can be built successfully in jurisdictions with unique challenges. Our approach to responsible environmental management and our local employment and procurement programs have played a major role in realizing shared benefits in Madagascar.

Safety requires relentless vigilance and remains our top priority. We aim to ensure that every person working at a Sherritt site returns home safely at the end of each day. Our injury rate across the company remained low in 2012. Our Paintearth mine in Alberta was again awarded the John T. Ryan Trophy as the safest coal mine in Canada. Despite such achievements, we suffered four separate work-related fatalities during the year. The loss of any worker is tragic and calls for immediate action. In each instance we have implemented corrective measures to prevent recurrence, and are reviewing our health and safety systems across our company to reinforce safe behaviour and consistent practices.

Sherritt is committed to demonstrating environmental responsibility at all of its projects and operations. Collaborating with local and international organizations involved in conservation has given us the opportunity to contribute to the advancement of scientific knowledge and leading practices. Our pilot project with the Business and Biodiversity Offsets Programme is helping to develop improved systems for biodiversity management in the natural resources sector, which can also be applied in other industries. In 2012, the California Academy of Sciences recognized our environmental stewardship by including the word "Ambatovy" in the name of a new species of ant discovered in our mine conservation zone in Madagascar.

Sherritt provides a rewarding workplace that engages and develops our employees. In 2012, we began the implementation of initiatives stemming from our most recent employee engagement survey. Additional groups of managers completed the company-wide leadership training program, and we started the Sherritt Accelerated Rotation Program, which gives recently hired engineers opportunities to learn across all of our businesses.

We also recognize that developing and maintaining harmonious and respectful relationships with our community partners is critical to the success of our operations. We maintain transparent and active relations with key local stakeholders and partners to further our mutual interests in areas such as public safety, community investment and emergency planning and response. In 2012, Sherritt provided equipment, materials and funding to assist with recovery efforts in Cuba and Madagascar after major storms struck both countries.



David V. Pathe

I want to thank our employees and all others who contributed to our sustainability performance last year. In 2013, we will build upon our achievements and lessons learned through continuous improvements to chart our future growth as a responsible natural resources company.

A handwritten signature in black ink, appearing to read 'David V. Pathe', with a long horizontal stroke extending to the right.

David V. Pathe

President and Chief Executive Officer
Sherritt International Corporation

Safe and Rewarding Workplace

Sherritt's operations are built upon a culture of health and safety. We strive to ensure that every employee returns home from work safely. We endeavour to minimize risks and communicate them to communities around our facilities.

[Learn more about our Management Approach](#)



Health and Safety

We are committed to zero harm. Zero harm means zero fatalities, no injuries and no work-related illnesses among employees and contractors.

[Learn more about Health and Safety](#)



Public Safety

We maintain public safety around our sites through effective risk management, active communications and ongoing community engagement.

[Learn more about Public Safety](#)



Rewarding Workplace

We provide a rewarding workplace that engages and develops our workforce, compensates employees competitively, and offers them exposure to world-class operations, projects, processes and people.

[Learn more about Rewarding Workplace](#)

For 2012 performance data, see Workplace Indicators.

Management Approach

Sherritt’s operations are built upon a culture of health and safety. We strive to ensure that every employee returns home from work safely. We endeavour to minimize risks and communicate them to communities around our facilities.

Building on our Operations Integrity Management System and the strong health and safety (H&S) management systems and practices in each of our divisions, Sherritt is in the process of strengthening its corporate-wide H&S management system. This system will provide greater consistency across our operations and continue to drive H&S performance improvement. We will increase our use of leading H&S performance indicators to reflect our focus on prevention and leadership.

Our corporate H&S management system will draw on the frameworks established in recognized international standards, including the [International Organization for Standardization \(ISO\) 14001](#) and [Occupational Health and Safety Assessment Series \(OHSAS\) 18001](#). In addition, we will strengthen our alignment with the management practices and standards established within the [Mining Association of Canada’s Towards Sustainable Mining program](#) and the [Chemical Industry Association of Canada’s Responsible Care Codes of Practice](#) related to community safety.

Sherritt is proud of the team we have in place across the Corporation, and we want to ensure our employees continue to find Sherritt to be a rewarding place to work – one that considers their well-being and professional development. To that end, we are continuing to address the opportunities identified in the most recent employee engagement survey. Sherritt is committed to investing in our people through targeted training. Our training program is addressing specific requirements related to our sustainability commitments, such as anti-corruption training. We have also embedded sustainability considerations in our leadership training program, which is being rolled out to a wide group of leaders from across the Corporation.

Workplace Priorities

Priority	2012 Progress	Future Focus
Establish a corporate health and safety (H&S) management system	<ul style="list-style-type: none"> Identified key H&S risks and opportunities for improvement across Sherritt 	<ul style="list-style-type: none"> Increase use of leading indicators for management and reporting Improve corporate-wide consistency of H&S practices Align management system with leading process and practices
Strengthen management of public safety at projects and operations	<ul style="list-style-type: none"> Conducted a public safety risk assessment of all sites Established an Industrial Risk Committee at Ambatovy, composed of community members and industry, for emergency response planning 	<ul style="list-style-type: none"> Implement improvements at all sites to minimize identified risks Apply effective practices that are already in place at particular sites across Sherritt
Address priorities and gaps identified in the latest employee engagement survey	<ul style="list-style-type: none"> Enhanced employee leadership training Implemented the Sherritt Accelerated Rotation Program (SHARP) for engineering graduates Increased number of CEO town halls and small group meetings 	<ul style="list-style-type: none"> Increase internal communications on employee engagement initiatives and progress Develop and roll out Sherritt’s operating principles and employee value proposition Conduct a follow-up engagement survey in 2014

Health and Safety

Sherritt's operations are built upon a culture of health and safety (H&S). We strive to ensure that every employee returns home from work safely. Our H&S culture is supported by an established Operations Integrity Management System, which is based on 10 key elements for environmental and H&S management. H&S issues are managed through systems for incident investigation, hazard identification and control, contractor management, maintenance of safeguards and follow-up assessments. Going forward, we will enhance our H&S management systems with a focus on leadership and prevention.

In 2012, Sherritt's 12-month rolling average lost-time injury (LTI) and total recordable injury (TRI) indices stood at 0.17 and 0.38 respectively, compared to 0.05 and 0.33 in 2011. Comparisons of LTI and TRI performance with peer resource companies and industry benchmarks, such as [Ontario's Workplace Safety North](#) and the [U.S. Mine Safety & Health Administration](#), continue to be favourable. Nevertheless, Sherritt is driving continuous improvement through the deployment of aggressive health targets and innovative management systems.

Despite several years of leading performance, we are saddened to report that there were four work-related fatalities in 2012. All four occurred at the Ambatovy Joint Venture (Ambatovy JV), and three of the four involved individuals employed by contractors. These incidents represent a deviation from our usual performance levels. Management takes these incidents seriously and has been directly involved in the investigations and the development of corrective and preventive action plans.

Metals

Moa Joint Venture (Moa JV)

In 2012, the Moa JV did not achieve its targeted safety performance at either site in Fort Saskatchewan, Alberta or Moa, Cuba. In response, the JV refocused on training, instituting additional programs, reviewing and updating general work procedures, and increasing supervision of on-site work.

The Fort Saskatchewan site increased leading-indicator activities, such as inspections, regulatory and leadership development training, and communication on standards of care and expectations for safety compliance and stewardship. In 2012, over 1,000 safety system inspections were conducted by site-based leaders, providing immediate feedback on in-progress work for the purpose of continuous improvement of site safety systems and the evaluation of compliance to systems, policies and procedures.

In June 2012, the Fort Saskatchewan site achieved 3.4 million hours without a lost-time injury for employees and contractors combined.

In October 2012, an external annual audit was conducted on the Fort Saskatchewan site's Basic Safety Program. The results confirmed that the safety system is mature and that all the critical elements are in place; as such, the site's Certificate of Recognition was renewed. Each year, the Basic Safety Program is audited by an external expert, using the [Alberta Association for Safety Partnerships](#) protocol.

Ambatovy Joint Venture (Ambatovy JV)

Our Ambatovy JV made significant strides following the rollout of its "zero lost time" policy in developing a proactive safety culture and it launched a number of initiatives to ensure continued success. The JV takes great pride in maintaining a TRI below 0.60 during the year.

Despite these efforts, there were four fatalities in 2012. To prevent such tragedies from occurring in the future, corrective measures were taken, such as: the installation of more mechanical safety features; implementation of policies to restrict access to certain high-risk areas; reinforced safe work practices and daily personal risk assessments; and increased specialized training, where appropriate.

The Ambatovy JV implemented a number of new activities and processes with the principle of safety in mind. The first Safety Day was held for all employees and contractors to ensure they are putting safety first and to reinforce the importance of safety. Safety awareness sessions are conducted with employees and contractors at the start of each workday. A campaign was established to identify risks associated with all tasks prior to starting a job each day. At the plant site, an H&S representatives program was launched in which workers coach each other on how to follow H&S rules and procedures. These activities help to prevent incidents in the workplace and reinforce a strong safety culture.

To ensure that safety measures are followed, all new employees complete an H&S induction and mandatory specialized training prior to starting their work. Ambatovy also provided workers with a complete health-and-safety training program and 24 emergency exercises during the year.

Safety training has been followed up with several risk management initiatives, such as quarterly risk reviews and an on-site office dedicated to inspecting, maintaining and calibrating industrial hygiene, fall protection and breathing assistance equipment. In addition, new quantitative-based risk assessments supplemented routine assessments; a change-management process was implemented to ensure that new installations and/or significant modifications comply with Sherritt and Ambatovy JV standards; an easy-access information management system was launched for records of related equipment additions and changes; and a safety review procedure was implemented for training relevant personnel on new initiatives.

As part of its overall safety program, the Ambatovy JV carried out 15 safety audits among major contractors, and qualified Ambatovy staff conducted 5,800 inspections and more than 1,000 "Permit to Work" audits in 2012. In collaboration with an external consultant, the JV conducted a pre-qualification audit on [Occupational Health and Safety Assessment Series \(OHSAS\) 18001](#) – the highest international standard for occupational health and safety. The pre-qualification audit showed that the Ambatovy JV's management system is well aligned with the requirements and made additional recommendations, which the JV is in the process of implementing. Upon completion, the Ambatovy JV will apply for OHSAS 18001 certification.

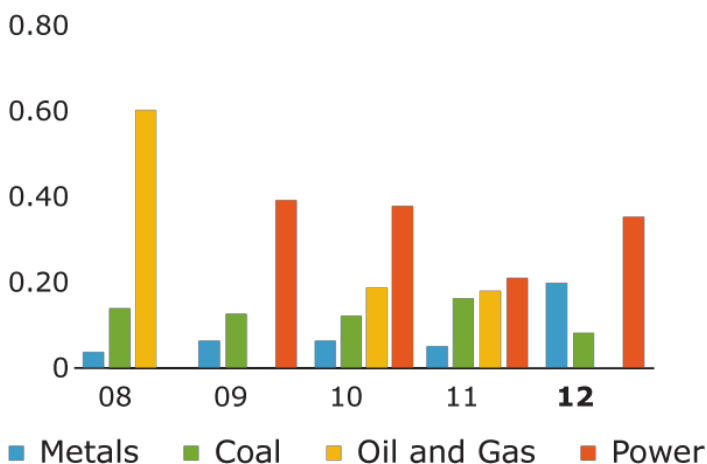
Coal

Our Coal employees have worked hard for many years to establish an outstanding operations safety record. In 2012, the [Canadian Institute of Mining, Metallurgy and Petroleum](#) presented the Paintearth mine with the [John T. Ryan Trophy](#) for achieving the lowest reportable injury frequency in a coal mine per 200,000 hours worked in Canada in the previous year.

Coal continues to maintain a focus on safety in the workplace with highly developed safety systems in place. At the end of 2012, several of Sherritt Coal's mines achieved significant safety milestones, recognizing years without an employee LTI. The most notable of these were Boundary Dam mine (eight years), Sheerness mine (17 years) and Genesee mine (24 years).

Lost Time Injury (LTI) Index^{1,2}

(12-month rolling average as at December 31, 2012)

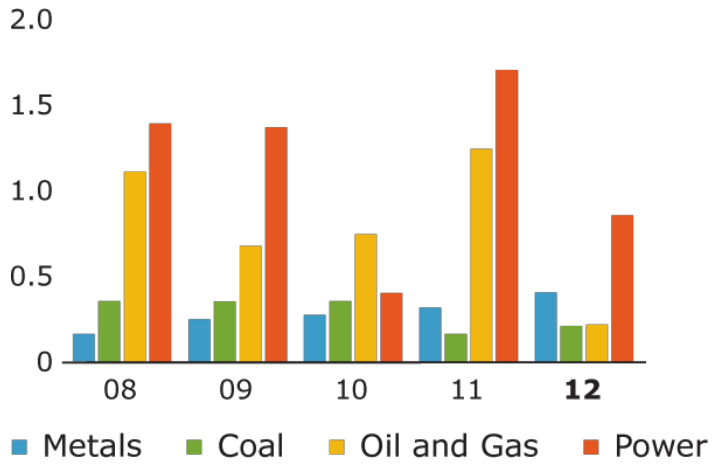


1 The LTI and TRI indexes are calculated by multiplying the number of total LTIs or TRIs by 200,000 and then dividing by total exposure hours. This index provides a measure that is comparable across industries and businesses of varying size.

2 Data have been restated to include contractors throughout.

Total Recordable Injury (TRI) Index^{1,2}

(12-month rolling average as at December 31, 2012)



¹ The LTI and TRI indices are calculated by multiplying the number of total LTIs or TRIs by 200,000 and then dividing by total exposure hours. This index provides a measure that is comparable across industries and businesses of varying size.

² Data have been restated to include contractors throughout.

Public Safety

We recognize that the first way to ensure the safety of the communities around our operations is to make certain that the site itself is free of harmful emissions and that all substances are properly managed and controlled. Our management approach at our Canadian industrial sites has been influenced by relevant elements of the [Chemical Industry Association of Canada's](#) globally recognized [Responsible Care Codes of Practice](#) – including risk prevention and emergency preparedness.

At the Moa Joint Venture refinery in Fort Saskatchewan, we regularly conduct emergency-simulation exercises with local police services and other first responders to continuously improve our ability to respond, which includes ensuring the efficient flow of information to the community.

At the Ambatovy Joint Venture, an accidental release of sulphur dioxide from the plant near the City of Toamasina in February 2012 led to the implementation of improved safety systems and the formation of an Industrial Risk Committee, involving other industries, local organizations and Ambatovy JV representatives to develop a community response plan in the event of emergencies. In addition, an emergency-simulation exercise was conducted with local authorities at the ammonia storage site to test our emergency communication protocol.

In Madagascar, the Ambatovy Joint Venture collaborates with civil society to promote HIV/AIDS awareness among our workforce and in the community. In addition, we have worked openly with the [United Nations Children's Fund](#) and other organizations to address the challenging social issue of child exploitation in areas adjacent to our operations. Learn more about this effort on Ambatovy's [website](#).

Fort Saskatchewan partnerships for public safety

At Fort Saskatchewan, we partner with local industries, through groups such as the Fort Air Partnership, the Northeast Capital Industrial Association and the Northeast Region Community Awareness Emergency Response, to coordinate response preparedness for environmental incidents and other potential emergencies. An important part of these efforts involves executing awareness-building campaigns in the local community.



Rewarding Workplace

We value our people and seek to provide them with a rewarding workplace. We do this by engaging them regularly and creating forums for input and feedback, providing ongoing training and professional development opportunities, periodically assessing compensation practices against performance and industry benchmarks, and implementing cross-divisional, cross-functional and cross-site training or work-experience programs, such as the Sherritt Leadership Development Program. This is a multi-faceted, customized program designed to support our leaders in developing their skills, behaviours and communications style in an open learning environment with other leaders from all facets of the organization.

Various initiatives that are focused on retention and employee development were implemented across the divisions. Workforce planning assists us in mapping out personnel needs for the next three to five years by proactively identifying current specialized talent and future requirements. This process identifies gaps and enables us to mitigate them through fully integrated employee programs, such as learning and development, compensation, recruitment, and succession and replacement planning.

The reason Sherritt's employment figures have increased from 2011 to 2012 is mainly because the Ambatovy Joint Venture (Ambatovy JV) filled 514 vacant positions to support operations in the latter part of 2012. Of these hires, 426 came through external recruitment and 88 were internal applicants. For the external ones, 80% were filled by residents of the regions where the mine and the plant are located. In order to attract the best local talent, the Ambatovy JV took part in four job fairs in the Malagasy cities of Toamasina and Antananarivo. To reinforce transparency in the search process, recruitment terms of reference were signed with community leaders in the mine region in 2012, and similar terms are being reviewed with the region where the plant is located.

Employee Engagement

We continue to assess the data and findings received from almost 4,000 respondents through our last employee engagement survey, conducted in November 2011. More than 40 focus groups and 30 one-on-one interviews were conducted in 2012 to gather feedback that was representative of our diverse workforce. This allowed us to take a closer look at some of the recurring themes coming out of the survey in order to develop and support specific action plans.

When possible, we have taken action where there was immediate opportunity. For example:

- Supporting our managers – Supervisory 101 training is offered to help managers become more effective leaders. Managers are further supported through the Sherritt Leadership Development Program.
- More communication from senior leaders – Our President and Chief Executive Officer is interacting with employees more often through town hall meetings and participating in small group discussions at different locations across the organization. These sessions allow for an open discussion on our leadership's vision for Sherritt and provide a forum for direct feedback on concerns and issues.

Recently, we initiated cross-divisional employee workshops to begin the process of developing the Sherritt employee value proposition, which will articulate the balance of rewards and benefits that are received by employees in return for their performance at work.

SHARP program for engineering graduates

In 2012, the Sherritt Accelerated Rotation Program (SHARP) was launched for recent engineering and science graduates, to attract professionals interested in a Sherritt career that could take them overseas. SHARP involves three one-year assignments across the Corporation, including an international one. With the support of a mentor, SHARP participants are integrated into existing Sherritt teams to foster their development. They are exposed to as many facets of the business as possible, including mine and plant operations, new projects and business development.



Training and Development

Our focus on skills training, professional development and staff retention has enabled us to maintain an experienced, stable workforce. We encourage both new accreditations for our workers as well as regular upgrades to their skill sets. Having a highly skilled workforce helps the Corporation maintain its competitive advantage.

Metals

Moa Joint Venture (Moa JV)

The Moa JV operation in Cuba provides training on a diverse range of skill sets, including safety, plant operations, vessel inspection, [International Organization for Standardization](#) standards, project management, working in confined spaces, leadership, mining equipment operation, first aid, incident review, defensive driving, ethics for managers, scaffolding, warehouse management, language and emergency response, among others. Cuban trainees from the Moa JV who complete prescribed programs receive Canadian-level accreditation at a Cuban technical institute accredited by the [Northern Alberta Institute of Technology \(NAIT\)](#).

In 2010, a separate training and development group was created at the Fort Saskatchewan operation in Alberta to address training needs for work currently being performed, as well as to enhance leadership talent and workforce specialization. To date, over 25 training programs have been developed or updated, and all employee training levels for 2012 met expectations.

Ambatovy Joint Venture (Ambatovy JV)

The Ambatovy JV's priority is to train national employees to progressively take over from foreign workers and to prepare national talent for senior management roles. We launched a leadership program to give talented local employees the skills and development opportunities they need to grow and advance in their career. See the Ambatovy JV [website](#) for details.

In 2012, our [Technical Excellence Program](#) for training local workers welcomed 98 high school graduates from the Toamasina area, which is adjacent to the plant site. Participating students attend an 18-month training program followed by a two-month internship.

Thousands of Ambatovy JV workers have also received manual, technical and administrative training through a combination of on-the-job training, e-learning and traditional instructor-led classes. Training was provided in various subject areas, including: maintenance training on 29 different topics; French and English language; office and administration software; management and leadership skills; and corruption and fraud prevention.

In addition, the Ambatovy JV's health and safety training program provided sessions on 33 different topics in 2012, resulting in 22,000 individual participations, as workers attended multiple sessions.

Coal

In 2012, training in Coal included: emergency response, occupational health and safety regulations, maintenance management, high-voltage breaker maintenance, electrical safety, picker and crane, leadership, standard first aid and [Workplace Hazardous Materials Information System](#) (Canada's national hazard communication standard).

Coal also rolled out a front-line supervisor training program to provide a consistent approach to coaching in the fundamentals of supervision across all mine sites. Program components include regulatory requirements, leadership qualities, and managing employees and relationships.

Oil and Gas and Power

Both Oil and Gas and Power Divisions maintain a long-standing training program for Cuban workers through affiliations with [NAIT](#) in Edmonton and the [Southern Alberta Institute of Technology](#) in Calgary.

This program is managed in Cuba for Cuban trainees with equivalency tests issued by a Cuban training school. All employees are encouraged to continue their training and at the end of 2012, Oil and Gas and Power employed 23 Cubans who were working to obtain accreditation as instrumentation technicians, millwrights or electricians. These accreditations will earn them a certification that is equivalent to that of a Canadian journeyman. At year-end, another 28 Cubans were training to become gas plant operators, 38 were completing various levels of the power engineering course, and 18 were training to become production field operators. Each individual is tested every two years on all standard operating procedures to retain qualified operator status.

Oil and Gas and Power also provide training in: operating systems, specialized equipment protection maintenance and operation, safety systems and safe operation of equipment, leadership skills and office skills.

At Oil and Gas, 12,849 training hours were completed in 2012, representing 5.3 days per employee, in addition to the apprenticeship training being completed at the National Industrial Certification Centre (in Spanish, CNCI) in Cuba, and facility-specific on-site training for operations. There were 341 training certificates issued to Oil and Gas employees in 2012.

At Power, 18,433 training hours were completed in 2012, representing 11.1 days per employee, in addition to the apprenticeship training being completed at CNCI in Cuba, and operations training on standard operating procedures. There were 448 training certificates issued for Power in 2012.

Training at Ambatovy

The Ambatovy JV's priority is to train national employees to progressively take over from foreign workers and to prepare national employees for senior management roles. We have launched a leadership program to give talented local employees the skills and development opportunities they need to grow and advance in their career. In 2012, a total of 232 employees participated in the first wave of this program. Of these, 160 completed the program (approximately 100 hours of training) in July 2012. The second wave is scheduled for 2013.



Operating Ethically

Sherritt is committed to conducting its business activities ethically and in a way that supports respect for the fundamental principles of human rights enshrined in international conventions.

[Learn more about Operating Ethically](#)



Business Ethics

We strive to foster a culture and environment that support and require ethical conduct.

[Learn more about Business Ethics](#)

Human Rights

We are committed to operating our business in a way that respects human rights as set forth in the Universal Declaration of Human Rights.

[Learn more about Human Rights](#)

For 2012 performance data, see Ethics Indicators.

Management Approach

Sherritt is committed to conducting its business activities ethically and in a way that supports respect for the fundamental principles of human rights enshrined in international conventions.

In support of this commitment, we embarked on a process in 2012 to establish an enterprise-wide policy management procedure, which will help ensure all policies are transparent, consistent, auditable and implemented effectively across the Corporation.

We also recently developed our Anti-Corruption Policy and drafted our Human Rights Policy. Going forward, we will continue to provide ethics-related training to all employees, and focus on strengthening procedures, behaviours and requirements for employees and contractors at projects and operations deemed higher risk in matters related to conduct. We also remain very committed to [transparency](#).

At the Ambatovy Joint Venture (Ambatovy JV), Sherritt aligns its operating practices with international standards related to human rights, such as those defined by the [International Council on Mining and Metals](#), the [Voluntary Principles on Security and Human Rights \(VPs\)](#) and the [International Finance Corporation](#). We plan to broaden the application of these or similar practices and standards, including aligning security practices across the Corporation with the VPs.

Ethics Priorities

Priority	2012 Progress	Future Focus
Ensure all Sherritt policies are transparent, consistent and auditable	<ul style="list-style-type: none"> Conducted a corporate policy audit Drafted a procedure for a standard approach to policy development and implementation 	<ul style="list-style-type: none"> Finalize and apply this approach
Complete training on the corporate Anti-Corruption Policy	<ul style="list-style-type: none"> Achieved 75% completion in 2012 and 96% completion at time of writing. 	<ul style="list-style-type: none"> Complete the remaining 25% of the training
Strengthen management systems relating to human rights and security	<ul style="list-style-type: none"> Formed a cross-functional committee to draft our Human Rights Policy (finalized in early 2013) Conducted a security and human rights risk assessment at the Ambatovy JV 	<ul style="list-style-type: none"> Conduct human rights risk assessments at all sites Align security practices across the Corporation with the Voluntary Principles on Security and Human Rights

Business Ethics

Sherritt recognizes sound corporate **governance** as essential to the Corporation's integrity and to the promotion and protection of shareholders' interests. We provide leadership by example, supported by clear policies, training, anonymous reporting mechanisms, sound investigation, corrective action and reporting processes.

Governance is embedded in the comprehensive structure of our **Board of Directors' Committee mandates**. The **Nominating and Corporate Governance Committee** is of critical importance, with a mandate to assist the Board in fulfilling its oversight responsibilities for all matters relating to corporate governance. The full mandate of this committee can be found on our [website](#).

Sherritt's Board is led by a Chairman who is independent of management. The Chairman is responsible for ensuring that the Board operates independently of management and that its independent directors have adequate opportunities to meet without management present. In this way, the Board is properly informed and engaged in oversight of the Corporation's business activities through its committee structure. All committees are composed entirely of independent directors.

The Corporation's governance system, which falls under the purview of the Board, includes responsibility for fair reporting and ethical and legal corporate conduct. Governance is also well integrated in many corporate and divisional policies, some of which are referenced below.

Policies

Ethical business practice is basic to all our activities and outlined in our corporate Business Ethics Policy. This policy establishes primary ground rules regarding such things as conflict of interest, fraud, corruption, fair dealings with stakeholders, protection of Sherritt assets, compliance, unethical behaviour and reporting any issues of concern. It specifies that ethical conduct is expected from all Sherritt employees, including directors and senior officers. It applies to Sherritt, its subsidiaries, affiliates and joint ventures, as well as to our consultants and contractors as specified in the policy. Where additional clarification is considered appropriate, the concepts in the Business Ethics Policy are expanded on in other policies. Among these other policies are those on alcohol and drug use, reportable concerns, foreign anti-corruption, timely disclosure, and confidentiality and insider trading.

Our policies outline ways in which employees can raise concerns about any issue through their supervisors or through senior management. If confidentiality is required, employees have access to an on-line third-party hosted service. Employees who file a reportable concern can do so with the assurance that the report will be anonymous and confidential, using systems with built-in mechanisms so they can report without fear of any internal discrimination, retaliation or harassment.

Anti-Corruption

Sherritt's Anti-Corruption Policy was finalized in 2012. Training sessions were carried out across the company to ensure that certain employees, especially those who interact significantly with government and other third parties, understand the policy and know how to apply it. By the end of the year, approximately 75% of relevant employees had completed anti-corruption training on the policy. At time of writing, anti-corruption training was 96% complete.

Sherritt's Business Ethics Policy

For over a decade, Sherritt has had a Business Ethics Policy in place. This has been regularly updated (most recently in November 2012) to ensure that employees understand the meaning and implications of such terms as conflict of interest, fraud, corruption, fair dealings and confidentiality. This policy provides clear guidance on Sherritt's expectations for employee behaviour; and, in concert with the Reportable Concerns Policy, how staff can report any ethics-related concerns, either directly or anonymously.



Human Rights

Sherritt's Human Rights Policy was formalized in early 2013, based in part on the many pre-existing policies that reflect the Corporation's care for individual rights. Our policies are supported by systems and controls to ensure that we consistently demonstrate respect for and alignment with the [Universal Declaration of Human Rights](#).

Aside from the new Human Rights Policy, Sherritt has policies on harassment and discrimination, accessibility for customers and guests, indigenous relations, employment practices, workplace violence and employee privacy.

The Ambatovy Joint Venture (Ambatovy JV) aligns itself with several international principles related to human rights, such as those defined by the [International Council on Mining and Metals](#) and the [Voluntary Principles on Security and Human Rights \(VPs\)](#). Staff members are trained to respect the traditional culture and beliefs in the area and must be in compliance with the [International Finance Corporation Performance Standards](#) relating to human rights. All workers, regardless of position, are expected to respect both fellow workers and the communities surrounding operations. The Ambatovy JV also ensures that contract workers are properly trained to comply with the requirements for human rights.

The Ambatovy JV is also in the process of embedding the VPs into its security-related policies, into memorandums of understanding with public security and into private security contracts. The Ambatovy JV has held presentations on the VPs for Madagascar's armed forces, gendarmerie, security and defense authorities. Partnerships have been formed with the [United Nations](#), [Madagascar's Ministry of Justice](#) and the [International Committee of the Red Cross](#) to deliver security and human rights awareness training.

We are also aligning our Sulawesi Project in Indonesia with leading practices relating to human rights and respecting local populations. The community affairs team is very conscious of the history of the area and the resulting blend of cultures, economic structures and religions. All of the Sulawesi Project's community programs are developed around that knowledge to ensure equal respect for all. An inquiry and complaints procedure has been established and publicized in all communities near the Project. As of the end of 2012, there had been no complaints submitted, possibly due in part to the routine consultation process by community affairs representatives to answer questions and resolve concerns before they become issues.

Inquiry and complaints mechanism for the Sulawesi Project

At our nickel project in Indonesia, a non-confrontational inquiry and complaints procedure gives community members a safe, accessible process for registering complaints or simply requesting information. The procedure is well publicized in all nearby villages.



Environmental Responsibility

Production of natural resource commodities inevitably impacts the environment. Our challenge is to ensure that these impacts are minimized and, to the extent possible, remediated where they occur.

Learn more about [Environmental Responsibility](#)



Tailings Management

We are committed to designing and operating all tailings management facilities – throughout the mine lifecycle – to meet or exceed applicable regulatory and company standards.

Learn more about [Tailings Management](#)



Biodiversity and Land

We aim to achieve no net loss, and preferably a net gain, of biodiversity for greenfield projects and significant expansions of current operations; and practice progressive reclamation as part of normal operations at all mines, working with local jurisdictions.

Learn more about [Biodiversity and Land](#)



Water

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

Learn more about [Water](#)



Energy and Climate Change

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

Learn more about [Energy and Climate Change](#)

For 2012 performance data, see [Environment Indicators](#).

Management Approach

Production of natural resource commodities inevitably impacts the environment. Our challenge is to ensure that these impacts are minimized and, to the extent possible, remediated where they occur.

Sherritt has always committed to responsible and forward-looking environmental stewardship by complying with, or exceeding, the environmental requirements where we operate. Our specific commitments in the areas of tailings management, biodiversity and land, water, and energy and climate change will drive continuous improvement and more consistency in environmental management practices and performance across our operations.

At its core, our current environmental management approach, which is based on the Operations Integrity Management System framework, ensures that we regularly measure, evaluate and communicate our performance. This provides the basis for continuous improvement – including the more efficient use of resources: energy, air, water and land – and allows us to make incremental contributions to the conservation of biodiversity at our projects and operations over the long term.

Also embedded in our management approach is a commitment to engage with local stakeholders on environmental issues, recognizing the shared use and management of key resources, such as land and water, and the need to assess longer-term risks related to climate change and other areas.

We are currently conducting a general review of our environmental management system. Our intention is to revise and align it with relevant standards set out by the International Organization for Standardization (ISO) and with the [Mining Association of Canada's Towards Sustainable Mining \(TSM\) protocols](#). For issue areas for which there is no TSM protocol, such as water, we are developing our own management standard in line with leading practices in the natural resources sector.

At the Ambatovy JV, we are committed to preserving and strengthening Madagascar's natural heritage. We continue to implement the [Ambatovy JV Environmental Management and Social Development Plan](#), accepted by Madagascar's environmental regulator, the [National Environment Office](#) (in French, ONE), in 2006. A multi-ministry Technical Evaluation Committee and the ONE conduct an annual inspection of Ambatovy JV operations to evaluate compliance with the Environmental Management and Social Development Plan.

At our Sulawesi Project in Indonesia, we adhere to our current corporate-wide approach to environmental management, as a drilling program provides the technical information needed to decide how to proceed with the development of this asset. At this early stage of the Project, we have begun preparations to conduct specialized studies in 2013, to establish an environmental baseline against which we can measure our performance.

Environmental Priorities

Priority	2012 Progress	Future Focus
Strengthen Sherritt's corporate environmental management system	<ul style="list-style-type: none"> Completed an assessment of site environmental systems 	<ul style="list-style-type: none"> Revise the corporate system to ensure a consistent application of key leading practices across the divisions
Maintain focus on tailings management, and strengthen where necessary	<ul style="list-style-type: none"> Finalized a third-party assessment of tailings management at our operation in Moa, Cuba 	<ul style="list-style-type: none"> Improve alignment of our tailings management approach with leading industry practices
Maintain leading practices in biodiversity management	<ul style="list-style-type: none"> Developed a new biodiversity action plan for the Ambatovy JV to align with International Finance Corporation Performance Standards 	<ul style="list-style-type: none"> Establish a corporate biodiversity management system Conduct a baseline study of biodiversity for the Sulawesi Project in Indonesia
Standardize reclamation processes and reporting	<ul style="list-style-type: none"> Initiated a cross-divisional dialogue on reclamation processes Assessed gaps and inconsistencies between divisions in reclamation reporting 	<ul style="list-style-type: none"> Assess quality of site-specific reclamation processes and plans Establish standardized reclamation terminology and indicators for reporting
Enhance water management at each site	<ul style="list-style-type: none"> Established a cross-divisional committee to draft common water-management principles 	<ul style="list-style-type: none"> Review water-management practices at all operations, and establish baselines where necessary Develop a corporate policy on water
Manage risks associated with climate change	<ul style="list-style-type: none"> Added greenhouse gas emissions produced by Ambatovy and Power to reporting Advanced the construction of a power-generating unit that recycles heat from exhaust 	<ul style="list-style-type: none"> Complete an infrastructure vulnerability analysis to identify emerging climate change risks Regularly conduct cost-benefit analyses of energy-efficient technologies for capital spending Continue clean-coal technology research through our Technologies group Apply for emission-reduction credits for the new power unit to indirectly offset other Sherritt emissions

Tailings Management

Ensuring that tailings from the processing of mineral products are properly handled or contained and prevented from entering the environment is critical for the protection of the environment and the community. We design and operate our tailings management facilities to meet or exceed all applicable regulatory and company standards.

Sherritt's mining operations in Cuba and Madagascar are the primary locations of tailings. Coal's Mountain Operations (Coal Valley and Obed Mountain mines) operate wash plants that produce a product that is considered tailings as well. The wash process enables coal to be separated from other mineral or rock material. This other material is placed in ponds that are designed to allow effective settling so water can be reused in the washing process. There is also a small amount of tailings at our Metals refinery in Fort Saskatchewan.

At the Moa operation, we have implemented a number of improvements to the tailings areas that were originally designed and constructed in the 1970s, following reclamation of a facility that was started in the 1950s. To enhance long-term technical, safety and environmental performance, we are considering implementing alternate tailings management approaches that remain in conformity with both Cuban regulations and international tailings management practices.

At the Ambatovy JV, there were no significant tailings due to the early stage of our operation. The tailings facility, located several kilometres inland from the plant site, has been designed to meet specific international standards as set out by the [Canadian Dam Association](#), the [International Commission on Large Dams](#) and the [Mining Association of Canada](#). The plant design provides for neutralization and precipitation of the tailings slurry with limestone and lime prior to discharge to the tailings basin. Containment in the tailings basin is achieved by progressive elevation of embankments encompassing the Ambatovy JV's tailings facility. Groundwater modelling indicates that seepage losses will be low due to the low permeability of the regional soils and the subsequent tailings layer that will be present. A network of 17 groundwater interception wells (each of which includes a pump, piping and control system) will be used to monitor and prevent any contaminant migration. Installation of the wells began in 2012 and will be completed in 2013.

Tailings management at the Ambatovy JV

Seventeen groundwater interception wells under construction at the Ambatovy JV will provide early warning of any possible groundwater encroachment from the tailings dam.



Biodiversity

Sherritt operates in different industrial spheres and in different countries. That complexity adds to the challenge in caring for the distinct ecologies around each facility. To meet our biodiversity commitment, we follow the mitigation hierarchy of study, avoid where possible, minimize any unavoidable impacts, restore any damage and provide offsets for any residual impacts, wherever necessary. We also conduct environmental baseline studies, and establish and implement biodiversity management plans for greenfield projects and significant expansions. Reclamation plans are in place at all mine operations, and we regularly monitor and measure their progress.

Metals

Moa Joint Venture (Moa JV)

Sherritt's commitment to protecting sensitive ecosystems is demonstrated in our respect for biodiversity across all operations. There are no species at risk near our Moa JV properties in Fort Saskatchewan, Canada, or Moa, Cuba, but we remain conscious of the need to minimize any impacts to local ecologies around these sites.

Ambatovy Joint Venture (Ambatovy JV)

The information below for the Ambatovy JV is a summary only. More detail may be found on the Ambatovy JV [website](#), under the Sustainability tab.

Watch a short [video](#) to discover more about the Ambatovy team's commitment to environmental protection.

Sherritt's biodiversity initiatives are particularly strong at the Ambatovy JV in Madagascar, a country well-known for its rich biodiversity. The Ambatovy JV has adopted a structured approach to ensuring its operations result in "no net loss" in biodiversity, and preferably a net gain. In 2012, the Ambatovy JV developed a new biodiversity action plan, which aims to ensure that the JV meets its biodiversity goals in alignment with the [International Finance Corporation \(IFC\) Performance Standards](#). The Ambatovy JV has championed novel approaches to ensure a much greater understanding of its environment.

To limit impacts to fauna during clearing operations at the mine site, the Ambatovy JV continued to implement and evaluate the successful paced, directional clearing method. The direction of clearing is predetermined and plotted on maps, which clearing contractors are required to follow. Markers are set out to limit and manage the direction and speed of cutting in the clearing zone. To the end of 2012, just over 700 ha had been cleared at the mine site, and monitoring suggests that the method is having the desired effect.

To ensure environmental issues are managed appropriately in Madagascar, the Ambatovy JV follows several significant international guidelines and standards, including those established by the [IFC](#), the Equator Principles, the [Business and Biodiversity Offsets Programme \(BBOP\)](#) and the principles of the [International Council on Mining and Metals](#). This is in addition to the comprehensive Malagasy environmental policy, regulations and programs under the country's decree on compatibility of investments with the environment (in French, this is known as the MECIE decree).

Business and Biodiversity Offsets Programme (BBOP)

The Ambatovy JV participates in the BBOP to ensure that any losses of biodiversity are offset through the conservation of comparable habitat. Launched in 2004, the BBOP is an international partnership of conservation organizations, scientists, corporations and governments that aims to be the world standard-bearer for biodiversity offsetting.

In 2006, the Ambatovy JV became a [BBOP pilot project](#) and we currently align our offsets vision and design to the guidelines provided by the BBOP Secretariat and Advisory Committee. The Ambatovy JV contributed to the development of an international [BBOP standard on biodiversity offsetting](#), published in early 2012.

The Ambatovy JV offsets program includes the 6,800 ha Ankerana Forest, plus the mine conservation forest and site offsets. These forest blocks provide a total combined area of over 10,000 ha of newly protected land. This area is almost six times the mine footprint area and over four times the approximately 2,400 ha of total disturbed forest land that aims to be reclaimed after operations are complete. The small amount of land that is not reclaimed represents the area occupied by legacy infrastructure, such as roads that will remain for the beneficial use of the communities. The total result is a net gain of conserved land.

In 2012, an outside organization, in collaboration with the BBOP secretariat, evaluated the Ambatovy JV's compliance with the [IFC Performance Standards on biodiversity](#) and the BBOP standard. The final report is expected in 2013.

Torotorofotsy Wetland – Ramsar Site

In 2012, the Ambatovy JV continued to actively support a process to halt further conversion of a wetland for agriculture. The [Torotorofotsy Wetlands](#) is a 9,000 ha wetland and forest area that lies immediately to the east of the mine site. It has been classified as a wetland of international importance under the [Ramsar Convention on Wetlands](#) and placed under the management of a Malagasy non-governmental organization (NGO). The Ambatovy JV works with the Government of Madagascar, the local NGO that manages the site and other stakeholders to provide assistance to manage the area. Since 2009, we have supported the development of a management plan, biological inventories and hydrological studies.

Natural Resources Management

In 2012, the Ambatovy JV continued to support six local forest management community associations that have been taking the lead in the sustainable management of natural resources in the conservation area around the mine site. In 2010, the Ambatovy JV and the local forestry service helped to form these associations in an effort to reduce pressure on the conservation forests. Since then, the JV has been supporting these associations through management and leadership training, and by providing assistance through income-generating activities, such as improved agricultural techniques.

The vast majority of residents located near the mine conservation zone live in poverty. The Ambatovy JV supports them through various alternative livelihood projects, to reduce illegal hunting and destructive agricultural practices. Association members have been involved in poultry and fish farming, in addition to growing plants that will be bought by the Ambatovy JV for restoration purposes. The JV also supports association members through monthly meetings held to resolve issues they encounter and to discuss ways of moving forward.

Species Conservation

The Ambatovy JV works with reputable international organizations to promote fauna conservation in its areas of operation. In 2012, the Ambatovy JV co-sponsored and participated in the [International Union for Conservation of Nature Species Survival Commission/Primate Specialist Group](#) workshop in Antananarivo, Madagascar. An overarching biodiversity program is in place to provide general guidance, and specific programs have been developed for those species of particular concern.

Specific initiatives include:

- A biomedical program to monitor the health of the lemur populations in the operation areas.
- Programs to collect and relocate mantella frogs from the mining area and to breed them in captivity.
- Monitoring of the fish populations in the mine area to confirm that all species are found outside the Ambatovy JV's zone of impact.
- Partnering with a Malagasy national association focused on bird conservation to minimize further degradation of the Torotorofotsy Wetlands through a number of initiatives, including mapping existing cultivated areas within the protected area, biological and hydrological studies, and public awareness campaigns.

- Building a research nursery (98% complete), an industrial nursery for the production of reclamation seedlings (60% complete) and an arboretum for demonstrating restoration efforts (85% complete).

The Ambatovy JV also began working with France's [Institute for Research and Development](#) to identify the role of mycorrhizal (natural fungi occurring in the soil which are often critical for successful plant growth), which may increase resistance to drought and disease.

Coal

Sherritt Coal has many years of experience in reclaiming its mine sites. During this time, we have continually improved and adapted our reclamation activities to meet changing management and regulatory expectations. For example, in 2010, the Coal Valley mine started trials that focus on ecosite and ecosystem (biodiversity) development. This trial work has continued and includes the establishment of woody shrubs and the ingress of native plants for the development of plant communities beneath successfully treed sites. The information and data gained from projects like these will be used throughout Coal, in keeping with Sherritt's continuous improvement philosophy.

Coal consults with experts to ensure that our reclamation programs for such things as wetland planning are effective. We continue to be part of a leading group of industry and government representatives on an initiative to help in the recovery of the native Athabasca rainbow trout population in Alberta. Over the next few years, Sherritt will work with the provincial government and other industries to develop a full recovery plan for this species of trout.

Scientific Consultative Committee at Ambatovy

In 2012, the Ambatovy JV convened the annual meeting of the Scientific Consultative Committee (SCC), an independent body of 16 national and international scientists renowned for their expertise in biodiversity. Half of these experts are Malagasy, and the other half come from eight different countries. The SCC has been monitoring and providing recommendations to Ambatovy since 2009. The positive impact of this Committee has led to the invitation of social-science experts to Committee meetings to discuss sustainability more broadly.



Land

Sherritt recognizes that the land entrusted to it is a valuable and irreplaceable resource. We work with authorities and other organizations to leave a positive impact, as demonstrated by our record of reclamation and remediation over the years.

Metals

Moa Joint Venture (Moa JV)

The Moa operation in Cuba has a plan in place to continuously reclaim and reforest mined areas, while ensuring the nickel resource available for future mining remains accessible. To ensure this is done correctly, the Moa JV works with the [Cuban Environmental Inspection and Control Center](#), the regulator in Cuba responsible for environmental matters. Since the formation of the Moa JV in 1994, 479 ha of mined area has been reclaimed (a total of 81%) from a total of 588 ha that has been disturbed by mining activities.

The Moa operation reports regularly to Cuban environmental authorities and did not record any significant environmental incidents in 2012. As part of the Moa JV's proactive effort to minimize future potential incidents, containment systems around acid storage tanks on site and at the Port of Moa are being improved and strengthened.

The Fort Saskatchewan site continues to manage land issues within its government-approved operating permit. Included within the site operating approval are soil management practices and planning guidelines agreed to with Alberta Environment and Sustainable Resource Development. The Fort Saskatchewan site has an ongoing program to manage material legacy issues before the end of the facility's life. The site had no significant environmental releases in 2012.

Ambatovy Joint Venture (Ambatovy JV)

Quarterly pipeline erosion survey reports were conducted in 2012, and the results are being used as the baseline to support management of the right-of-way (ROW) access road along the pipeline. Findings show that the number of active erosion points decreased from 100 in the first quarter of 2012 to 57 by year-end. This is a significant improvement compared with the 295 erosion points counted in October 2010.

Heavy rains in January 2012 and cyclones Giovanna and Irina did not damage the pipeline itself, but they did temporarily increase erosion levels on the pipeline ROW and on related access roads. The Ambatovy JV mitigated these impacts through erosion repair and revegetation. In addition, Ambatovy increased the scope of the monitoring program to include assessment of vegetation growth and the presence of invasive plant species.

Coal

At our prairie coal mines in Canada, land from mined areas is progressively reclaimed as operations move forward along the coal beds. Reclamation practices in the mountain mines (Coal Valley and Obed Mountain) can vary quite differently from the prairie operations, where the coal seams are in rocky outcrops rather than in flat beds. Mining operations must follow the coal along the seams, moving farther from the load-out point and restricting reclamation opportunities until either the entire seam is exhausted, the boundary of the mineral lease is reached, or the coal is no longer economic to mine.

In 2012, at our wholly-owned mines, we levelled and contoured 1,182 ha of formerly mined land and completed (topsoiled) 1,098 ha of land. This is the highest annual reclamation level achieved in the last five years.

By the end of 2012, our operations had completed reclamation activities on an average of 69% of the total area disturbed since production began, a reduction from 74% reported last year. During 2012, we revisited methodologies for surveying and verifying reclaimed areas, resulting in extensive revisions to practices at certain mines. We undertook this effort due to the age of some operations – for example, mining began at Bienfait in 1905 and at Paintearth in 1956. Operating facilities that have been in production for generations meant that the original assumptions used for reclamation considerations were likely different from those used today. The revisions resulted in some significant changes in the total area disturbed and in the total reclamation

achievement shown in the [Performance section](#) of this report, ultimately leading to the lower reclamation percentage shown above.

Oil and Gas and Power

In Cuba, Sherritt's Oil and Gas Division routinely mitigates any impacts of oil exploration and recovery activities when operations have ended. Drill sites are cleaned and topsoil is replaced, and the land is returned to conditions similar to those present before drilling commenced. When this work is completed, the land is returned to the Cuban state in accordance with the requirements laid out in the operating permits.

Ground-level planting at Coal

Since 2010, our Coal Valley mine in Alberta has been conducting a pilot project to encourage the development of native ground-level plant communities beneath successfully treed sites. The information learned will be shared throughout the Coal Division, in keeping with Sherritt's continuous improvement philosophy.



Water

Water is central to Sherritt's metallurgical process and we manage it carefully. Where possible, 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 operation, we conduct baseline studies, assess risks, and engage stakeholders to inform water-management planning.

Our approach to water-management varies across our operations based on technical requirements, the 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 all divisions.

Metals

Moa Joint Venture (Moa JV)

The Moa JV Fort Saskatchewan site coordinates its water-management practices and interaction with [Alberta Environment and Sustainable Resource Development](#) through the [Northeast Capital Industrial Association](#), a local industry association that promotes sustainable industrial growth and high quality of life through environmental, socio-economic and public safety programs.

The Moa JV operation in Cuba maximizes the recovery of water and recycles it for reuse in the process. A number of projects to recover water and minimize discharge to the environment have been completed or are ongoing, including a program to treat the site's domestic wastewater discharges. Rainwater runoff is collected in a series of sedimentation ponds to control its flow into the local watershed.

Ambatovy Joint Venture (Ambatovy JV)

In Madagascar, water is extracted from the Mangoro River for use in mine operations, and from the Ivondro River for use in processing operations. In both cases, extraction rates are well below 1% of the total annual river flow and are expected to have a negligible effect on flows and water levels. At the mine, water is pumped into the ore preparation plant to transport slurried ore to the plant via the slurry pipeline, approximately 220 km in length. Storm water runoff is collected in three separate sedimentation ponds to prevent contamination of downstream water catchments.

Water runoff collection ponds and flow allowances are designed to meet the World Bank's suspended solids concentration threshold of 50 mg/l or less, based on a one-in-10-year storm event. Hydrological studies during the environmental assessment determined that this method will properly control and maintain seasonal water flows off the mine site.

Coal

For the Coal Division, limited water is required for the majority of the operations. The main concern regarding water at most coal mines is controlling suspended solids in runoff to avoid sedimentation further downstream. When the volume of suspended solids exceeds the level allowed in our operating permits, an official incident report must be sent to the authorities. In 2012, Coal had 49 environmental water incidents, the majority of which took place at our Mountain Operations (Coal Valley and Obed) and involved runoff containing suspended solids. The major factor in the incidents was runoff due to the high rainfalls throughout the summer. As a result of these incidents, a water-management action plan was initiated.

Additionally, at our Mountain Operations, water is used in the coal cleaning process. As part of the process, the sites strive to minimize the amount of water taken from groundwater sources and maximize the amount of recycled water from the tailings pond.

At the Bienfait mine, which has a plant that produces activated carbon, process water that would normally be collected, treated for suspended solids and then released is now intercepted daily and diverted for use in the activated carbon production process.

Oil and Gas and Power

The Oil and Gas Division uses water to produce drilling mud for operations. Sea water and/or brackish water is generally used for this purpose. The rigs have continuously circulating mud systems on the surface to reduce the amount of water needed to maintain the required level in the system. The amount of water typically used in the drilling of a well could range from 8,000 to 15,000 m³. At the completion of drilling, all mud is collected and sent to a regulated site for land-farming, where the mud is allowed to dry and is progressively blended with soil or organic matter to produce safe, useable soil. Oil and Gas has 19 groundwater monitoring wells located throughout its areas of operation to enable identification of impacts on the environment.

The Power Division primarily uses municipal water for sanitary and cleaning purposes at the different gas plants. In addition, the Varadero facility uses a closed-circuit process containing sea water for cooling the steam from the combined-cycle steam generator. An early-warning system has been installed; it consists of seven wells that monitor groundwater for any contamination from the sea water in the event of a leak. There are also five monitoring wells located between the Varadero facility and an oil storage facility nearby to monitor contaminants.

The Energas Boca de Jaruco site has eight monitoring wells (one is located within the facility and the others around it), and Puerto Escondido has two monitoring wells. These wells are used to monitor any contaminants that may migrate through or onto the site property. Monthly observations are carried out in each facility and its surrounding area.

Water management at Fort Saskatchewan

The Moa JV site in Fort Saskatchewan does not discharge effluent to the local river system. All effluent is treated at a regional wastewater treatment facility.



Energy and Climate Change

Climate change has become an increasingly high-profile issue for many extractive industry stakeholders in recent years. As an emitter of greenhouse gases (GHGs), Sherritt responds to emissions legislation and reacts to regulatory changes. To meet our commitments, we establish baselines for energy use and GHG emissions at current operations and put in place appropriate management systems to evaluate performance. We are also conducting a vulnerability analysis of existing and planned infrastructure to identify potential risks related to a changing climate.

Like many large industrial companies, Sherritt is affected by legislation associated with GHG reduction in some jurisdictions. The Province of Alberta has implemented such a regulation that is applicable to large GHG emitters in the province. Currently, the Metals Fort Saskatchewan refinery and one Sherritt Coal mine in Alberta are subject to this regulation. This report represents the first time that Sherritt has included GHG emission results for Canadian and international operations. Emissions at our Oil and Gas operations in Cuba are expected to become available in the near future. Our emissions by operation are included in the [Performance section](#).

Any eventual costs related to failing to meet regulated emission targets may be partially offset by emission-reduction credits that are presently being earned, as well as through internal measures, and research and development or emissions-reduction projects in the pipeline, examples of which include the clean-coal research being conducted at Technologies in Fort Saskatchewan, the minimization of fuel use through proper engine maintenance and an emission-reduction Power project under construction in Cuba.

More information on GHG emissions as they pertain to Sherritt may be found on page 82 of our [Annual Information Form](#).

Metals

Moa Joint Venture (Moa JV)

At both Moa JV sites, environmental departments monitor emissions to ensure compliance with the operating approvals and standards issued by the appropriate government authorities. Both sites employ advanced maintenance programs to ensure equipment is performing within manufactured or engineered specifications in order to minimize GHG emissions.

The Moa operation in Cuba produces GHGs and other emissions primarily in two areas. The first source is caused by the operation of mine haul trucks and other mobile mining equipment. The second is primarily a result of the production of steam, sulphuric acid and hydrogen for plant operations. A significant portion of the carbon dioxide from hydrogen production is diverted for shipment by pipeline to a nearby nickel producer for use in its process.

The Fort Saskatchewan site reports GHG emissions under the reporting regulations of both [Alberta Environment and Sustainable Resource Development](#) and [Environment Canada](#). (It should be noted that these regulations identify some types of GHG emissions that companies are not required to report, specifically industrial process emissions not subject to GHG emissions reduction. The Performance section of this report includes both types of GHG emissions – separately identifying industrial process emissions – to provide a figure for total GHG emissions for the site.)

For the 2012 compliance period in Alberta, reportable GHG emissions at the Fort Saskatchewan site were 35,588 tonnes of carbon-dioxide equivalent over the provincial government's targeted 12% reduction level. A purchase of 35,588 credits, for a total cost of \$533,820, from the [Climate Change and Emissions Management Fund](#) was required to meet compliance requirements. It is anticipated that the Fort Saskatchewan site will continue to comply with this regulation by contributing to the Fund for the next several years, as it reviews practical and economic alternatives to reduce GHG emissions.

In 2012, 25,266 tonnes of industrial carbon dioxide supplied from the Fort Saskatchewan site were converted to a liquid carbon dioxide product for use in the oil-field service industry. This gas is part of our industrial process emissions, so this conversion does not reduce reported GHG emissions for federal and provincial regulations.

Coal

There was a decrease in total GHG emissions at Coal in 2012 because production was reduced at some sites, and operations at the Obed mine were suspended. For the 2012 compliance period in Alberta, the Coal Valley mine was the only Sherritt Coal operation to exceed the 100,000-tonne emissions threshold established under the Alberta regulation. In 2012, the mine was 27,065 tonnes above target, primarily due to increasingly long haul distances and greater coal consumption in the preparation plant dryer. The Coal Valley mine met compliance levels by purchasing 27,065 Fund credits for a total cost of \$405,975.

In Saskatchewan, we operate the Poplar River, Boundary Dam and Bienfait coal mines, as well as a Char plant and an Activated Carbon plant at Bienfait. Verification of earlier data reported from Bienfait resulted in a downward revision to the 2010 and 2011 GHG totals from the Activated Carbon and Char plants. The revised levels and 2012 emissions are more in line with historic levels. The successful passage of proposed Saskatchewan GHG emissions legislation would likely impact Sherritt's operations at the Boundary Dam and Bienfait mines. Until there is greater clarity around this legislation, it is difficult to identify the full extent of its impact.

Oil and Gas and Power

As mentioned, emissions data for our Oil and Gas operations in Cuba were not available for 2012, but such information is expected to be available in the near future.

The Power Division is developing the Boca de Jaruco Combined Cycle Project at the Energas Boca de Jaruco facility in Cuba. This Project will reduce the level of GHG emissions in Cuba through the use of waste exhaust heat to generate electricity. An application is being prepared for submission to the [United Nations Framework Convention on Climate Change \(UNFCCC\)](#) for consideration under the [Clean Development Mechanism \(CDM\)](#) process under the provisions of the [Kyoto Protocol](#). CDM accreditation will allow CDM offset credits to be issued to the Energas Joint Venture for emission reductions. In 2013, we will continue working with our Energas partners to assemble the required auditable information to allow this application to proceed.

The Boca de Jaruco Combined Cycle Project is our second CDM project in Cuba. CDM status was granted for the [Energas Varadero Combined Cycle Project](#) in 2007, and over 340,000 credits had been issued by the end of 2012 for the June 2007 to June 2008 time period. A report showing over 630,000 additional credits from July 2008 to the end of December 2010 was delayed because of necessary revisions to the submission as well as internal UNFCCC processes. The approval process had resumed by early 2012. Upon issuance of these credits, Sherritt will request over 460,000 additional credits in 2013 for reductions in 2011 and 2012. A summary of CDM credits issued, and estimates for those not yet issued by the end of 2012, can be found in the [Performance section](#) of this report.

The first Energas CDM project at Varadero was approved to receive credits over a seven-year monitoring period. In order to continue receiving credits under the program, Energas must apply to the UNFCCC for renewal. A decision on whether to proceed with this renewal will be made on the basis of current economics, revised processes and any issues encountered in the registration of the Boca de Jaruco Combined Cycle Project.

Clean Coal Technologies

Sherritt Technologies is evaluating, adapting and developing coal beneficiation and gasification technologies, several of which could make the reduction of GHG emissions more economical and lead to commercialization opportunities. The outcomes of this work could also play a role in reducing the costs associated with installing carbon-capture and emissions-reduction technologies at existing coal-fired power plants and new gasification facilities, and contribute to the development of emerging coal gasification technologies.



Air

Sherritt is conscious of the potential impacts that its operations may have on the surrounding atmosphere. We take great care to ensure that all applicable air quality regulations are properly followed. We do this not just to ensure compliance with operating permits and regulations, but also to ensure that there are no negative impacts to local stakeholders due to reduced air quality.

Metals

Moa Joint Venture (Moa JV)

The Moa operation in Cuba had no significant air releases in 2012. Air monitoring at Moa Nickel includes monitoring of sulphur dioxide (SO₂), carbon monoxide, ammonia (NH₃), hydrogen sulphide and particulate matter (PM) concentrations at the plant site and the perimeter. This monitoring is primarily focused on the quantification of stationary source emissions.

The Fort Saskatchewan site had no significant air releases in 2012. The on-site air emission monitoring program includes stack emissions for NH₃, sulphur oxides (SO_x) and PM. The site participates in regional airshed monitoring activities through membership in the [Fort Air Partnership](#) both financially, through its dues payable to the [Northeast Capital Industrial Association](#), and by participating in the Fort Air Partnership Technical Working Group.

Sherritt continues to make progress in efforts to reduce emissions associated with the operation of the Moa JV. Previous improvements to catalysts in both acid plants at Moa Nickel reduced SO_x emissions by 50% in 2009. Gains made to date are expected to be maintained on an intensity basis by cleaning the catalyst during scheduled shutdowns, with 5% to 10% of it being replaced. Ongoing monitoring of acid-plant efficiency is conducted to confirm that the catalyst is working within its operating parameters.

The refinery at Fort Saskatchewan is a hydrometallurgical plant that uses heat, pressure and chemistry to refine metal products. Some emissions, such as steam and greenhouse gases, are a normal result of this process. Other gases that are used or produced on site are controlled in systems designed to prevent their accidental release. The refinery is subject to certain emission limits, as per its operating approval from the Alberta government.

In 2012, reported nitrogen oxide (NO_x) levels were higher than in 2011 due to the cycle of maintenance activities. Levels of SO_x in 2012 were lower at both the Fort Saskatchewan refinery and our facilities in Moa, Cuba, due to cycles in mechanical maintenance and on-stream timing. In 2011, there was a significant reduction in total particulate matter (TPM), and this was maintained in 2012. The decreased TPM levels observed at the refinery in 2011 and 2012 were a result of an equipment replacement program and of changes to operating procedures based on an internal research project and a complete review of operational parameters.

Ambatovy Joint Venture (Ambatovy JV)

The information below for the Ambatovy JV is a summary only. More detail may be found at the [website](#), under the Sustainability tab.

In Madagascar, air quality monitors have been installed within the perimeter of the mine and plant site and now provide continuous monitoring of the ambient air.

The Ambatovy JV monitors environmental incidents and tracks them with an integrated reporting system. Root causes are analyzed and corrective and preventive measures are identified for each reported incident to avoid recurrence. The Ambatovy JV is obliged to report material incidents in the annual report submitted to Madagascar's [National Environment Office \(ONE\)](#). During 2012, there was one material air-related incident reported to the ONE (discussed below), and five other issues regarding possible releases to air and water were raised by local stakeholders. All of these issues were investigated and resolved. The ONE was provided with information on the claims and the results of the investigations as a matter of transparency and disclosure.

On February 26, 2012, a release of SO₂ gas occurred at the plant site on the outskirts of the City of Toamasina during the start-up of our sulphuric acid plant. The low-level emission at no time endangered the lives of people or animals in the area. The emission covered an area of approximately 500 m long and 200 m wide and was located to the north of the plant site, beyond the fence line.

After the incident, the Ambatovy JV took action to mitigate the effects of the release, and medical experts determined that any impacts on the health of the local population were minor and lasted only a short period of time. The JV assumed responsibility for the release and compensated affected individuals for any inconvenience and for the cost of any minor medical treatments. The impacts on animal health were also negligible and there were no impacts on local water quality.

The Ambatovy JV took a number of steps to reduce the risk of elevated SO₂ emissions in the future. These steps included:

- Verification of the plant's safety systems.
- Installation of additional interlocks.
- Internal review of start-up and shutdown operating procedures to ensure that any potential elevated releases are appropriately managed to avoid exposure and that the inlet dampeners on the acid-plant blower allow proper shut-off operation.
- Installation and calibration of an acid plant SO₂ analyzer.
- Identification and installation of additional monitoring equipment for the plant perimeter.
- Provision of better local meteorological information to the plant control room.
- Establishment of an Industrial Risk Committee involving Ambatovy, other industries and local organizations to develop a community response plan in the event of emergencies.
- Holding regular meetings with the community to continue to keep residents informed of the Ambatovy JV's activities and to address any related issues or concerns.
- Improvement of internal and external communications and procedures for better incident preparedness.

Visit the Ambatovy JV [website](#) for more information on our response to this incident.

The Ambatovy JV adheres to its approved social and environmental management plan, which is based on international standards in environment, health and safety. The JV continues to engage with national and regional authorities and the local community to keep them properly informed and to seek their input as it works to continuously improve its monitoring systems, procedures and safety controls.

The Ambatovy JV does not yet report NO_x, SO_x and particulate matter data comparable to that produced by the Moa JV and Coal.

Coal

Our Coal operations do not normally produce high levels of air emissions from coal use. The coal-drying operations at the Coal Valley and Obed Mountain mines and the operation of the Char and Activated Carbon plants at the Bienfait mine have resulted in reportable SO_x emissions. Coal's large open-pit mining operations primarily produce dust rather than other emissions. Vehicle emissions from moving large volumes of material are minimized by the use of modern mining equipment and draglines. Emissions are also minimized through proper equipment maintenance, which ensures efficient operation.

Oil and Gas and Power

Oil and Gas and Power had no significant releases to air during 2012. Emissions of NOx and SOx from Power operations in Cuba are included in the Performance section of this report. We do not report these emissions from our Oil and Gas operations.

Ambatovy Industrial Risk Committee

At the Ambatovy JV plant site in 2012, our team in Madagascar led the establishment of an Industrial Risk Committee with other industries and local organizations to develop a community response plan in the event of major emergencies in the future.



Waste Management

Waste is produced during any extractive operation. Machinery parts may wear out, engines are maintained and supplies are received in packaging. Sherritt is conscious of the need to reduce the waste that goes to landfill and ensures that all toxic substances are properly disposed of. We recycle whenever possible.

Metals

Moa Joint Venture (Moa JV)

The Moa JV has recycling programs in place that include scrap metal (over 600 tonnes in 2012), used oil (almost 190,000 litres in 2012), cans, paper, pallets and batteries. Non-hazardous recyclable materials, such as paper, wood and metal, are recovered and returned to community recycling processes. Batteries and oil are recycled through approved companies for safe conversion.

Ambatovy Joint Venture (Ambatovy JV)

In Madagascar, the Ambatovy JV uses several channels for recycling materials. Over 3,000 m³ of plastic waste was sent to a local company in 2012 for conversion to marketable products for domestic and international customers. Approximately 13,000 m³ of used lumber was sent to communities around the plant site for use in furnishings for government buildings and schools. In addition to these reuse opportunities, vegetable oil, machine oil and lubricant and scrap metal is recycled. The [Ambatovy JV Sustainability Report](#) provides additional information on the management of waste materials.

Coal

In 2012, Coal recycled over 1,500 tonnes of metal and more than one million litres of oil from vehicle maintenance. All waste materials are sent to the appropriate qualified facilities for disposal, and recyclable items are provided to municipal recycling programs where available.

Oil and Gas and Power

Oil and Gas and Power have well-established programs for recycling waste materials where possible. In 2012, just over 200 tonnes of metal were recycled through Cuban companies. Used oil is collected in a central area and transferred to Cuba's national oil company for reprocessing. Other waste streams, such as water and domestic waste, are sent to approved Cuban landfill and sewage treatment facilities for safe disposal.

Engaging Stakeholders and Benefitting Communities

Sherritt's projects, operations and other business activities affect a diverse range of stakeholders. To succeed in the highly competitive and closely watched global natural resources sector, Sherritt must engage effectively and transparently with its stakeholders. A broad list of our stakeholders can be found [here](#). Those most affected by our activities are the local communities near our sites. We are committed to working with them in a trusting, fair and respectful way to contribute to their quality of life and support development opportunities that align with their needs.

Learn more about [Engaging Stakeholders and Benefitting Communities](#)



Stakeholder Engagement

We engage stakeholders early on and throughout the asset lifecycles; and build enduring relationships based on mutual trust, respect and transparency.

Learn more about [Stakeholder Engagement](#)



Transparency

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

Learn more about [Transparency](#)



Community Benefits

We contribute to a lasting improvement in quality of life in the communities in which we operate.

Learn more about [Community Benefits](#)

For 2012 performance data, see [Stakeholder Indicators](#).

Management Approach

Sherritt's projects, operations and other business activities affect a diverse range of stakeholders. To succeed in the highly competitive and closely watched global natural resources sector, Sherritt must engage effectively and transparently with its stakeholders. A broad list of our stakeholders can be found [here](#). Those most affected by our activities are the local communities near our sites. We are committed to working with them in a trusting, fair and respectful way to contribute to their quality of life and support development opportunities that align with their needs.

Building on our history of successful partnerships and stakeholder relationships at our more mature operations, as well as the leading practices in place in Madagascar and our project in Indonesia, we are drafting corporate-wide stakeholder engagement guidance to ensure common standards are applied across the Corporation. This guidance involves taking certain steps to identify, understand and engage with our stakeholders and address their concerns, in order to maintain meaningful and productive relationships. It also outlines our mitigation hierarchy for any social impacts our activities may cause. Sherritt is currently updating the policy for engagement with indigenous peoples, including Aboriginal communities in Canada, so it better aligns with applicable legal requirements and international norms, such as the [International Finance Corporation Performance Standards](#).

Although our sustainability framework includes distinct commitments for stakeholder engagement and transparency, these two areas are, in practice, intertwined and mutually dependent.

Our commitment to transparency is about providing timely and accurate information on the impacts, benefits and associated risks of our mining-related activities and management practices. In addition to our annual sustainability report and regulated corporate disclosure, Sherritt adheres to recognized transparency standards and practices, including publishing payments to governments in nations that participate in the [Extractive Industries Transparency Initiative \(EITI\)](#) and reporting on [Global Reporting Initiative](#) indicators that are appropriate for our business.

We consult with local stakeholders around each of our sites to align our community investment initiatives with identified community development priorities. Community economic benefits from our projects and operations are optimized through local hiring and the evaluation and development of local supply options as part of our sourcing strategy.

Stakeholder Priorities

Priority	2012 Progress	Future Focus
Ensure common standards for stakeholder engagement are in place across the Corporation	<ul style="list-style-type: none">• Drafted our corporate Stakeholder Engagement Policy• Invested in a corporate-wide stakeholder information management system• Established an external affairs steering committee for the Sulawesi Project to align practices with corporate stakeholder engagement guidance	<ul style="list-style-type: none">• Finalize and roll out the Stakeholder Engagement Policy and develop additional guidance• Roll out the stakeholder information management system
Standardize guidance for engagement with Indigenous communities	<ul style="list-style-type: none">• Revised Aboriginal engagement approach for the permitting process of a Coal project in Alberta• Drafted a corporate Indigenous Relations Policy	<ul style="list-style-type: none">• Secure consent of Aboriginal communities affected by the permitting process of our Coal project• Finalize and roll out the Indigenous Relations Policy and develop additional guidance
Actively support transparency reporting initiatives	<ul style="list-style-type: none">• Represented industry in Madagascar's Extractive Industries Transparency Initiative (EITI) multi-stakeholder group• Supported the EITI reporting process in Madagascar• Aligned Sherritt's annual sustainability report with Global Reporting Initiative G3.1 Guidelines	<ul style="list-style-type: none">• Support the ongoing publication of EITI reporting in Madagascar• Contribute to Canadian and international transparency consultations and initiatives• Continuously improve the quality of our external sustainability reporting
Enhance our approach to benefitting communities	<ul style="list-style-type: none">• Updated our Community Investment Policy to focus on supporting education, health, biodiversity, culture/heritage and social initiatives• Revised our corporate strategy for major community investments	<ul style="list-style-type: none">• Focus on community investments that provide a clear linkage to our business objectives• Establish a major partnership for a common community development priority in the jurisdictions where we are active• Leverage local employment and procurement practices to enhance community benefits, as appropriate

Stakeholder Engagement

Sherritt believes that effective stakeholder engagement across the Corporation is crucial to being a successful company in the natural resources sector. By undertaking a transparent, proactive, receptive and systems-based approach to identifying and engaging with stakeholders, we are able to establish a mutual understanding of each other's needs, wants and concerns. This commitment optimizes our ability to share the benefits of our work, ultimately supporting growth, risk management and operating efficiency.

Our stakeholders comprise all individuals and groups who have an interest in, or believe they may be affected by, decisions regarding the management of our projects, operations and other interests. A complete list of our stakeholders can be found [here](#).

It is worth noting that Sherritt engages with a variety of non-governmental organizations (NGOs) through participation in the [Devonshire Initiative](#), a collaborative problem-solving forum for leading international development NGOs and mining companies aimed at improving on-the-ground sustainable development outcomes.

Metals

Moa Joint Venture (Moa JV)

Sherritt's Fort Saskatchewan and Moa operations have been in existence for many years. During that time, the surrounding communities have worked with site management to forge strong and trusting relationships. In Fort Saskatchewan, Sherritt was one of the first major industrial companies in the area, almost 60 years ago, and has been a major force in the development of the community, in terms of providing direct and indirect employment as well as assistance to the construction, improvement and maintenance of many municipal facilities.

Similarly, in Moa, the Moa JV has been operating for nearly 20 years, and previous to this, the Moa operation had been in production for another 35 years. During that entire time, the City of Moa has grown to be a significant resource hub in the area. Relations between the City of Moa and plant management have developed concurrently. Moa Nickel has participated in many projects to assist the municipality, and has even provided its specialized industrial equipment to support public infrastructure initiatives and hurricane recovery.

Our Havana office is in regular communication with authorities in the City of Moa, Holguin Province and the Government of Cuba, in order to align our community investment program with the identified priorities of the jurisdictions where we operate. This engagement also helps us to better understand the impacts of our operations on local populations.

Ambatovy Joint Venture (Ambatovy JV)

The information below for the Ambatovy JV is a summary only. More detail can be found at the [website](#), under the Sustainability tab.

The Ambatovy JV fosters positive relationships with communities near operating sites and other external stakeholders through proactive engagement. These communities are critical to the operation's success, and every effort is made to ensure they are well informed about its activities.

During 2012, the Ambatovy JV engaged with over 180,000 stakeholders, including local communities, civil society, government and regulatory bodies, media, the financial and business community, and its employees and contractors. These engagements were made during information road shows along the pipeline and main highway, at the JV's Information Centres in Moramanga and Toamasina, at public site visits, in meetings with community leaders and at special question-and-answer sessions.

In addition, the JV conducted over 500 meetings with local stakeholders, such as traditional leaders and village elders, mayors and leaders of the region, Malagasy NGOs, and the Local Consultative Committee and the Resettlement Committee, to maintain open communication and discuss collaboration opportunities.

During construction, Ambatovy JV archeologists carefully preserved objects of cultural significance. Over the course of its archeological work, the JV identified over 4,000 objects (including pottery and stones) and 200 heritage sites. The Ambatovy JV partnered with the [University of Toamasina](#) and the [CEREL Museum \(in French, Centre d'Études et de Recherches Ethnologiques et Linguistiques\)](#) to create a digital catalogue of the artifacts found. The Ambatovy JV presented its archeological work at an international workshop-symposium and [shared its findings](#) with the Ministry of Culture and Heritage.

In order to build the tailings facility safely, it was necessary to relocate just over a thousand people, creating the villages of Vohitrambato and Marovato. Following international best practices, the Ambatovy JV worked with both the people being relocated and the host communities to ensure that the move would have the best chance to succeed. Careful, long-term measures were taken so that communities and individuals would receive proper compensation for income reduction or affected property. The JV was pleased to hand over the land titles to the resettled population in Marovato in 2012, representing a key milestone in the resettlement process (as formal documentation of land tenure is a critical component of socio-economic development). The Ambatovy JV continues to work on finalizing land titles for residents of Vohitrambato and hopes to achieve this milestone soon.

In any major development such as the Ambatovy JV, there will be instances of disagreement or situations where industrial activities harm someone's property. The JV has worked hard to ensure that even the smallest property holder is not at a disadvantage. The Ambatovy JV's comprehensive grievance mechanism, created in 2010, is modelled on guidance from leading practices. In 2012, the mechanism's 30-day response rate significantly improved, from 28% to 48%, and the rate of complaint resolution increased by 9% compared to 2011.

The Ambatovy JV has provided compensation to people affected by its activities, to restore their livelihoods and standards of living, and to allow them to recoup their losses. Payments in cash and rice were made where people with rice paddies were impacted by construction. In 2012, the JV distributed a total of 626 tonnes of rice and US\$405,000 in cash. Rehabilitation of rice paddies affected by sediment from up-slope construction activities continued, and 158 ha were restored, directly benefitting 207 people.

With 2012 being the inaugural year that the Ambatovy plant site began operations, it was the first time that local residents could see, hear and smell the entire operation in production; that prompted questions. The Ambatovy JV actively engaged with external stakeholders, at the community, regional and national level, to respond to inquiries directly or through established committee meetings or communications.

Sulawesi Project

Our nickel project in Indonesia is at a preliminary exploration stage, so the needs and opportunities for stakeholder engagement and transparency are different than they would be for an operating facility. Nevertheless, stakeholder engagement was established quite early on. The Sulawesi Project is expected to begin its exploration drilling program in 2013, but discussions in the communities began more than a year earlier.

Community engagement is focused on raising community awareness of the Project, its needs and its potential impacts. Through a participatory approach running over two months and 27 meetings, the Sulawesi Project and the community established two institutions around which to structure the Project's community engagement and communication:

- Village committees: Each village in the Project region has a committee consisting of the village head, a female representative and a male representative. The village head is elected democratically through a government-controlled process. Other committee members are elected democratically through a Sulawesi Project-monitored process.
- Sub-district committee: This committee represents all the villages in the sub-district, consisting of one representative (elected by the village committee) from each village.

The committees will facilitate and mediate communication between the Sulawesi Project and the village communities. They will also act as the entry point for the Project to discuss community development projects, allowing community participation before activities are formally planned or implemented.

The village and sub-district committees provide a forum for distributing information on the Project's activities and plans. Those plans include bringing the village committees to the exploration site so that they can see what exploration is and what impact it has on the environment.

Possible employment at the Sulawesi Project is expected to prompt in-migration from other regions, making it important to establish a clear understanding of employment selection. Committee consultations established criteria for local employment. Despite the limited skills available in the local community, the Project was able to employ 132 persons, representing 100% of the local applicants who were physically able and suitably skilled to work in the exploration program.

In the event of disagreements, the Sulawesi Project has implemented inquiry, complaints and grievance management procedures that include a series of structured steps. These procedures have been widely publicized in nearby communities. A formal process for receiving, registering and processing inquiries and complaints is in place to ensure that both the Project and the inquiring party agree on any corrective action before the matter is closed.

Coal

Most of our Coal mines have been operating in Alberta and Saskatchewan for several decades. So for a long time, our presence and mining activities have been critical to the prosperity of the nearby communities. We are so engrained in these communities that, in some cases, Coal employees are also the community leaders, serving in such roles as mayor or councillor in local governments. This deep-seated interdependence gives us a unique understanding of the issues and needs of the communities as they evolve over time.

Coal regularly engages with its stakeholders on a range of social, economic and environmental issues of mutual concern. However, given its long-standing presence in many of its communities, interactions may consist of everything from formal meetings with the local government to relaxed discussions with informal leaders outside of the grocery store. We encourage all such forms of engagement to ensure that there is no hesitation, by either party, to raise an issue before it becomes a problem.

Coal has maintained a positive, largely informal relationship over the years with Aboriginal communities near operations. We continue to work on strengthening these relations by developing more formal and structured engagement programs to ensure these communities are properly consulted and represented in discussions relating to Coal's projects and operations.

Oil and Gas and Power

Engagement with Cuban stakeholders around our Oil and Gas and Power operations is an ongoing process. Regular communication is needed for: the coordination of drilling programs; the movement of natural gas and electricity; as well as ensuring that local communities are aware of Sherritt's activities. We also conduct regular consultations for Sherritt's community investment projects and maintain positive relationships with the government administrations in our areas of operation. In the past, we have provided assistance for hurricane recovery, and have been presented with certificates of appreciation for the work we do in the area.

Benefits of stakeholder partnerships

A great deal of Sherritt's success in stakeholder relations is due to the formation of successful partnerships, both to operate our business and for community investment purposes. Sherritt International Corporation was formed almost two decades ago on the basis of establishing a partnership to create and manage its Metals assets in Canada and Cuba; shortly afterward Sherritt entered into a joint venture to produce and distribute energy in Cuba. In Canada, Coal has investment and operating partnerships. In Madagascar, the Ambatovy JV is a joint venture partnership, as is our nickel project in Indonesia. (More information about Sherritt's history can be found [here](#).)

Sherritt also enjoys positive relationships with a number of local, national and international organizations outside of the business environment. For instance, we have worked with the World Wildlife Fund in Cuba to help preserve wetlands and wildlife. We have a long-standing relationship with the Northern Alberta Institute of Technology for training in Cuba and, more recently, in Madagascar, as well as for contributing to its Alberta campus. We partner with the Canadian Institute of Mining, Metallurgy and Petroleum to annually present the Sherritt Hydrometallurgy Award to recognize significant contributions in the field of hydrometallurgy. In Madagascar, we partner with dozens of organizations – from the United Nations Children's Fund to Conservation International – to support our sustainability-related programs. We are involved in several other such partnerships in all of our operating jurisdictions.



Transparency

As part of our commitment to transparency, we strive for continuous improvement in the disclosure of our annual sustainability reports, which we have been publishing for the past four years. Each year, the latest edition of this report is made available on our website, as is extensive information on the Corporation, its structure, organization and management, as well as its securities filings. Sherritt has established policies on timely disclosure and confidentiality and foreign anti-corruption that assist in ensuring that our employees manage their external interactions ethically and lawfully. We strive to meet or exceed our required disclosures in all jurisdictions where we operate and adhere to recognized transparency standards and practices. This includes publishing payments to foreign governments in [Extractive Industries Transparency Initiative \(EITI\)](#) candidate countries and sustainability reporting in alignment with the [Global Reporting Initiative G3.1 Guidelines](#).

Through the Ambatovy JV, Sherritt supports the EITI, an initiative – supported by a coalition of governments, companies, civil society groups, financial institutions and investors – aimed at improving the transparency and accountability of all payments made by companies in extractive industries to governments. There are two core elements to EITI:

- **Transparency:** Oil, gas and mining companies disclose their payments to the government, and the government discloses its receipts. The figures are reconciled and published in annual EITI reports alongside contextual information about the extractive sector.
- **Accountability:** A multi-stakeholder group (MSG) with representatives from government, companies and civil society is established to oversee the process and communicate the findings of the EITI report.

Madagascar became an EITI candidate country in 2008 and to date has submitted well-received [reports](#) for the EITI Board. Sherritt is fully supportive, and the Ambatovy JV has taken an active role in the MSG in Madagascar, to continuously improve reporting and build public awareness about transparency. In 2011, the EITI Board suspended Madagascar's candidacy until the country returns to democratic rule. However, Madagascar continues to make meaningful progress on EITI implementation, with its next report due out in 2013.

Transparency reporting

Sherritt freely reports its payments to various levels of government in Madagascar, the only EITI candidate country in which we are operating. (If our activities in Indonesia increase, we will also contribute to the reporting of that EITI candidate country.)

In Canada, extractive companies, along with civil society organizations and other stakeholders have been participating in consultations with the Government of Canada on how to approach mandatory reporting on the transparency of payments to governments. Sherritt has participated in many of these discussions, and will continue to work with our industry and the Government of Canada on this matter, as an advocate and thoughtful stakeholder.



Community Benefits

Sherritt recognizes that our licence to operate and grow is inextricably linked to the acceptance and approval of our stakeholders, especially the communities where we operate. We aim to ensure they can see a benefit from our presence. Generally, this will be economic, such as an employment opportunity or a supplier contract, but it can also take the form of community development, which considers broader social and environmental benefits. Sherritt believes that sharing the benefits of operations bolsters community acceptance, reduces social risks, helps to attract a talented workforce and may help to secure the resources needed to grow in the future.

We align our community investment (CI) programs with identified community development priorities at each site, through consultation with local stakeholders. For most of 2012, Sherritt focused CI on the areas of education, health and social initiatives (and that is the basis for this year's CI reporting). However, towards the end of 2012, we revised our CI policy to include two additional focus areas: culture/heritage and biodiversity, which are growing priorities for our stakeholders.

Watch a short [video](#) to learn more about Ambatovy's Buy Locally, Hire Locally policy.

Communities near Sherritt's projects, operations and offices benefit economically from our presence. In 2012, Sherritt as a whole contributed over \$500 million to the economies of their local communities in the form of wages and benefits paid to our workforce.

Metals

Moa Joint Venture (Moa JV)

Our operation in Fort Saskatchewan continues to source goods and services from regional businesses, and we paid almost \$2.3 million to the city and the region in taxes and fees in 2012.

We have also made donations to local youth organizations and educational institutions. A large number of our employees volunteer their time to activities such as children's sports, local governments, fire departments and other first responders, the collection and distribution of toys and goods during the holidays, local charities, and the organization of community events.

In Cuba, Sherritt consults with Cuban local authorities to provide assistance where it is most needed. We have provided the City of Moa with several buses to support public transit and have given funding to buy spare parts to keep the buses running. Their continued operation is a benefit to the community at large. We have also provided street lighting for public areas and hospitals, equipment to refurbish a community centre and materials for market gardens.

In 2012, Cuba was severely affected by Hurricane Sandy, which had a significant impact on Santiago de Cuba, as well as the Moa area. Sherritt consulted with the government and provided \$250,000 worth of sanitation equipment to the city of Santiago de Cuba to assist with clean-up operations and the recovery effort. Although Moa was not quite as hard hit as Santiago de Cuba, Sherritt provided equipment valued at over \$150,000, including a front-end loader, sanitation equipment and construction materials to help with Hurricane Sandy clean-up. The Moa JV helped in the clean-up and in equipment repair required for the fabrication of clay pipes, used by the City of Moa for sewers and drains.

Ambatovy Joint Venture (Ambatovy JV)

The information below for the Ambatovy JV is a summary only. More detail may be found at the [website](#), under the Sustainability tab.

The Ambatovy JV's comprehensive social development plan is aimed at achieving self-sustainability and an improved quality of life through vocational training, education and health initiatives, and agricultural support.

Health

The Ambatovy JV worked with local authorities in Toamasina, a city by the plant site, and Moramanga, a town near the mine site, to improve sanitation and waste management with the aim of improving public health. The JV provided funding to support a temporary provision for waste collection and pre-collection activities beginning in late 2012, in collaboration with a local non-governmental organization (NGO). As part of a different program, support was also provided for clean-up activities around smaller communities to fight malaria and other diseases.

In partnership with the [United Nations Children's Fund \(UNICEF\)](#), the Ambatovy JV trained 200 new youth peer educators in life skills. The JV has also begun constructing five new centres to give youth a place to exchange ideas with their peers. (Youth involvement is one of the cornerstones of the HIV/AIDS and sexually transmitted disease awareness campaigns that the Ambatovy JV oversees in communities near its operations.) These two youth-related initiatives are part of Ambatovy's zero tolerance programs for child protection and against children's sexual exploitation. All Ambatovy JV personnel, as well as contractors, are required to commit to supporting the programs.

Education

Projects with UNICEF are closely focused on education. The eco-friendly schools project teaches students how to use local products and innovative technology to build sustainable schools in their community. The construction of these schools is underway and expected to be completed in 2013. The School Success Contract Program teaches educators how to develop and implement participatory action plans in their schools in alignment with the Education for All Movement led by the [United Nations Educational, Scientific and Cultural Organization](#). The Ambatovy JV also continued its School Garden Program, which educates students, parents and educators on gardening.

Local Procurement

The [Ambatovy Joint Venture](#) is one of the largest customers for Malagasy businesses in the fields of transportation, construction, clothing, catering, supplies and materials. As at the end of 2012, 57% of its suppliers were from Madagascar, and they received US\$342 million in payments.

The Ambatovy JV's "buy locally, hire locally" policy provides an important impetus to the Malagasy economy and local entrepreneurs. In 2012, the JV:

- Purchased more than 900,000 kg of local produce from three bulk purchasing centres that it helped establish in Toamasina and Moramanga.
- Bought over 12,000 uniforms from two sewing studios in Toamasina – 99% of the staff members are women.
- Received over 10,000 wooden pallets from three local suppliers in Toamasina and Moramanga. The Ambatovy JV will buy approximately 50,000 pallets per year to transport its refined nickel and cobalt.
- Audited 224 local companies, to identify their strengths and weaknesses and determine with them areas requiring additional training.

Local Capacity Building

In 2012, the Ambatovy JV continued its program of agricultural training, providing instruction to over 5,000 people. With a local NGO, the JV offered hands-on training to farmers to teach techniques that can help them achieve self-sufficiency.

The Ambatovy JV also opened the [Ambatovy Business Training Centre](#), in collaboration with the [International Finance Corporation](#), to provide current and potential local suppliers with necessary skills in entrepreneurship; finance; quality control; and environment, health and safety, so that they are able to meet our procurement requirements. Courses are free to contracting companies, individuals with a business plan and students with a valid student card.

Donations

In 2012, the Ambatovy JV continued to support access to clean water in communities around its operations, providing financing for the construction of 26 wells built by a local NGO. To ensure the wells remain in good working order over the long term, communities are trained in the care and maintenance of the equipment.

In February 2012, Cyclone Giovanna struck Madagascar and caused extensive damage. We provided US\$150,000 in assistance, and additional funds came from contractors and Ambatovy JV partner companies. Working through NGO [CARE Madagascar](#), these funds supported relief efforts around the areas of our operation affected by the cyclone.

Demobilization

The end of the demobilization of the Ambatovy JV's construction workforce, a process which began a couple of years ago, coincided with the end of construction in 2012. Sensitive to the challenges these recently unemployed workers faced, the Ambatovy JV established a program to assist them in finding other income-generating opportunities. The JV set up and managed Manpower Redeployment Offices (in French, BRMOs) in key towns and cities near our operations and offices, to help these workers identify and apply to other employment or business opportunities that match their skill set. The uptake of the BRMOs has been impressive, with thousands of demobilized workers registering. By mid-2012, nearly 800 former construction workers had been re-employed at the Ambatovy JV in long-term positions as part of the BRMO process, and many others found jobs elsewhere or started their own businesses.

In addition, the Assistance Initiative for Demobilized Workers (in French, AIDE) program continued throughout the year. This innovative program provides temporary financial assistance to demobilized employees who are making the transition to new opportunities. By the end of 2012, approximately 19,500 people had registered; of those, 97% were determined to be eligible. By the end of the year, the Ambatovy JV had distributed approximately US\$5 million in AIDE payments.

Sulawesi Project

In addition to its local employment arrangements, we are addressing cultural issues around the Project area. One of these is the culturally embedded gender roles where men are the providers in the household, and women look after the children and the home. Furthermore, women require written permission from their husband or male family member to pursue employment with the Project. This is a challenge for us in our efforts to provide employment regardless of gender. Most positions in exploration are linked to working in remote areas on a rotational basis, which would be difficult for local women to do.

One way that the Project involves women without undermining cultural values is to establish an all-women catering group to supply meals for the logistics camp. To do this, women are being trained on hygiene standards related to food preparation, and they are developing weekly menus, budgeting, purchasing supplies, and establishing catering contracts. The cooking will be done in the women's home kitchens, which will allow them to maintain their responsibilities as wives and mothers.

The Project is also working to preserve local languages that are in danger of extinction. A doctoral scholarship program funded by us was established to focus on language and identity in the Project area. In addition, the Sulawesi Project encouraged and supported the publication of a dictionary in the local language, as the first step to preserving and promoting it.

Coal

Coal operations paid over \$10 million in municipal and city taxes in Alberta and Saskatchewan in 2012 and continue to provide hands-on assistance to local first responders in emergency situations.

Coal contributes annually to the [Foothills Recreation Management Association \(FRMA\)](#), which manages 15 campgrounds and eight trail systems in the foothills area near our Coal Valley and Obed mines. The FRMA's campgrounds and trails are maintained by [Fox Creek Development Corporation](#), an Aboriginal-owned-and-operated not-for-profit company committed to creating and maintaining jobs for Aboriginals (treaty, non-treaty and Métis) in the Hinton area.

Oil and Gas and Power

In areas where our Oil and Gas and Power operations are located, Sherritt assisted with a range of community projects identified as priorities by local authorities. Cities such as Varadero, Cardenas and Santa Cruz have benefitted from thousands of streetlights provided by Sherritt in recent years, as well as basic civic maintenance equipment, such as asphalt compactors, weed and brush clearing equipment, and machinery for maintaining sanitary sewers. We have supplied equipment for renovating schools and seniors' homes, as well as musical instruments for schools.

Corporate Office

Sherritt's corporate office has recently made many significant community investments for the arts, education and health facilities. Such investments are chosen strategically in support of local operations and broader business objectives, or are based on a commitment to a cause. Some examples include:

- For several years, we have been purchasing carefully selected pieces of contemporary art by internationally recognized Cuban artists to form the Sherritt Collection. The collection is housed at the [Art Gallery of Ontario](#) as a lasting contribution in Canada of Cuba's world-class achievements in contemporary art.
- For most of Sherritt's history, we have supported [Canada's National Ballet School \(NBS\)](#) in its pursuit of excellence in dance. Early on, Sherritt encouraged a partnership between Canada's NBS and Cuba's national ballet school in Havana to enable a sharing of cultures, skills and traditions between the countries. This initiative, as well as the art collection, underscores the shared values and common appreciation for culture that we have with our Cuban partners.
- In the past decade, Sherritt made a major donation to the Northern Alberta Institute of Technology for construction of the Centre for Millwright Technology, which has since trained a significant amount of our workforce.
- We are currently fulfilling a major commitment to the [Fort Saskatchewan Community Hospital](#) for the purchase of diagnostic equipment, and we donate funding to the [Multiple Sclerosis Society of Canada](#) to provide studentships for research into multiple sclerosis – two initiatives driven by employee interest.
- Sherritt proudly joined many other companies associated with the mining industry in an event to raise funds for the [SickKids Foundation](#), [SickKids International](#) and the [B.C. Children's Hospital Foundation](#).

Sherritt Community Investment

Sherritt's community investments focus on social programs, education and health. In 2012, the Corporation invested approximately \$1.9 million in community initiatives (excluding Ambatovy JV donations, which are detailed here). Social causes (including environmental, infrastructure and arts investments) were the Corporation's largest area of investment, receiving just over \$1 million. A significant portion of this related to \$400,000 provided to Hurricane Sandy recovery efforts in Cuba. Coal made significant contributions in Alberta and Saskatchewan to organizations such as the United Way and Make-A-Wish Foundation, as well as to First Nations communities. Education formed the second-largest investment area. Sherritt presents an annual Prize in Mining Engineering at Queen's University to encourage academic excellence, and Coal sponsors scholarships at the University of Alberta and the University of Saskatchewan. The balance (just over \$230,000) went to various health initiatives.



Performance

The data and tables in this section provide updates to key performance indicators and information. All data are based on a calendar year, and all references to currency are in Canadian dollars, unless otherwise noted.

Learn more about Corporate Indicators, Workplace Indicators, Ethics Indicators, Environment Indicators, Stakeholder Indicators, and Global Reporting Indicators



For more information about Sherritt's 2012 corporate performance, please see our 2012 Annual Report.

Corporate Indicators

P-1 Corporate Financial and Operations Highlights

	2012	2011
Revenue (\$ millions)	1,840.2	1,978.3
Adjusted EBITDA (\$ millions)	515.5	643.2
Net Earnings (Loss, \$ millions)	33.2	197.3
Nickel Produced (tonnes)	39,958	34,572
Cobalt Produced (tonnes)	4,285	3,860
Coal Produced (millions of tonnes)	34.9	37.1
Net Oil Production (boepd)	11,336	12,057
Electricity Generation (GWh)	1,884	1,854

NOTE: All volume measurements represent 100% of operations. No adjustment is made to reflect joint venture ownerships. (EBITDA: earnings before interest, taxes, depreciation and amortization. Boepd: barrels of oil equivalent per day. GWh: gigawatt hours.)

Workplace Indicators

W-1 Employee and Workforce Overview

Key Indicator	As at Dec. 31, 2012
Workforce (number of people)	
Canada	3,153
Cuba	2,217
Madagascar	3,197
Other Locations	17
Total Workforce*	8,584
Contractors	
Canada	121
Cuba	67
Madagascar	6,029
Other Locations	3
Total Contractors	6,220
Total	14,804
Gender — Percentage of Total (excluding Contractors)	
Male	88%
Female	12%
Fatalities	
Sherritt Direct Staff	1
Contractor Staff	3

* Data for total workforce adjusted from previous reporting to include approximately 350 people previously counted as contract workers.

W-2 Safety Statistics

Lost Time Injury Index*	2012	2011	2010	2009	2008
Metals	0.77	0.00	0.26	0.55	0.00
Ambatovy JV**	0.07	0.01	0.04	0.03	0.01
Coal	0.08	0.16	0.12	0.13	0.15
Oil and Gas	0.00	0.18	0.19	0.00	0.60
Power	0.35	0.21	0.39	0.39	0.00
Total**	0.17	0.05	0.07	0.07	0.06

* All data includes employees and contractor staff. Divisional data for previous years has been restated since the last report, resulting in some changes.

** The Ambatovy JV was previously included in Metals. Separation of data resulted in changes to Metals.

Total Recordable Injury Index*	2012	2011	2010	2009	2008
Metals	0.95	0.12	0.38	0.82	0.17
Ambatovy JV**	0.29	0.30	0.26	0.21	0.15
Coal	0.21	0.16	0.32	0.34	0.33
Oil and Gas	0.21	1.24	0.74	0.67	1.11
Power	0.86	1.70	0.39	1.37	1.38
Total**	0.38	0.33	0.29	0.29	0.23

* All data includes employees and contractor staff. Divisional data for previous years has been restated since the last report, resulting in some changes.

** The Ambatovy JV was previously included in Metals. Separation of data resulted in changes to Metals.

W-3 Winners of the John T. Ryan Trophy for Coal Mines*

Mine	Year Awarded
Paintearth mine	2012
Sheerness mine**	2011
Genesee mine	2010
Sheerness mine	2009
Genesee and Paintearth mines	2008
Awarded to a non-Sherritt mine	2007
Genesee mine	2006

Paintearth mine	2005
Genesee and Sheerness mines	2004
Genesee and Paintearth mines	2003
Poplar River mine	2002
Sheerness mine	2001
Genesee mine	2000
Genesee and Paintearth mines	1999
Genesee and Paintearth mines	1998
Genesee, Sheerness and Paintearth mines	1997
Genesee mine	1996

* The John T. Ryan Trophy for Coal Mines is awarded annually by the Canadian Institute of Mining, Metallurgy and Petroleum to a coal mine (or mines) that achieve(s) the best safety performance in the Canadian coal sector during the previous year.

** Sheerness also received a John T. Ryan Special Award in 2011 for its exemplary safety record.

W-4 Employee Relations

Union Relations (Canadian operations)

Number of collective bargaining agreements	7
Number of unionized employees	1,936
Percentage of employees covered by a collective bargaining agreement	61%
Canada	61%
Cuba*	>95%
Madagascar**	90%
Number of strikes or lockouts exceeding one week duration	
All locations	0
Awards for employee dependant scholarships (dollar amount)	\$535,000

* Employees in Cuba are represented by a union structure, but the degree of collective bargaining is not known.

** Employees in Madagascar do not have formal unions but are represented by employee organizations that provide similar benefits.

Ethics Indicators

Ethics

Anti-Corruption Training:

By the end of 2012, a total of 75% of affected employees had received anti-corruption training, increasing to 96% at the time of writing.

Human Rights

Incidents of Discrimination:

Sherritt had no reported incidents of discrimination at its operations or offices during 2012.

Child Labour:

Sherritt has no operations at risk for incidents of child labour. The Ambatovy JV actively works to protect the rights of children through its Zero Tolerance Policy, which applies to both employees and contractors.

Security and Human Rights Risk Assessment:

In 2012, Ambatovy facilitated the completion of a security and human rights risk assessment by subject-matter experts, who consulted greatly with internal and external stakeholders.

Grievance Procedures:

Both the Ambatovy JV and the Sulawesi Project have established formal grievance procedures.

- The Ambatovy JV reported 1,941 complaints of different degrees of seriousness, ranging from compensation to environmental concerns. Of these, 48.6% were resolved by year-end, mostly within 30 days.
- The Sulawesi Project has not received a grievance to the end of 2012.

Environment Indicators

E-1 Environmental Incident Reports*

Key Indicator (number of reports filed in Canada for Canadian operations)	2012
Fort Saskatchewan ¹	
Air	2
Land	0
Water	0
Coal ²	
Air	1
Land	2
Water	49

* "Reported" shows the number of times reports were required due to an exceedance of our operating approvals.

1. Fort Saskatchewan had two air events that were reported to Alberta Environment and Sustainable Resource Development in 2012. These events were reported as incident notifications because both events had the potential to exceed operating approval limits. Both events resulted in completed corrective actions.

2. The following details describe events at Coal: Air – The report was related to hazardous waste storage. Land – One report was due to administrative error and one was due to a spill of deleterious substances, which was contained and the materials recovered for disposal at a regulated facility. Water – These reports were primarily due to high precipitation resulting in higher levels of suspended solids in water discharged from mine sites.

E-2 Reclamation at the Moa Nickel Mine

	2012	2011	2010	2009	2008
Affected	55	46	46	48	45
Reclaimed	38	43	74	85	82

E-3 Reclamation at Coal's Mines¹

(ha)	2012	2011	2010	2009	2008
Levelled*	1,182	1,143	912	643	928
Completed**	1,098	992	501	694	688

* Levelled: the return to contour specified as the provincial standard, as outlined in mining licences.

** Completed: levelled, contoured and topsoiled.

1. Excludes reclamation at Genesee and Highvale mines, which are not owned by Sherritt.

E-4 Sherritt Coal's Total Reclamation Achievement¹

Mine	Surface disturbed ² to Dec. 31, 2012	Approximate total reclaimed ^{2, 3}	
	Ha	Ha	Percent
Bienfait	2,479	1,485	59.9
Boundary Dam	9,295	7,401	79.6
Coal Valley	5,910	3,320	56.2
Obed Mountain	1,911	624	32.4
Paintearth	3,782	2,904	76.8
Poplar River	5,034	3,636	72.2
Sheerness	3,780	2,317	61.3
Gregg River ⁴	1,300	1,300	100.0
Total	33,491	22,987	68.6

1. Cumulative life of mine total.

2. Data revised from previous reports.

3. Completed: levelled, contoured and topsoiled.

4. The Gregg River mine ceased operation in 2000. Reclamation was completed in 2011.

E-5 Ambatovy JV Net Impact of Mining Activities in Forested Areas

Forest/Land Areas	Land to be used (ha)	Land to be reclaimed (ha)	Land to be conserved (ha)
Mine Footprint	1,800	1,800	0
Slurry Pipeline	600	600	0
Roads/Infrastructure	100	0	0
On-Site Mine Conservation Forest ¹	0	0	3,644
Ankerana Offset (BBOP area)	0	0	6,800
Subtotals	2,500	2,400	-100
Net Gain			10,344

1. The Ambatovy JV has redefined the mine conservation forest to include only land within the Ambatovy JV land lease area. This caused a reduction of 1,556 ha that is outside of the lease area but was being conserved by the JV. This land is rightly under the control and protection of the Analamay-Mantadia Forest Corridor (AMFC) administration. A 300 ha zone identified in previous reporting as on-site offset is now included in the mine conservation forest total of 3,644 ha.

The AMFC is a forest area beside the Ambatovy JV mining lease area that includes 6,823 ha of forest to be strictly conserved, the 1,556 ha transferred and other conservation areas. The Ambatovy JV and a major international non-government organization were instrumental (through funding and services) in initiating the process to acquire protected status and forest management for this area, but its administration will remain independent of the JV. The Ambatovy JV continues to work with partners in the conservation of the AMFC to ensure that there is a continuous protected forest area linking mine conservation forests and other conservation zones. The result will be one of the largest continuous tracts of protected forest in Madagascar. By securing protected status for this land, the Ambatovy JV has effectively increased the total net gain in conserved land.

These data exclude land conserved as the Torotorofotsy Wetlands, which are located near the mine site. The Ambatovy JV works with the Government of Madagascar, Malagasy non-governmental organizations, and other stakeholders to assist in managing the area, which has been classified under the Ramsar Convention on Wetlands.

For more information on our efforts in Madagascar relating to biodiversity, mitigation and rehabilitation, please visit the Ambatovy JV website.

E-6 Ambatovy JV Inventory of Species Protected

Full details on the Ambatovy JV's biodiversity programs are available on the Ambatovy JV website or in the Ambatovy JV Sustainability Report.

E-7 Greenhouse Gas Emissions by Operation

(tonnes of CO₂e)	2012	2011	2010	2009	2008
Metals					
Fort Saskatchewan industrial process emissions*	119,709	105,417 ¹	71,617	70,078	78,641
Fort Saskatchewan refinery**	256,079	238,895	223,433	239,280	213,634
Ambatovy JV total (mine, slurry pipeline, plant and port) ²	2,095,772	375,000	n/a	n/a	n/a
Coal					
Bienfait mine, Activated Carbon and Char plants	113,162	122,128 ³	158,288 ³	126,647	119,437
Boundary Dam mine	49,489	51,156	50,083	50,314	46,175
Coal Valley mine	195,197	180,390	198,072	195,640	174,439
Genesee mine (100% basis)	46,805	48,995	55,056	48,642	51,556
Obed Mountain mine	20,794	43,435	41,329	18,043	0
Paintearth mine	30,195	27,106	31,250	26,375	24,982
Poplar River mine	21,171	25,736	20,877	20,369	17,470
Sheerness mine	27,569	29,197	29,504	25,880	30,314
Power	32,592	31,950	31,161	n/a	n/a
Total⁴	3,008,534	1,279,405	910,670	821,268	756,648

* Industrial process emissions are those associated with such things as chemical reactions, which are not required as part of annual reporting to Alberta regulators.

** Emissions reported to Alberta regulators for compliance (total emissions less industrial process emissions).

1. Revised provincial definitions for industrial emissions to include carbon-dioxide sales have resulted in higher Fort Saskatchewan emission levels since 2011 reporting.
2. Ambatovy JV greenhouse gas (GHG) levels increased in 2012 due to commissioning and the start of operations.
3. Correction made to Bienfait's GHG data from 2011 reporting.
4. Oil and Gas Division and Moa operations GHG emissions data were not available for this report.

E-8 Offset Credits Purchased

Offset Credits Purchased (tonnes of CO₂e)	2012	2011	2010	2009	2008
Metals	35,588	16,267	20,120	37,915	20,202
Coal	27,065	16,830	28,020	7,782	0
Total	62,653	33,097	48,140	45,697	20,202

E-9 Carbon Credits Produced

(tonnes of CO₂e)	2012
Carbon credits from Energas in Cuba	
Clean Development Mechanism credits issued to Dec. 31, 2012	343,125
Reported (submitted for approval, not issued or awaiting verification)	634,208
Recorded but not yet submitted	463,969
Total recorded to Dec. 31, 2012	1,441,302

E-10 Air Emissions

Metals – Fort Saskatchewan

(tonnes)	2012	2011	2010	2009	2008
NO _x	1,920	1,650	1,556	1,620	1,452
SO _x	177	250	194	92	219
TPM	48	48	170	153	121

NOTE: Total site nitrogen oxide (NO_x) and sulphur oxide (SO_x) data will not match National Pollutant Release Inventory (NPRI) database because NO_x and SO_x data are below the applicable NPRI reporting threshold levels. Total particulate matter (TPM) decreased significantly following process adjustments at the granulation plant, as per testing results.

Moa Nickel

(tonnes)	2012	2011	2010	2009	2008
NO _x	n/a	n/a	n/a	n/a	n/a
SO _x	14,497	16,334	15,776	15,038	15,554
TPM	n/a	n/a	n/a	n/a	n/a

NOTE: Moa Nickel has no equivalent data for NO_x and TPM.

Coal – All Locations

(tonnes)	2012	2011	2010	2009	2008
NOx	316	359*	315	351	260
SOx	593	667*	674	559	523
TPM	15,985	19,990	16,612	22,033	21,011

*NOx and SOx values for Coal were corrected to reflect final reporting to authorities.

Power

(tonnes)	2012	2011	2010	2009	2008
NOx	102	96	100	n/a	n/a
SOx	298	335	278	n/a	n/a

Sherritt Total – All Locations Above

(tonnes)	2012	2011	2010	2009	2008
NOx	2,338	2,105	1,971	1,971	1,712
SOx	15,565	17,586	16,922	15,689	16,296
TPM	16,033	20,038	16,782	22,186	21,132

E-11 Waste Management Indicators

Indicator	2012
Metal recycled (tonnes) – Canadian and Cuban sources	2,352
Oil recycled (litres) – Canadian, Moa and Ambatovy JV sources	1,350,472
Sulphur reclaimed (tonnes) – Canadian operations	>40,000

Stakeholder Indicators

S-1 Local Employment Contribution

	2012	2011	2010
Wages paid, including benefits at all operations (\$ millions)	500	442	430

S-2 Voluntary Community Investment

Sector	2012 (\$)	2011 (\$)	2010 (\$)
Education	606,412	680,625	815,587
Health	231,501	1,608,833	791,165
Social	1,069,124	402,062	187,620
Total*	1,907,037	2,691,521	1,794,372

* These totals exclude obligatory community investment and training costs.

S-3 Affiliations, Partnerships and Memberships in 2012

Sherritt is affiliated with a wide range of local, national and international organizations. Although we are proud of each of these associations, it is not practical to list them all here. Below is a list of our major affiliations, partnerships and memberships.

	Organization
Industry	Alberta Chamber of Resources
	Canadian Chamber of Commerce
	Canadian Clean Power Coalition
	Canadian Institute of Mining, Metallurgy and Petroleum
	Coal Association of Canada
	Cobalt Development Institute
	Madagascar Business Association
	Chamber of Mines Madagascar
	Madagascar Industrial Association
	Nickel Institute
Northeast Capital Industrial Association	

Prospectors & Developers Association of Canada

Saskatchewan Mining Association

Other

Asity Madagascar (BirdLife in Madagascar)

Business and Biodiversity Offsets Programme,
Advisory Group

CARE International

Conservation International

Devonshire Initiative

Extractive Industries Transparency Initiative Multi-
Stakeholder Group in Madagascar

Human Network International

Missouri Botanical Garden

Population Services International

United Nations Children's Fund

Wildlife Conservation Society

GRI Index

Our adoption of GRI reporting is progressing well but some indicators are not yet reported. Others are noted as not material to Sherritt.

Profile Disclosure	Description	Location
Strategy and Analysis		
1.1	Message from the President and Chief Executive Officer	President and Chief Executive Officer Message
1.2	Key impacts, risks and opportunities	Approach (Sherritt sustainability framework, sustainability priorities, framework development) Key Sustainability Priorities Framework Development Materiality Governance Performance Annual Information Form, p. 87
Organizational Profile		
2.1	Organization name	About Sherritt
2.2	Primary brands, products and activities	About Sherritt Annual Information Form, p. 5 (Nickel and Cobalt), p. 29 (Coal), p. 59 (Oil and Gas) and p. 76 (Power)
2.3	Operational structure of the organization	About Sherritt Annual Information Form, p. 1, p. 5 (Nickel and Cobalt), p. 29 (Coal), p. 59 (Oil and Gas) and p. 76 (Power)
2.4	Location of organization's headquarters	About Sherritt
2.5	Countries where the organization operates	About Sherritt
2.6	Ownership and legal form	Annual Information Form, p. 1
2.7	Markets served	About Sherritt Annual Information Form, p. 1, p. 5 (Nickel and Cobalt), p. 30 (Coal), p. 59 (Oil and Gas) and p. 76 (Power)
2.8	Scale of the organization	About Sherritt Performance (Workplace Indicators) Management's Discussion and Analysis (financial information)
2.9	Significant changes during the reporting period	About This Report Annual Information Form, p. 3
2.10	Awards received	John T. Ryan Trophy - See Performance

Report Parameters

Profile Disclosure	Description	Location
3.1	Reporting period	About This Report
3.2	Date of most recent previous report	About This Report Previous full report was in 2011 for 2010 calendar year
3.3	Reporting cycle	About This Report Report is biennial, data annual
3.4	Contact point for questions	About Sherritt For sustainability: sustainability@sherritt.com For investor relations and financial questions: investor@sherritt.com
3.5	Process for defining report content	Approach Materiality About This Report
3.6	Boundary of the report	About This Report
3.7	Limitations on the scope or boundary	Complete information is not yet available for some divisions. For example, GHG data for the Oil and Gas Division is not available for this report.
3.8	Reporting on joint ventures	About This Report
3.9	Data measurement techniques	Performance
3.10	Effect of re-statements of information	Performance Coal reclamation achievement has been recalculated using more current methodologies. See Environmental Responsibility – Land.
3.11	Significant changes from previous reporting periods	None
3.12	Table locating standard disclosures	GRI Index
3.13	External assurance	The report is not externally verified.

Governance, Commitments and Engagement

4.1	Governance structure	Governance Annual Information Form, p. 104 Management Information Circular, p. 17 Sherritt's website
4.2	Board Chairman	Annual Information Form, p. 104 Sherritt's website
4.3	Independent Board members	Annual Information Form, p. 104 Sherritt's website
4.4	Stakeholder communication with Board	Management Information Circular, p. 18
4.5	Executive compensation	Management Information Circular, Compensation Discussion and Analysis, p. 20
4.6	Conflicts of interest	Management Information Circular, p. 13
4.7	Board qualifications and expertise	Management Information Circular, p. 15

Profile Disclosure	Description	Location
4.8	Mission, values, codes of conduct and principles	Sherritt Sustainability Framework Key Sustainability Priorities Framework Development Sherritt's website
4.9	Board oversight of Sustainability	Governance
4.10	Board performance evaluation	Management Information Circular, p. 18
4.11	Application of precautionary approach or principle	Governance Annual Information Form, p. 87
4.12	External charters, principles, or initiatives	Operating Ethically Callout on EITI Human Rights Environmental Responsibility
4.13	Memberships in associations	Performance Table S-3, Affiliations and Memberships
4.14	Stakeholder groups engaged	Performance Table S-3, Affiliations and Memberships About This Report Stakeholder Engagement
4.15	Identification of stakeholders	About This Report Stakeholder Engagement
4.16	Approaches to stakeholder engagement	About This Report Stakeholder Engagement Performance Table S-3, Affiliations and Memberships Materiality
4.17	Stakeholder topics and concerns	Materiality Stakeholder Engagement Management Approach Sections
Economic		
Management Approach – Economic		Performance Table P-1 Annual Information Form, Narrative Description of Business, p. 5 Engaging Stakeholders and Benefitting Communities
EC1	Direct economic value generated and distributed	Transparency Community Benefits Performance Tables P-1, S-1 and S-2 Annual Report (Financial Review)

Profile Disclosure	Description	Location
EC2	Implications and opportunities due to climate change	Energy and Climate Change Performance Tables E-7, E-8 and E-9 Annual Information Form, p. 81
EC3	Defined benefit plan obligations	Annual Report (Financial Review)
EC4	Government financial assistance	Annual Information Form, p. 143
EC6	Local spending for supplies	Engaging Stakeholders and Benefitting Communities – Management Approach Benefitting Communities
EC7	Local hiring	Rewarding Workplace Community Benefits
EC8	Public benefits	Community Benefits
EC9	Significant indirect economic impacts	Community Benefits

Environmental

	Management Approach – Environment	Environmental Responsibility landing page Environmental Responsibility – Management Approach Annual Information Form, pp. 80–82
EN1	Materials used by weight or volume	Not material to Sherritt
EN6	Energy-efficiency initiatives	Energy and Climate Change Annual Information Form, pp. 80 and 81
EN9	Water sources significantly affected by use	Water
EN11	Areas of high biodiversity value	Biodiversity Performance Table E-5
EN12	Impacts on biodiversity	Biodiversity Performance Table E-5
MM1	Land disturbed or rehabilitated	Biodiversity Performance Tables E-2, E-3, E-4 and E-5
EN13	Habitats protected or restored	Biodiversity Ambatovy JV website
EN14	Strategies for managing impacts on biodiversity	Environmental Responsibility – Management Approach Biodiversity
EN15	Species at risk	Performance Table E-6 http://www.ambatovy.com/_docs/?p=416
EN16	Direct and indirect greenhouse gas emissions	Performance Table E-7
EN18	Initiatives to reduce greenhouse gas emissions	Energy and Climate Change Performance Table E-9
EN19	Emissions of ozone-depleting substances by weight	Not material to Sherritt
EN20	NOx, SOx and other significant air emissions	Performance Table E-10
EN22	Total weight of waste by type and disposal method	Performance Table E-11
EN23	Total number and volume of significant spills	Performance Table E-1
EN26	Mitigation of environmental impacts of products	Energy and Climate Change Annual Information Form, p. 80

Profile Disclosure	Description	Location
EN27	Products and packaging materials reclaimed	Not material to Sherritt
EN29	Significant environmental impacts of transporting products	Not material to Sherritt

Labour

Management Approach – Labour		Safe and Rewarding Workplace – Management Approach Our Workforce Rewarding Workplace
LA1	Total workforce	Our Workforce Performance Table W-1
LA4	Collective bargaining agreements	Our Workforce Performance Tables W-1 and W-4
MM4	Number of strikes and lock-outs	Performance Table W-4
LA7	Rates of injury	Health and Safety Performance Table W-2
LA8	Health education and training	Community Benefits
LA10	Average hours of training provided	Training and Development
LA11	Skills management programs provided	Training and Development
LA13	Diversity of governance bodies	Performance Table W-1 Sherritt's Website

Human Rights

Management Approach – Human Rights		Operating Ethically - Management Approach Business Ethics Human Rights
HR4	Total incidents of discrimination	Performance (Ethics Indicators)
HR6	Risk for child labour and prevention measures taken	Community Benefits Performance (Ethics Indicators) Ambatovy JV website

Society

Management Approach – Society		Engaging Stakeholders and Benefitting Communities – Management Approach Stakeholder Engagement Transparency Community Benefits
SO1	Community impacts	Community Benefits
MM7	Use of grievance mechanisms	Human Rights Stakeholder Engagement Performance (Ethics Indicators)
MM9	Resettlement	Stakeholder Engagement

**Profile
Disclosure Description**

Location

S03	Corruption training	Business Ethics Performance (Ethics Indicators)
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Product Responsibility

Management Approach – Product Responsibility		Annual Information Form, pp. 80 and 82
PR1	Health and safety impacts of products and services	Not material to Sherritt
PR2	Incidents of non-compliance regarding product health and safety impacts	Not material to Sherritt
PR3	Product information requirements	Not material to Sherritt
PR4	Non-compliance with information requirements	Not material to Sherritt
PR5	Customer satisfaction	Not material to Sherritt
PR6	Programs for marketing communications	Not material to Sherritt
PR7	Compliance with marketing communication regulations	Not material to Sherritt
PR8	Complaints regarding customer privacy and data	Not material to Sherritt
PR9	Significant fines for non-compliance regarding products	Not material to Sherritt

Glossary

Activated carbon – A form of highly porous carbon that can easily absorb gases, vapours and colloidal particles. It is made by the distillation of solid material that has a high carbon content, such as coal, wood and peat, followed by heating the resultant product to high temperatures with steam or CO₂.

AESRD – Alberta Environment and Sustainable Resource Development, a provincial government department responsible for environment and sustainable resource development.

BBOP – The Business and Biodiversity Offsets Programme is a defined program that provides for measurable conservation outcomes to offset significant or persistent adverse impacts of capital project development. The BBOP program is a partnership of companies, governments and civil society groups. The BBOP secretariat function is provided by Forest Trends and the Wildlife Conservation Society.

Biodiversity – The biological diversity in an environment as indicated by the number of different species of plants and animals.

Carbon credits – A calculated quantity representing either a reduction of carbon-dioxide equivalents (measured in tonnes of CO₂e) or an emission level below what is required under law. To be an effective credit, it must be verified under a recognized methodology and appropriately registered with a recognized third party.

CDM – The **Clean Development Mechanism** is provided in the **Kyoto Protocol** to enable companies to produce tradable registered carbon credits (called certified emission reductions, or CERs) through development of emission-reduction projects in developing countries.

Char – The product derived from heating lignite coal at high temperature in the absence of air. It is used to produce barbecue briquettes.

CO₂/CO₂e – The chemical formula for carbon dioxide. CO₂e signifies the carbon-dioxide equivalent of a greenhouse gas, using the global warming potential of each gas.

EITI – The **Extractive Industries Transparency Initiative** is a global standard that promotes revenue transparency and accountability in the natural resources sector.

Ha – Hectares; one hectare is equivalent to 10,000 square metres or 2.47 acres.

ICMM – The **International Council on Mining and Metals**, a global industry association that requires members to implement 10 sustainable development framework principles.

IFC – **International Finance Corporation**, a part of the **World Bank Group**, established in 1956 to promote sustainable private-sector investment in developing countries. The IFC has developed a series of performance standards on social and environmental sustainability that are often required for successful project financing.

ISO – The **International Organization for Standardization**, an organization that develops and publishes international standards.

LTI – The Lost Time Injury index is a standardized method that allows comparison of data among companies of different sizes. The total number of LTIs in a period is multiplied by 200,000 (the average number of hours in 100 years) and is then divided by the total number of exposure hours in the period.

NGO – A non-governmental organization is a legally constituted corporation that operates independently from government.

NOx – Nitrogen oxide emissions.

NPRI – The National Pollutant Release Inventory is Environment Canada's annual inventory of air, land and water emissions, disposals and transfers, as reported under current regulations.

OHSAS – The **Occupational Health and Safety Assessment Series**, an international occupational health and safety management system specification created by a team of world national standards bodies, certification bodies and specialist consultancies.

ONE – In French, **Office National pour l'Environnement**, Madagascar's National Environment Office, which is a regulatory body.

PM – Particulate matter (commonly airborne dust), which is measured at different levels, often by particle size.

GHG – Greenhouse gas can be any of the six commonly used gases that are known to have the potential to add to global warming. These are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). Some of these have subcategories. Each GHG has a global warming potential (GWP) in relation to CO₂.

GRI – The **Global Reporting Initiative**, a standard for sustainability reporting.

GW – A gigawatt is a standard unit of measure for electricity, equivalent to one million kilowatts.

GWP – The global warming potential is an index that compares the relative potential of the greenhouse gases to contribute to global warming over 100 years. Global warming is a result of the additional heat/energy that is retained in the Earth's ecosystem through the release of these gases into the atmosphere. The additional heat/energy impact of all other greenhouse gases are compared with the impacts of carbon dioxide (CO₂) and are referred to in terms of a CO₂ equivalent (CO₂e). Carbon dioxide has been designated a GWP of 1, methane has a GWP of 23, and nitrous oxide has a GWP of 310. A complete list of GWP multipliers may be found on this [site](#).

SO_x – Sulphur oxide emissions.

TPM – Total particulate matter, which includes all sizes of particles.

TRI – The Total Recordable Injury index is a standardized method that allows comparison of data among companies of different sizes. The total number of TRIs in a period is multiplied by 200,000 (the average number of hours in 100 years) and is then divided by the total number of exposure hours in the period.

UNESCO – The **United Nations Educational, Scientific and Cultural Organization**, whose purpose is to contribute to peace and security by promoting international collaboration through education, science, and culture in order to further universal respect for justice, the rule of law, and human rights along with fundamental freedoms proclaimed in the United Nations Charter.

UNFCCC – The **United Nations Framework Convention on Climate Change** is an international treaty, supported by a United Nations Secretariat who works to consider what can be done to reduce global warming.

UNICEF – The **United Nations Children's Fund** is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential.

VPs – The **Voluntary Principles on Security and Human Rights** are a set of voluntary principles that guide companies in maintaining the safety and security of their operations within an operating framework that ensures respect for human rights and fundamental freedoms.