



2018 CSR Report

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Christel Bories
Chairman and CEO

“Our vision for the future includes a strong ambition: to be the best in the business activities we choose to pursue and to be a responsible company that creates value and is admired for its strategic, managerial and social model.

In 2018, we launched a number of initiatives to improve our operational performance and our commitment as a responsible company.

2019 will be the year of acceleration of the in-depth transformation of our activities initiated 18 months ago in order to build a sustainable, high-performance and recognized global player in responsible mining and metallurgy and energy transition.”



Virginie de Chassey
Director of Communications and Sustainable Development

“Now is the time for action! Climate change, responsible resource management, biodiversity preservation, social justice, our society is facing many challenges. Fully aware of the world in which it operates through its mining and industrial activities, Eramet commits.

Combining Eramet's Non-Financial Performance Statement and its Vigilance Plan into a single document, this 2018 CSR Report presents the Group's commitments, organization, monitoring of key indicators, risks and significant achievements during the year.

In its CSR roadmap, in line with the UN Sustainable Development Goals (SDGs) and the Group's five-year vision, Eramet has set itself ambitious and measurable objectives. Defined for the 2018-2023 period, they reflect the commitment to being a socially responsible, committed and contributing company. Through its strategic choices, its actions and its exchanges, Eramet aims to make a positive contribution where it operates.

For maximum efficiency, 13 objectives address 3 core areas:

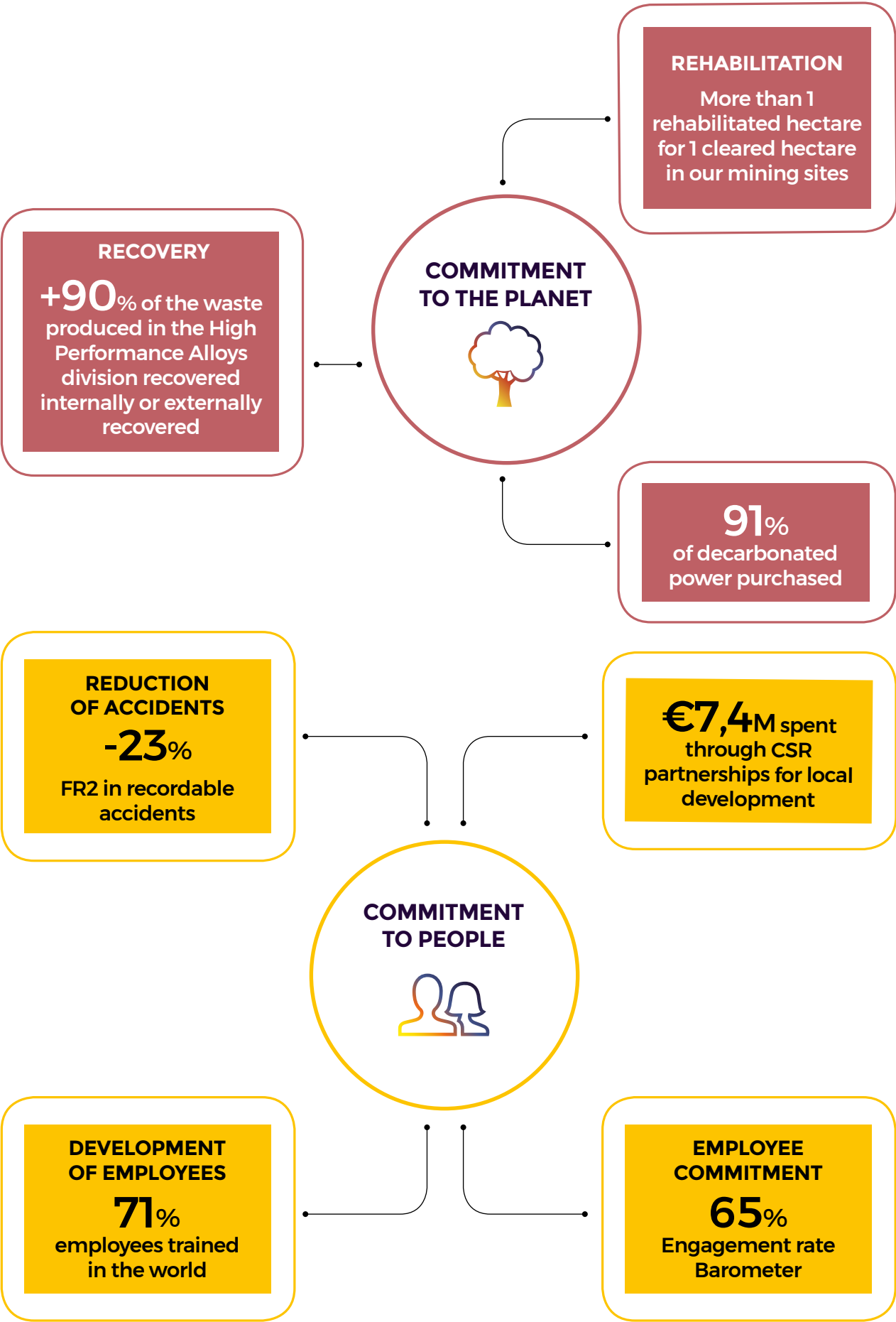
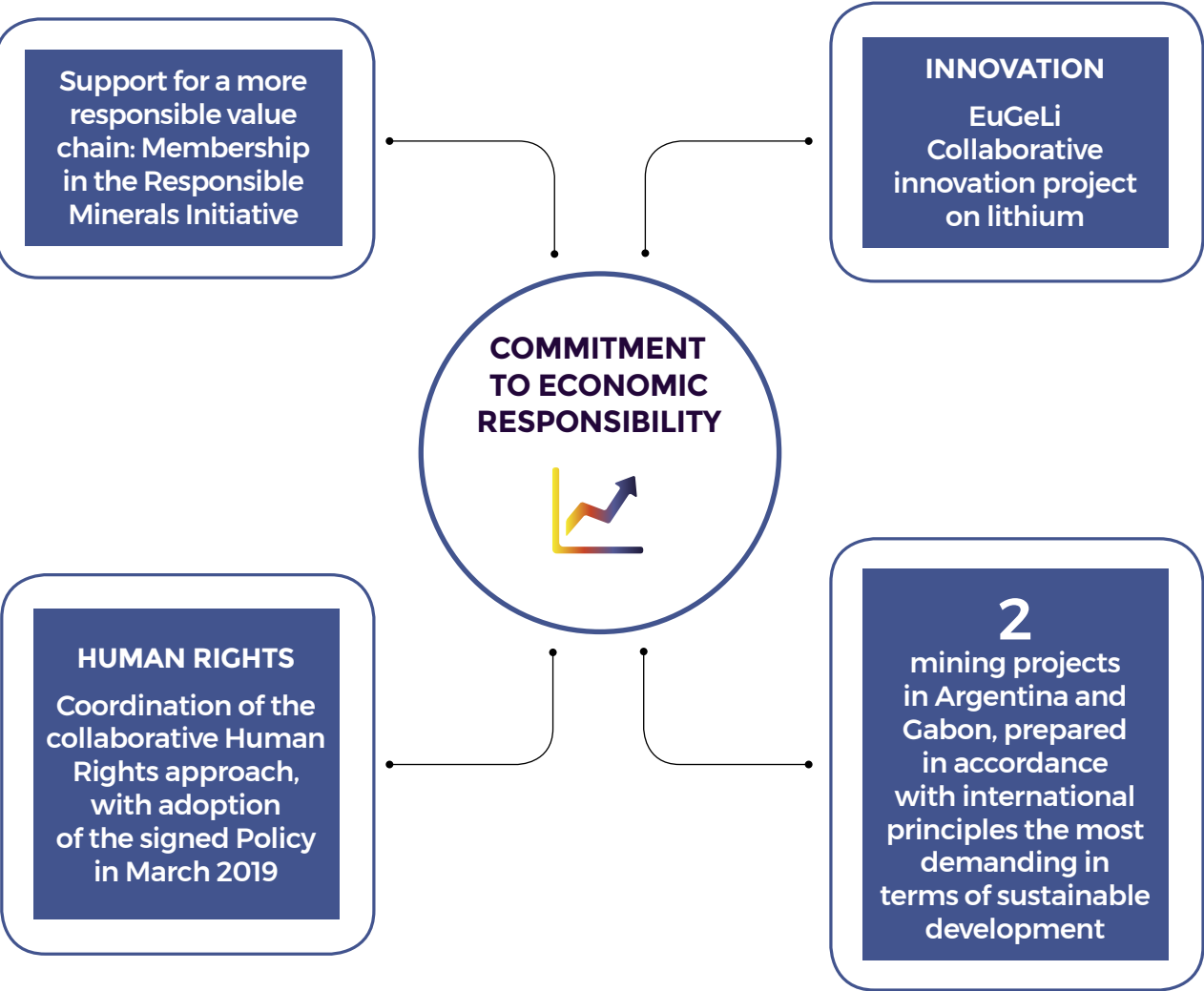
- a committed player for women and men (health, safety, dialogue and development of our employees and of our host communities);
- a responsible economic player (ethical compliance, responsible management, development of metals in the energy transition, circular economy);
- a committed player for the planet (management of our environmental and climate footprint).

The implementation of the Group's social commitments is the result of an active and constructive collaboration between the Corporate departments and the teams working in the field. I would like to warmly thank all those who, through their commitment and positive initiatives, have contributed to these results.”

CSR HIGHLIGHTS

2018

Due to the nature of its mining and industrial activities, and aware of its strong interaction with the local areas in which it operates, Eramet is resolutely focused on all matters related to sustainable development and corporate social responsibility (CSR). 2018 represented a new stage in the Group's continuous improvement approach, as illustrated by the publication of our 2023 CSR Roadmap and the social and environmental achievements shown opposite.

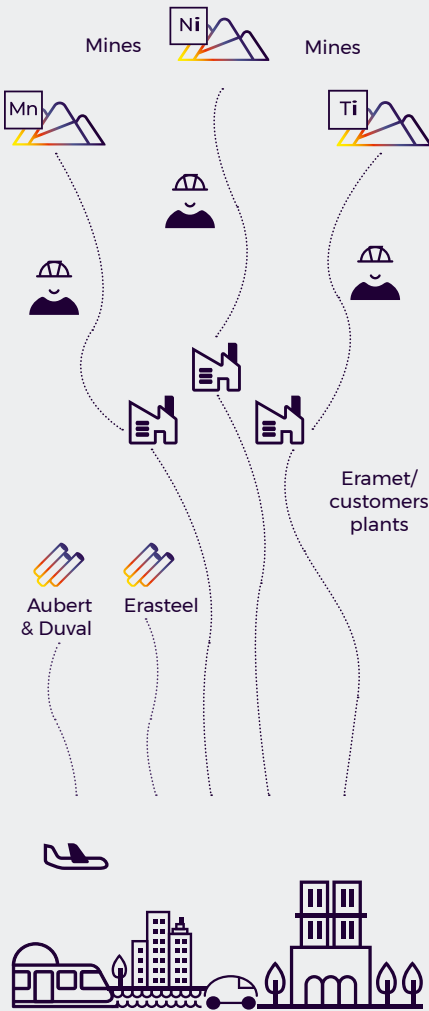


I. NON-FINANCIAL PERFORMANCE STATEMENT

1.1 A diversified mining and metallurgical group and a leader in its areas of activity

WHO WE ARE

Eramet is a key player in metals mining and transformation, activities as well as high performance alloys manufacturing.



Eramet also develops strong growth potential activities such as lithium extraction and recycling, which will play a critical role for the energy transition and tomorrow's mobility.

OUR AMBITION

> Developing a **selective portfolio of value-accretive** mining and metallurgical activities.

> Being **among the best** in each of our businesses, in terms of performance, profitability and innovation.

> Being **admired** for our strategic model, our management system and our societal commitment.

WHAT WE DO		OUR VALUE CREATION	WHERE WE WANT TO BE IN 2023
<div><div>Our strategic</div><div>Fix / Reposition our least performing assets</div><div>Grow on our attractive businesses</div><div>Expand our portfolio in metals for energy transition</div><div>Our managerial transformation</div><div>neWays</div><div>UNLEASH OUR POTENTIAL</div></div>		<div>SHAREHOLDERS</div> <div>22% ROCE*** (2018)</div> <div>€2.3 per share paid in 2018</div>	<div></div> <div>Sustainable value creator</div>
<div><div>Our activities</div></div>		<div>CUSTOMERS / SUPPLIERS</div> <div>€3.8bn Turnover</div> <div>€2.3bn Group purchases</div> <div>91% of decarbonated power purchased</div>	<div></div> <div>Business partner of choice</div>
<div><div>Our people</div></div>		<div>COMMUNITY</div> <div>€122m paid by our companies active in the extractive industry to local government (mainly taxes and royalties) in 2017****)</div> <div>€7.4m spent through local CSR partnerships</div>	<div></div> <div>Committed & contributive corporate citizen</div>
<div><div>Our R&D</div></div>		<div>EMPLOYEES</div> <div>-23% FR2 in recordable accidents</div> <div>71% employees trained</div>	<div></div> <div>Home for best talents</div>
<div><div>Our R&D and Innovation</div></div>		<div>R&D AND INNOVATION PARTNERS</div> <div>25 ongoing European collaborative projects</div>	<div></div> <div>Entrepreneur</div>

* Eramet Resources includes 6 'capitals' in line with IIRC recommendations.
** LCE : Lithium Carbonate Equivalent.

*** ROCE: current operating income/capital employed.
**** yearly updating issued in June.

1.2 Eramet Group's CSR issues and approach

1.2.1 Group business model

Eramet's business model is based on the extraction and recovery of metals (manganese, nickel, mineral sands) and the production and processing of parts and semi-finished products in high value-added alloys (high-performance steels, aluminium and titanium based superalloys).

Eramet is also developing activities with strong growth potential, such as lithium mining and recycling, which will play a key role in the energy transition and mobility of the future. The Group employs almost 13,000 people in some 20 countries.

The infographics presenting the Group's business model can be found in Chapter 1 of the Registration Document (Part 1.2). This graphical representation shows the Group's strategy, resources, activities and the value created for its various stakeholders.

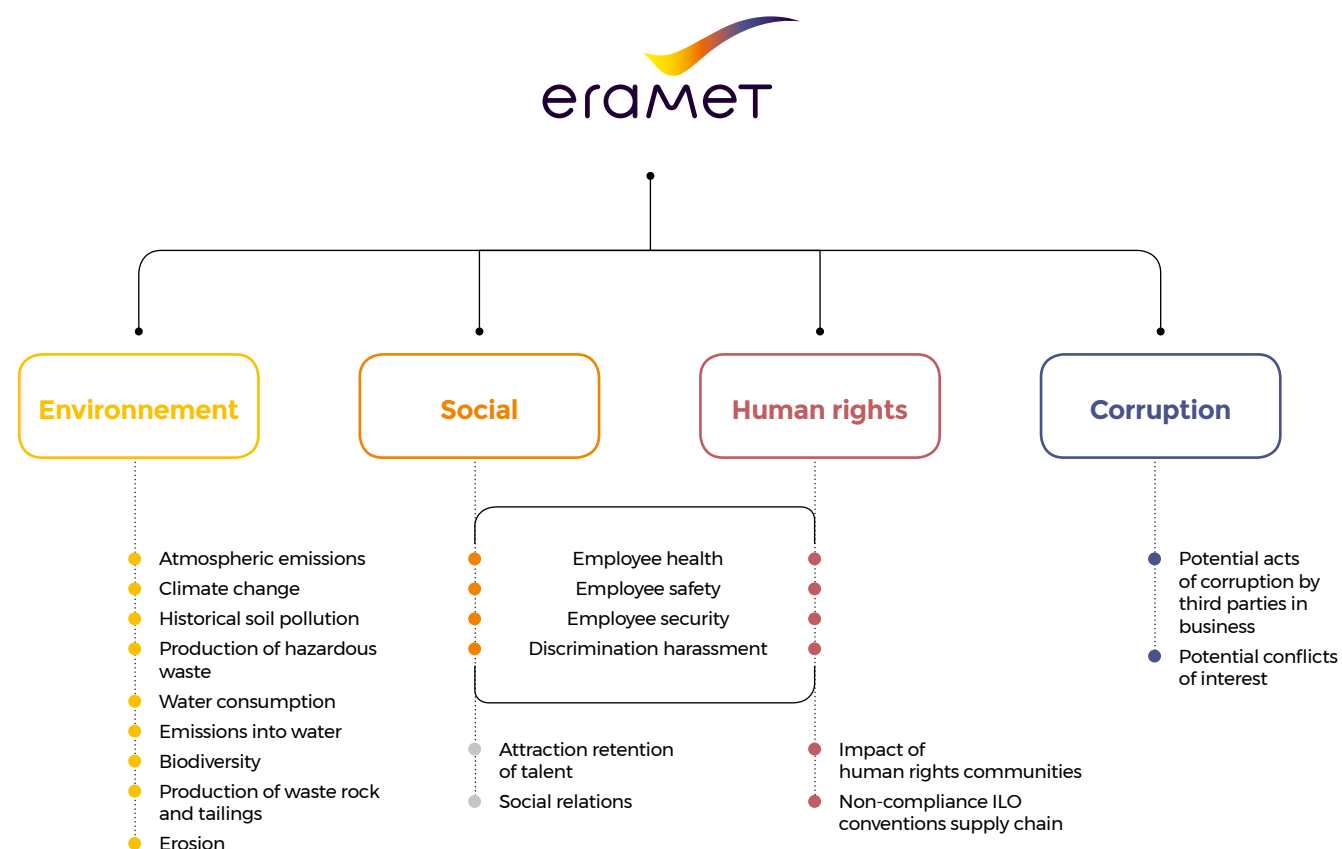
Chapter 2 provides further details on the activities and markets in which the Group operates.

1.2.2 CSR risk assessment

In addition to its risk mapping taking into account CSR risks (risk management is described in Chapter 5 of the registration document), Eramet has developed, with the support of its internal stakeholders, specific risk maps in three specific areas: the Environment, Human Rights and the Fight against Corruption.

This comprehensive work on risk assessment provides the Group with a very precise view of the challenges it faces.

OVERVIEW OF THE ERAMET GROUP'S CSR RISKS



This diagram presents the main CSR risks that have emerged from the various risk mapping exercises. The grouping of the risks under the various categories has no relation to the impact or occurrence of that risk.

As matters relating to societal commitments to combat food waste, food insecurity, respect for animal welfare and responsible, sustainable and fairly traded food are not significant for the Group, they are not included in a specific report.

In order to facilitate the reading of Eramet's Non-Financial Performance Statement, an ESG (Environment, Social and Governance) themed approach has been adopted: Environmental protection (1.3), the Group's social and societal commitments (1.4), in particular respect for Human Rights and the social consequences of its activities, and Governance (1.5), focusing in particular on the fight against corruption and tax evasion.

1.2.3 Group CSR approach

1.2.3.1 Group policies and commitments

Due to the nature of its mining and industrial activities, and aware of its strong interaction with the local areas in which it operates, Eramet is resolutely focused on all matters related to sustainable development and corporate social responsibility (CSR). The Group has a long-standing commitment to a responsible approach and continuous improvement. It aims to be a company recognised for its strategic model, management system and social commitment.

In a spirit of continuous improvement that creates shared value, Eramet's Board of Directors adopted a Sustainable Development policy in 2010.

This policy is structured around four priorities:

- the protection and development of Group employees;
- the management of risks to and impacts on health and the environment;
- the integration of sustainable development into product policy and innovation;
- and finally, maintaining a relationship of trust with stakeholders.

The complete text of the Sustainable Development policy is available on the Eramet website: <http://www.eramet.com/publications/la-politique-de-developpement-durable>.

Implemented in 2015, the Group's Ethics Charter sets out the rules and principles of action and behaviour that are applicable to and binding on all Group employees. The Charter forms the basis of Eramet's ethics compliance programme, approved by the Executive Committee in November 2016 and deployed throughout the Group. It is related to the commitments of the Group and its employees in many areas: development, respect and trust with stakeholders, safety of employees and their families, respect for and protection of the environment, safety, respect for customers, social dialogue, the fight against all forms of coercion and harassment, trans-

parency, prevention of corruption, compliance with competition rules, etc.

These two fundamental documents have been translated into the eleven languages of the countries where the Group operates and are the subject of e-learning courses aimed at employees.

Finally, specific policies enable the Group to make further commitments in relation to certain issues, such as safety and the environment. These will be addressed in the sections on these topics.

1.2.3.2 CSR organisation

The Group's commitment translates into involvement at the highest level of the Company. The Communication and Sustainable Development Director and the Human Resources, Health, Safety and Security Director, both members of the Group's Executive Committee propose, support and monitor the multi-year objectives and associated action plans.

The effective integration of CSR topics into the Group's activities is also closely monitored by Eramet's Board of Directors, in particular through two of its Committees: the Strategy and CSR Committee, and the Audit, Risks and Ethics Committee.

The Communication and Sustainable Development Department (DC2D) has in particular an Environment, Industrial Risks and Product Department (DERIP) and a Public Affairs Department (DAP), while the Human Resources Department (DRH) includes a Social Relations Department, a Safety and Prevention Department, a Security Department and a Medical Advisor, responsible for promoting the Group's Health Policy. The Ethics and Compliance Department completes this organisational structure. It reports to the CEO and the Legal Department, member of the Executive Committee.

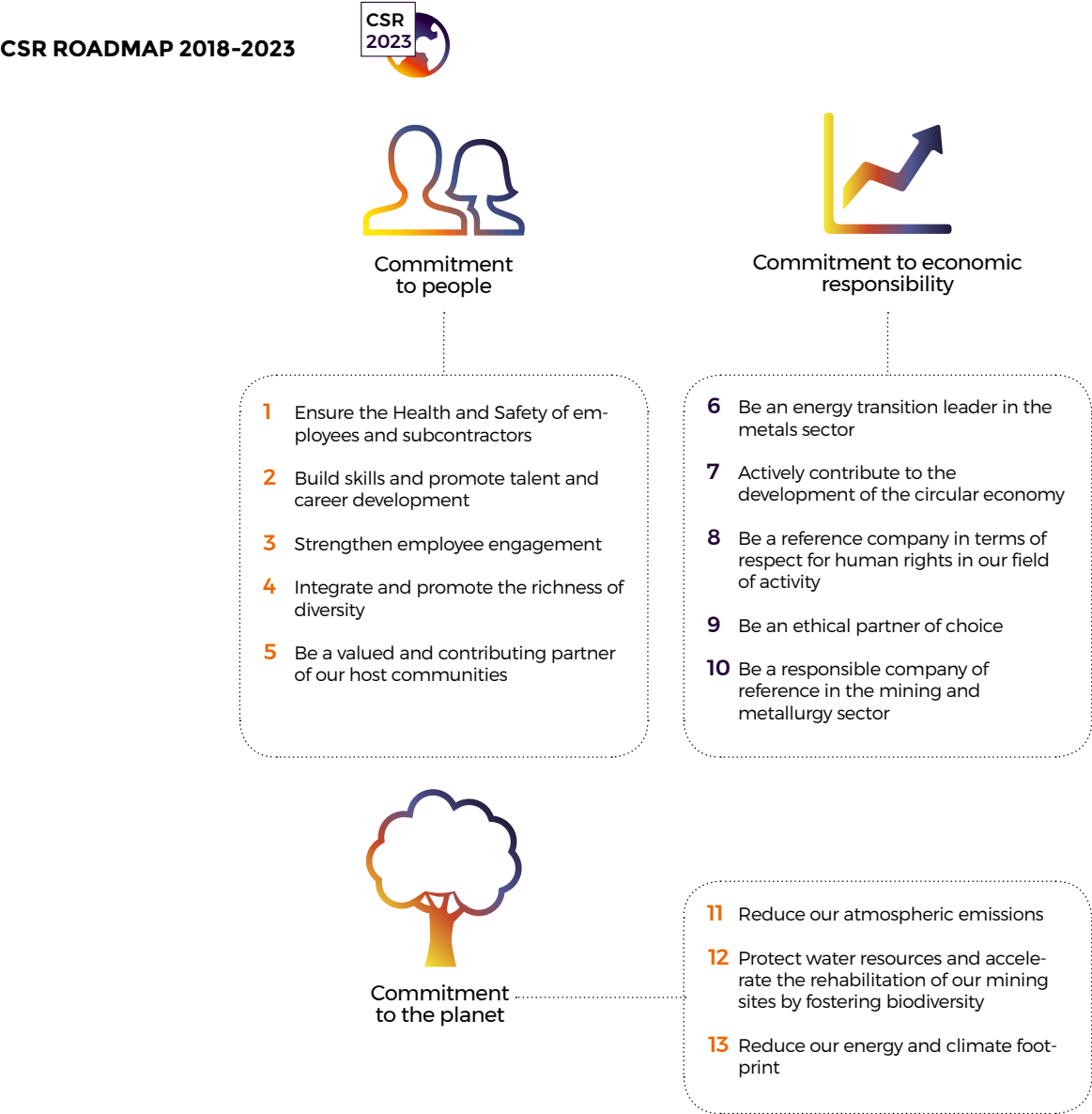
The objectives and action plans of the CSR Roadmap (detailed below) are implemented across all the Group's Divisions and operating entities. Their successful implementation has been strengthened by the establishment of working groups and cross-functional committees focusing on various themes (CSR, biodiversity, mining environment, responsible purchasing, responsible sales, Human Rights, ethics).

Furthermore, the Group pays particular attention to the integration of social, environmental, health and safety, cultural and societal criteria in the design and development of its projects. By referring to the most demanding international standards, the Group is committed to building long-term relationships with its stakeholders wherever it operates, in accordance with specific rules and cultural norms as well as current scientific knowledge. The Communication and Sustainable Development Department is systematically represented on the Project Steering Committees. Section 1.5.4 of this chapter details the application of these general principles to all the Group's projects.

Finally, Eramet has put in place monitoring and control measures and tools to ensure the concrete implementation of sustainable development objectives throughout its scope of activity. These tools include dedicated information systems that collect and consolidate data and indicators for all Group companies. Details of the standards and tools used to produce this information are provided in the methodological note in Section 1.6.

The Group also relies on an internal audit system for the performance of its entities in terms of Environment, Health, Safety, Energy and Ethics, which is detailed in Section 1.3.1.3. The data from these audit and control systems is used to feed the Group's continuous improvement approach.

The Eramet Group's Vigilance Plan and its update report, referring to the Non-Financial Performance Statement, are attached to this Registration Document.



For each of the 13 goals indicated above, a specific action plan and measurable annual objectives have been developed, as shown in the table opposite.

The CSR Roadmap, validated by the Strategy and CSR Committee of the Board of Directors, is subject to an annual review by the latter. The Executive Committee monitors the progress of the commitments made during the interim reviews, managed closely by an internal quarterly *ad hoc* organisation, the CSR Committee.

1.2.3.3 CSR performance management

The Eramet Group has adopted a CSR Roadmap to effectively manage its CSR performance. This Roadmap, which links the CSR priorities with the pillars of the Group's five-year strategic vision, covers the period 2018-2023. The Roadmap also provides a framework for the Group's contribution to the United Nations Sustainable Development Goals.

The CSR Roadmap focuses on the Group's commitment in three areas:

- commitment to people;
- commitment to economic responsibility;
- commitment to the planet.

2023 TARGETS – ERAMET CSR ROADMAP



FOCUS AREA	OBJECTIVE	KPI 2023
 Commitment to people	1 – Ensure the Health and Safety of employees and subcontractors	Zero fatalities Reduce by half the workplace accident frequency rate with and without work stoppage FR2 < 4
	2 – Build skills and promote talent and career development	100% of employees participate in at least one training course per year
	3 – Strengthen employee engagement	Group employee engagement rate >75% (barometer)
	4 – Integrate and foster the richness of diversity	30% of managers are women
	5 – Be a valued and contributing partner to our host communities	100% of sites have established a mechanism for dialogue with local stakeholders 100% of sites have implemented an investment programme to contribute to local development, with a focus on initiatives in favour of young people
 Commitment to economic responsibility	6 – Be an energy transition leader in the metals sector	Committed diversification of Eramet's business portfolio in relation to the supply chain for electric mobility batteries
	7 – Actively contribute to the development of the circular economy	2 Mt of low-grade incidental ores and tailings recovered over the period 2019-2023 10 kt of waste recovered instead of being disposed of over the period 2019-2023 through innovative actions
	8 – Be a reference company in terms of respect for Human Rights in our field of activity	Obtain recognition for our application of the United Nations Guiding Principles, measured by reaching a mature level according to the UNGP Reporting Framework (Shift-Mazars)
	9 – Be an ethical partner of choice	100% of sales and purchasing teams trained on anti-corruption every year
	10 – Be a responsible company of reference in the mining and metallurgy sector	100% of the Group's suppliers and customers evaluated are in line with Eramet's CSR/Ethics commitments ⁽¹⁾
 Commitment to the planet	11 – Reduce our atmospheric emissions	Tonnes of ducted dust emitted by industrial facilities: -80% in 2023 compared to 2018
	12 – Protect water resources and accelerate the rehabilitation of our mining sites by fostering biodiversity	Ratio of rehabilitated areas to cleared areas ≥ 1 over the period 2019-2023 ⁽²⁾
	13 – Reduce our energy and climate footprint	-26% of reduction of tons of CO2 by tons of outgoing product in 2023 compared to 2018 ⁽³⁾

(1) Evaluated refers to parties evaluated as critical and/or sensitive (in terms of importance to Eramet or CSR risk – depending on the business activity or country concerned), which must be compliant, verified on the basis of a CSR/Ethics evaluation. If they do not comply following the evaluation, the Group encourages dialogue and support, but reserves the right to terminate the business relationship.

(2) Excluding long term infrastructure.

(3) Of which 16.5% is due to the business mix effect related to the Group's strategic choice to develop its mining activity, which is lower in emissions than the Group's processing activities.

1.3 Preservation of the environment

1.3.1 Challenges, objectives, organisation and resources for the prevention of environmental and industrial risks

1.3.1.1 Environmental issues and risks for Eramet sites

The Group's industrial and mining sites carry out activities that are sometimes very different from each other in geographical areas that are themselves diverse. Therefore, environmental issues and risks vary greatly from site to site. The environmental issues and risks specific to the Group's mining operations are described in detail in the section dedicated to the mining environment (1.3.6).

The following table aims to give an overview of the major environmental issues and risks for the major categories of the Group's industrial sites. This summary aims to help the reader in their understanding: it is necessarily macroscopic and schematic and cannot completely reflect the diversity of the issues and risks for each site taken individually. Some sites also include activities in several of the categories presented here. Moreover, the majority of the industrial sites located in France fall under the ICPE (classified facilities for environmental protection) regime and some are under SEVESO status.



TABLE SUMMARISING THE ENVIRONMENTAL ISSUES AND RISKS AT ERAMET'S INDUSTRIAL SITES

Sites	PYROME-TALLURGY ⁽¹⁾ (FURNACES)	HYDROME-TALLURGY ⁽²⁾	DEVELOPMENT AND PROCESSING METALLURGY ⁽³⁾ (ROLLING MILLS, FORGING, DIE-FORGING, HEAT TREATMENT, ETC.)	COMMENTS
Water consumption	***	***	**	Except for the hydrometallurgical sites, the vast majority of the Group's water consumption is linked to industrial equipment cooling loops. The water consumed in these processes does not undergo any transformation. In addition, the vast majority of sites work in closed loops, which greatly reduces the demand. In other cases, water is returned to the natural environment.
Emissions into water	**	***	*	Hydrometallurgical sites are the sites that present relatively the most significant risks of water pollution, due to the use of chemicals and an aqueous process. All industrial waters are managed in accordance with applicable regulations.
Atmospheric emissions	****	*	**	Sites that have metallurgical furnaces or electricity generation plants are the sites that amass most of the Group's atmospheric emissions (dust, nitrogen oxides or sulphur). The main sources of emissions from installations are equipped with capture and treatment equipment, in accordance with applicable regulations and the best available technologies.
Energy consumption/ greenhouse gas emissions	****	*	**	Sites that have metallurgical furnaces and/or electricity generation facilities are the sites that amass the bulk of energy consumption and greenhouse gas emissions.
Production of hazardous waste	***	***	**	Pyrometallurgical activity produces dust, sludge and slag, which, depending on their intrinsic characteristics and locations of operation, can be considered hazardous waste.
Impact on biodiversity	*	*	*	The Group's industrial sites are mainly located in urban and industrial areas.
Risks of historical soil pollution	***	***	***	The production sites are generally designed on soil protection slabs and the storage of hazardous products is equipped with retention systems, which reduces the risk of soil contamination. However, as industrial practices have evolved, the oldest sites may present risks of historical soil pollution.

(1) Comilog Dunkerque (France), CIM and CMM (Gabon), Eramet Marietta (United States), Eramet Norway (Kvinnesdal, Sauda and Porsgrunn in Norway), SLN Centrale B and Doniambo (New Caledonia), TTI (Norway), Aubert & Duval Les Ancizes (France), Erasteel Commentry (France).
(2) Eramet Sandouville (France), CMM (Gabon).
(3) Brown Europe, Ecotitanium, Forges de Monplaisir, Interforge, UKAD (France), Aubert & Duval sites in Firminy, Imphy, Issoire, Les Ancizes and Pamiers, TAF in Gennevilliers (France), Aubert & Duval in Irun (Spain), Erasteel Champagnole, Erasteel Commentry (France), Erasteel Boonton (United States), Erasteel Kloster (Langshyttan, Söderfors and Vikmanshyttan in Sweden), Erasteel Stubbs (UK), EIML (China), SQUAD (India).
Legend:
* Low.
** Moderate.
*** Significant.
**** Major.

Note that the noise or light pollution does not represent a significant environmental impact. The various sites concerned respect the noise levels stipulated in their operating licences, and the subject does not appear as important in the assessment of litigation made by the Group.

1.3.1.2 Environmental objectives

Eramet has three key environmental objectives:

- 1. Strict compliance with the laws and regulations applicable to its activities.



FOCUS AREA	OBJECTIVE	KPI 2023
Circular economy	7 – Actively contribute to the development of the circular economy	Quantities (t) of materials recovered through the circular economy action plan 2 Mt of low-grade incidental ores and tailings recovered over the period 2019-2023 through innovative actions 10 kt of waste recovered instead of being disposed of over the period 2019-2013 through innovative actions
Air	11 – Reduce our atmospheric emissions	Tonnes of ducted dust emitted by industrial facilities: -80% in 2023 compared to 2018
Biodiversity/Mine rehabilitation	12 – Protect water resources and accelerate the rehabilitation of our mining sites by fostering biodiversity	Ratio of rehabilitated areas to cleared areas ≥ 1 over the period 2019-2023⁽¹⁾
Greenhouse gases	13 – Reduce our energy and climate footprint	KPI: Reduction of tCO ₂ /t Outgoing product (ref. 2018) -26% in 2023 compared to 2018⁽²⁾

(1) Excluding long-term infrastructure
(2) Of which 16.5% is due to the business mix effect related to the Group's strategic choice to develop its mining activity, which is lower in emissions than the Group's processing activities.

1.3.1.3 Organisation and instruments for the prevention of environmental risks

To implement its objectives, the Group relies on a network of internal experts and on a structured organisation:

- the Environment, Industrial Risks and Product Liability Department (DERIP) defines the Group's benchmarks, coordinates the general dynamics of continuous improvement, implements the control mechanisms of internal standards and provides expert technical support to the sites and projects;
- the Public Affairs Department (DAP) facilitates and coordinates CSR actions related to relationships with stakeholders and monitors the anticipation of regulatory change;
- more than 60 people make up the network of HSE functions at sites, with a reporting line to their senior management for the vast majority of them;

- The implementation of environmental management systems certified in accordance with ISO 14001 for all industrial and mining sites with significant environmental issues.
- The indicators and results relating to these first two objectives are detailed in Section 1.3.2.
- And finally, the voluntary and continuous reduction of the Group's environmental footprint. Four key objectives for reducing the Group's environmental footprint corresponding to the Group's major challenges have been defined for the period 2018-2023 as part of the CSR Roadmap, and are set out below.

- once a year, the Committee of Occupational Hygiene, Health and Safety (HS&S) and Environment (E) analyses the skills available within the Group with regard to requirements and concerns. This proactive approach is conducted in coordination with the Human Resources Departments of the Group Divisions and the Safety Prevention and Environment Departments.

In November 2017, the HSE network's biennial mobilisation seminar was held in Le Havre, bringing together more than 80 Group HSE specialists and managers. The seminar was dedicated to information-sharing sessions regarding new multi-year objectives and feedback on the topic of "relationships with stakeholders".

Monitoring and control systems constitute one of the key strengths of the Group's environmental management.

In this respect, a dedicated environmental information system (EraGreen) has been fully deployed in all industrial and mining sites, allowing for the collection and consolidation of environmental performance indicators.

The Group also relies on a demanding internal audit system for the performance of its entities in the areas of Environment, Health, Safety and Energy. The common audit guidelines are structured according to three pillars: human involvement, operational control and prevention. They fully take into account the requirements of ISO 14001, OHSAS 18001 and ISO 50001. Joint teams of internal auditors (Corporate, Divisions and Sites) conduct these audits, which last several days and provide a detailed overview of site performance. During the period 2014-2018, 32 out of 40 sites with significant environmental issues were audited in accordance with these methods.

Corrective action plans are defined at the end of each audit, and for all risks considered significant, a quarterly report on the implementation of corrective actions is consolidated at Group level.

1.3.1.4 Organisation and instruments for the prevention of industrial risks

The main industrial risks to which the Group's sites may be exposed are fire, explosion (including, for certain sites, related to the risk of contact between water and molten metal), machine breakdown on critical equipment, and natural events (floods, storms/cyclones, etc.).

Eramet focuses specifically on preventing these risks as early as possible in its industrial and mining projects, by identifying major accident scenarios and their causes and impacts, and by setting up prevention and/or protection safeguards (important elements for safety) that reduce the probability or severity of an event. In 2018, this mainly concerned the lithium projects (in Argentina), the extension of the manganese mine in Gabon and the rolling mill industrial development project at the Aubert & Duval plant in Les Ancizes.

For sites in operation, the industrial risk control system is based primarily on the programme of insurance engineering visits (insurance prevention audits) to its industrial sites over a two-year cycle, in close collaboration with insurers, brokers and the Group Insurance Department.

Any significant risk detected during these audits results in a corrective action plan by the site concerned. The monitoring of corrective actions agreed as a result of these visits is documented in an annual summary report covering compliance with Eramet's industrial risk standards (revised in 2016) and the progress of recommendations made by the insurer during its prevention visits.

In addition, Eramet carries out regular third-party audits of its waste rock stockpiles and tailing ponds, in order to ensure the proper.

Alongside this, in late 2017 the Group launched a programme to systematically review industrial risk prevention and/or protection safeguards for its non-Seveso sites in operation. This programme took place in 2018 at most of the sites of the High Performance Alloys division.

Finally, the Group has implemented crisis prevention and management procedures. These procedures focus on three areas:

- crisis prevention: identification of weak signals and operational response thereto, crisis simulation exercises so that each person knows their role and in order to continually improve emergency planning (in conjunction with the Group industrial risk standards);
- serious incident management: definition of a serious incident, Group reporting, feedback;
- crisis management: as the sites already have their own emergency plans (contingency plan, ERP or other), the corporate crisis management system was reviewed and now includes procedures for escalation of alerts, assessment of their severity, organisation into crisis units and feedback.

These procedures were deployed across all sites. As in 2017, special attention was paid to crisis simulation exercises across all sites: out of the 34 sites monitored, more than 90% conducted one or more exercises in 2018, some of them in cooperation with the fire brigade.

1.3.1.5 Financial resources devoted to environmental preservation

Overall environmental investments are estimated at nearly €23 million in 2018 – remaining stable over the last three years. This reflects the sustainability of Eramet's commitments to environmental protection.

The investments considered here relate strictly to environmental prevention and protection. For example, they cover the installation of new equipment or work performed in order to minimise impacts. They also cover certain investments made for new activities with an exclusively environmental dimension. In 2018, environmental investments were apportioned at one third for air pollution control and one third for water pollution prevention, with the remainder given to waste management, biodiversity and the prevention of other impacts.

In terms of the prevention of air pollution, in 2018 and for the second consecutive year, the most significant investments were made at the SLN plant in Doniambo (New Caledonia), where a number of major maintenance operations were carried out to reduce dust emissions from the site.

In relation to the prevention of water pollution, the most significant investments in 2018 relate to the installation of a closed loop for the cooling system of the Pamiers plant, the completion of an extensive operation to equip the various Comilog sites (Gabon) with hydrocarbon separators, as well as the start of rehabilitation operations on the segment of the River Moulili downstream from the Comilog mine (Gabon).

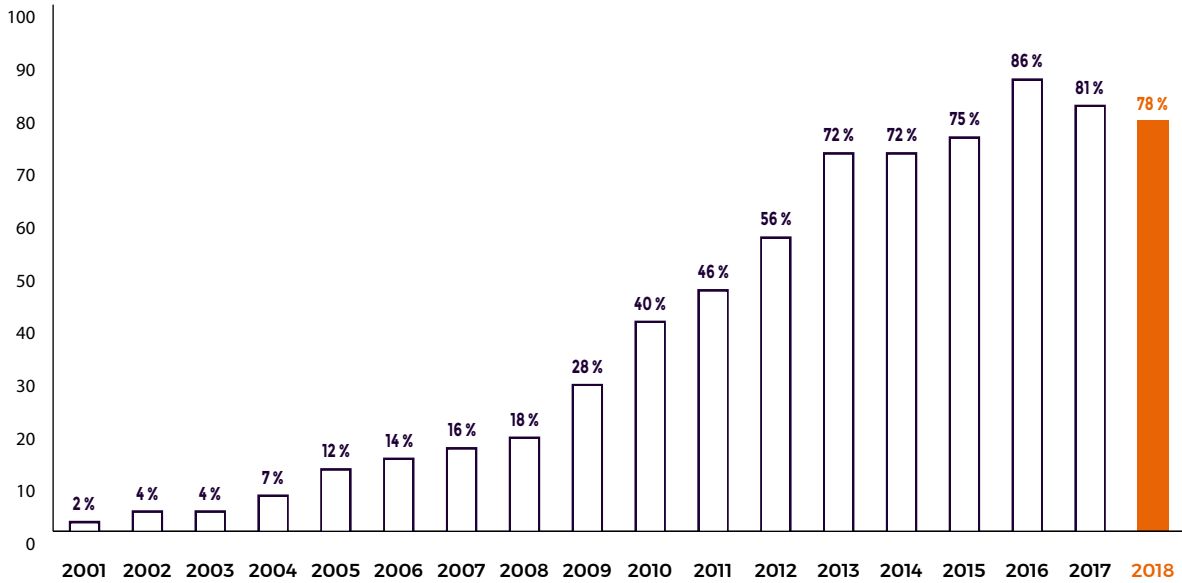
1.3.2 ISO 14001 certifications and environmental compliance indicators

It should be noted that since 2013, the Group measures the progress of its ISO 14001 certification target for sites likely to have a significant impact on the environ-

ment. All industrial and mining sites in operation are concerned.

As at the end of 2018, sites that had obtained ISO 14001 certification represented 78% of the target objective. This slight dip in the rate of certified sites is exclusively due to the Group's change in scope in 2018, with the integration of new sites: EIML (China), SQUAD (India), Aubert & Duval Irun (Spain) and EcoTitanium (France).

EVOLUTION OF ISO 14001 CERTIFIED SITES (INCLUDING MINES)



“Zero dispute” goal (environmental compliance)

The Eramet Group promotes a policy of strict regulatory compliance, transparency and dialogue with the supervisory authorities in all circumstances, particularly in the event of temporary difficulties or special operating conditions. The objective is to achieve zero formal notices or legal proceedings arising from a breach by Group sites of binding regulatory requirements.

To measure the achievement of this objective, the Group monitors four indicators:

- **Type 1 – Weak signals:** Written warning by the authorities as a reminder of a deadline which, if not observed, could lead to formal notice (known in the US as a “notice of violation”), a third-party claim against the plant or in the media.
- **Type 2: Declaration of a non-compliance** and notice by the authorities to take action by a specific deadline in order to avoid a fine; for example in mainland France, New Caledonia, Gabon: formal notice; in the US: “notice of enforcement” or “consent agreement” between the authorities and the operator, or an “administrative order”.

- **Type 3 – Legal action:** Legal proceedings by the public prosecutor or any other public authority following a notice of violation or a claim brought before the courts by a third party. Legal claims by employees or third parties for damages arising from the breach of an obligation or environmental damage. Legal claims by third parties against an administrative permit issued pursuant to environmental legislation.
- **Type 4 – Actual sanction:** An administrative sanction (fine, suspension of permit), unfavourable legal ruling or criminal conviction.

In 2018, three type 3 and 4 events should be noted: the summons for summary proceedings with a request for an expert report on noise by a local resident of the Erasteel Commentry plant; concerning the Aubert & Duval Isoire site, the initiation of legal proceedings following the accidental leakage of oil into the natural environment in 2015; and finally the payment of a fine for non-compliant waste storage at the Comilog (Gabon) mineral port site.

One type 2 event was recorded this year at Setrag (Gabon), compared to four in 2017.

1.3.3 Emissions reduction

1.3.3.1 Airborne emissions

AIRBORNE EMISSIONS		2016	2017	2018
Sulphur oxides (SOx)	tonnes	14,848	13,072	14,847
Nitrogen oxide (NOx)	tonnes	6,038	6,910	7,623
Total dust channelled	tonnes	1,232	1,519	2,534
Nickel	tonnes	12.8	8.9	11.1
Manganese	tonnes	122	276	529

In terms of airborne emissions, the main contributors are pyrometallurgical activities with their fusion plants, heat treatment furnaces and the energy production plants that supply them. CO₂ emissions are discussed in Section 1.3.5.

Airborne emissions are a function of the nature of raw materials and ores used, the transfer and loading technologies in place, the installed capacity of the equipment and especially the level of activity of the sites.

In pyrometallurgy, channelled emissions are generated in the handling of materials, furnaces, grinding and milling operations, as well as operations involving molten liquid metal and slag. In hydrometallurgy, channelled dust emissions most often occur during the handling, grinding, drying or transfer of materials.

The air effluent treatment systems generally used in the Group's plants are electrostatic precipitators, baghouse dust collectors, scrubbers and washing towers. Specific treatment systems for certain pollutants can also be used, such as activated carbon filters. The different items of equipment are installed according to the characteristics of the effluent and the industrial processes, the target purification performances and regulatory requirements.

The sulphur oxide (SOx) emissions are mainly generated at SLN (thermal power station and Doniambo plant). The 10% increase recorded in 2018 for the Group is mainly due to an increase in power generation at the SLN thermal power station (New Caledonia) (due to lower energy availability from the Yaté dam and higher demand from the public grid) and lower use of very low sulphur fuel oil (VLS+) due to the ten-year maintenance of the associated storage capacity.

The project of converting the oil-fired power plant in New Caledonia to LNG (liquefied natural gas) in 2023 will be a factor in the progress of atmospheric emissions.

The measurement system of the Moanda Industrial Complex (CIM) in Gabon has been significantly improved, leading to an upward reassessment of the quantity of substances discharged.

Nitrogen oxide (NOx) levels increased this year, mainly due to the increase in discharges from CIM (Gabon) due to a better assessment of the emission factor based on a new measurement campaign.

Channelled air emissions of dust and manganese rose significantly.

As indicated in the “objectives” section, as part of the CSR Roadmap, the Group has launched an extensive action plan to reduce these ducted dust emissions by 80% in 2023 compared to 2018 values.



1.3.3.2 Aqueous waste

AQUEOUS WASTE		2016	2017	2018
Suspended solids (SS)	tonnes	10,304	10,944	8,084
Chemical oxygen demand (COD)	tonnes	96.7	126	155
Nickel	tonnes	7.2	6.7	3.6
Manganese	tonnes	36.1	37.5	29.9

As with its atmospheric emissions, Eramet is committed to reducing its aqueous waste. Industrial sites are working to improve treatment processes to ensure a better quality of discharged water.

In addition to preventive systems, such as basins and double-walled storage tanks, curative mechanisms, such as effluent treatment plants using physico-chemical processes or hydrocarbon separators (separation by decantation), are used to allow discharges that are in accordance with the statutory limit values.

COD emissions are up by 23%. This change is mainly due to the Moanda Metallurgical Complex (CMM) in Gabon, which, by improving its control system, has made an upward reassessment of the quantities emitted.

Discharges of suspended solids, nickel and manganese were significantly reduced compared to 2017 (between -20% and -46%). This is mainly linked to the progress made by the Doniambo site thanks to the strengthening of its monitoring activities, which allows a quicker response to potential excesses.

Finally, the Group's sites also closely monitor the quality of groundwater and the impact of the activity on soils and subsoils. Several hundred piezometers are distributed throughout the Group's various sites, both within and outside of the Company, to support the initial phases of any new project (characterisation of the initial state) and also to monitor any impacts on ground and surface water.

1.3.3.3 Rehabilitation/restoration of sites

The Group exercises the utmost vigilance against potential impacts on soils and subsoils resulting from its past, current or future activities, both in the area of its industrial and mining activities.

Over several years, the Group has developed expertise to support the cessation of activity of certain industrial sites. This expertise concerns the investigation, monitoring and management of potentially impacted land through various projects, such as the rehabilitation of industrial land, the end of life of landfills, or former mines. This expertise is also consulted in the context of internal audits or in advance of acquisitions and disposals. It is important to mention the implementation of a policy of systematic characterisation of soil conditions before any new project is undertaken. Finally, the Group is taking action to strengthen its knowledge of the state of the soils and subsoils of the various sites at which the Group operates.

The main recent advances in the management of closed industrial sites include:

- *Aubert & Duval Gennevilliers (France):* plants B and C ceased operations in 2011, and decommissioning and restoration work was carried out between 2013 and 2016. The inventory report (administrative clearance) was obtained in 2017. The land was sold to the Société

d'Économie Mixte d'Aménagement de la Commune de Gennevilliers (SEMAG);

- *Valdi Feurs (France):* the site notified the authorities of the winding up of its business in 2014. The remediation work, which began in 2015, was completed in 2016. The inventory report (administrative clearance) was obtained in 2017;
- *Valdi Le Palais (France):* the site notified the authorities of the termination of its activities in September 2016. The site proceeded to secure and evacuate all the remaining stocks and products. A third-party claimant procedure has been validated by the administration for the benefit of CGEP, a subsidiary of Rio Tinto, which owns the subsoil. Dismantling and clean-up work is in progress.

The rehabilitation of mining sites is a major focus of the environmental policy; it is described in Section 1.3.6 "Mining environment", and Section 1.3.7 on biodiversity.

1.3.4 Circular economy

The circular economy can be defined as a system of trade and production which, at all stages of the product life cycle, aims to increase the efficiency of the use of natural resources and virgin raw materials and reduce the impact of economic activities on the environment.

The Eramet Group has long been committed to such a model. This model applies to all types of resources used: water, energy, raw materials. Given its business activities, Eramet is particularly active in optimising the use of primary metal resources. This commitment was further strengthened in 2018 with the adoption of a Circular Economy Action Plan, which covers both Eramet's mining and metallurgical activities.



1.3.4.1 Optimisation of the consumption of primary raw materials

Concerning mining activities, the circular economy is reflected in the concept of sustainable management of mining resources. In concrete terms, this involves maximising the recovery of lower-grade ores or mine tailings from ore concentration processes. This makes it possible to recover more resources with an almost constant environmental footprint (mining operations have already been carried out). The actions undertaken in this area are described in Section 1.3.6.2 Responsible resource recovery.

Approximately 9 million tonnes of raw materials are consumed by the Group's plants, of which about 75% is ore (produced overwhelmingly by the Group's mines) and 7% is reducers (coal and coke). The rest of the consumption consists mainly of metals used in alloy factories, and various additives.

In metallurgical activities, Eramet's commitment to improving the efficiency of the use of primary metal resources takes several forms:

- the development of specific recycling activities;
- the development of the use of secondary raw materials wherever possible as a substitute for primary materials;
- maximising the internal or external recycling of waste containing metallic materials.

Two new recycling activities have been developed by the Group since 2017:

- the transformation of the Erasteel Commentry steel mill (France), with a new business line allowing it to recover industrial waste (oil catalysts, scalings and other metalliferous waste);
- in Auvergne, the EcoTitanium plant started operations in 2017. EcoTitanium is Europe's leading recycling business for aviation-grade titanium alloys. It produces alloys from massive titanium scrap and chips collected from major aircraft manufacturers and their subcontractors.

The steel mills of the High Performance Alloys division (Les Ancizes, Commentry and Söderfors) are true

WASTE PRODUCTION		2016	2017	2018
Amount of non-hazardous waste	thousands of tonnes	3,959	4,509	4,676
Amount of hazardous waste	thousands of tonnes	66	64	64

The concepts of hazardous and non-hazardous waste are defined in accordance with the regulations of the host countries. Indeed, to date the measures regarding waste are very disparate from one country to another.

Non-hazardous waste

The mining activities and their related industrial operations are the main source of non-hazardous waste. A significant tonnage of these is stored in industrial basins in Gabon. These are the fine fractions of manganese ore collected after the washing step which serves to isolate the grained fraction intended for the market. In terms of nickel activity, the Doniambo plant generates another important tonnage of non-hazardous waste through pyrometallurgical activity corresponding to the smelting of slag. The three major contributors – the SLN plant (New Caledonia), the Moanda mines and the Moanda Industrial Complex (CIM) (Gabon) – account for 99% of the total amount calculated for 2018.

The amount of non-hazardous waste produced in 2018 is roughly equivalent to that of 2017.

champions of the circular economy: their secondary raw material use rate varies between 85 and 95%, adding internal recycling flows and the processing of secondary raw materials purchased externally.

In the same Division, more than 90% of the waste produced is recovered internally or externally. More than a third of the waste produced by the Mining and Metals division's plants is already recovered. Furthermore, the Circular Economy Action Plan adopted aims to further develop these recovery rates.

1.3.4.2 Waste prevention and recovery

The implementation of an environmental management system results in specific waste management at operational sites, which respects the following management hierarchy: prevent waste generation/reuse/recycle/recover or otherwise dispose of safely and in an environmentally friendly manner.

Special efforts are therefore made to reuse the waste when their physical-chemical properties permit; for example, slag from SLN (New Caledonia) and the poor slags from Comilog Dunkerque are homologated and integrated for applications in road technology. The Group's sites are also very active in the areas of waste recovery for use as secondary raw materials (see previous Section 1.3.4.1 Optimisation of the consumption of primary raw materials).

At much lower tonnages, industrial activities of the steelworks and of the smelting-reduction or of the ferro-alloys production sectors of the Group generate non-hazardous by-products or waste. They are in the form of slags or inert slag mainly stored in an internal landfill or are subject to some external recovery.

Finally, although quantities are still much lower, local initiatives are also being implemented at many sites to reduce food waste: accurate forecasts of the people present on site each day (absences, holidays, visitors, etc.) to inform the catering service, the composting of plant-based food waste or redistribution to neighbouring farms as animal feed.

Hazardous waste

The activities that generate hazardous waste are mainly derived from the pyrometallurgical processes of the Group's mining Divisions (74% of the total amount for the Group). The High Performance Alloys division's major sites, such as the plants in Pamiers and Les Ancizes, also generate significant quantities of hazardous waste.

These activities produce dust recovered by filtration systems, sludge and sodium-calcium slag which, depending on their intrinsic properties and the location of the operation, can be considered hazardous waste.

The hazardous waste is treated through specific, authorised channels. Controls are put in place to ensure the proper management of this waste throughout the

process (transport of waste, delivery to approved centre and final treatment).

The amount of hazardous waste produced has remained stable over the last three years.



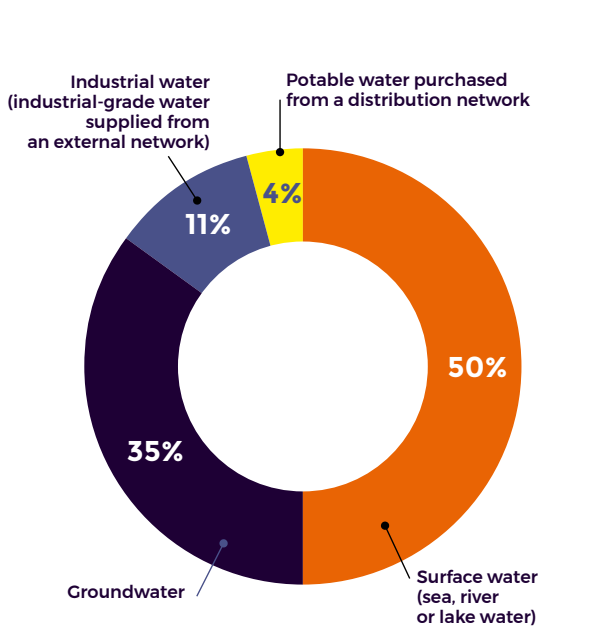
1.3.4.3 Optimisation of water consumption

CONSUMPTION		2016	2017	2018
Total water consumption	millions of m ³	31.9	33.5	32.1

Before any comment on the water consumption of Eramet Group sites, it is important to point out that none of the Group's industrial sites are located in a country confronted with "water stress" according to the definition adopted by the UN, that is to say, whose water resource per inhabitant, for all uses combined, is generally less than 1,700 m³ per person per year. Although this water resource is often substantial or abundant on its sites, the Group attaches real importance to its preservation. Multiple actions are taken to use only the required amount.

Total water consumption breaks down in 2018 as follows:

BREAKDOWN OF WATER CONSUMPTION IN 2018



Mining, metallurgy and hydrometallurgy activities consume water in several ways:

- processes for cooling furnaces and other metallurgical installations;
- washing of ores, raw materials and by-products;
- hydrometallurgical processes: solubilisation and reaction media.

Water resources are essential for running some of the processes used within the Group. The cooling of electric furnaces, for example, must be perfectly managed and optimised. In some cases, a lack of water supply may lead to risky situations in which safety must be ensured before any other consideration.

Whenever technically possible, the sites:

- encourage internal recycling of the water consumed. The cooling of furnaces and other metallurgical facilities, as well as other high-consumption uses, are mainly done in a closed circuit. This is the case, for example, of the washing of ores in Gabon, or the mining facilities in Senegal. The water consumption is then essentially supplemented in order to compensate for evaporation or losses in the system;
- prioritise the use of water from a nearby industrial site such as Eramet Norway Porsgrunn.

In 2018, total water consumption decreased slightly compared to 2017 (-4%).

This is partly due to the sites of Comilog Moanda (Gabon) and Aubert & Duval Pamiers (France), both of which have significantly reduced their water consumption: one by improving its recycling rate, and the other by setting up a closed cooling water circuit.

Details about water management on mining sites are available in Section 1.3.6.3.

1.3.5 Fight against climate change

1.3.5.1 Analysis of carbon and climate risks and opportunities

1.3.5.1.1 Eramet incorporates climate issues into its business strategy

The transition to a low-carbon economy is a systemic issue and Eramet has chosen to broaden the perspectives of these climate change impacts beyond the matter of its direct carbon footprint by assessing the impacts on the entire value chain in which it operates. Indeed, the reduction of emissions among Eramet's customers (due to regulations or as a consequence of carbon recovery, for example) can pose a risk to the business. Conversely, Eramet offers products and solutions that contribute to reducing the carbon footprint in the first place, and the energy transition represents opportunities in terms of business development. This is reflected in one of the three pillars of the Group's strategy: "to expand the portfolio of activities towards energy transition metals".



In addition to the Group's essential contribution to energy and climate transition, Eramet has included in its strategy the physical and non-physical impacts of climate change on the Group's assets, productivity and the markets on which its products are sold.

1.3.5.1.2 Eramet identifies the risks associated with climate change

Risks related to the physical impacts of climate change include those related to extreme weather events and long-term changes in climate patterns (sea level rise, water stress, etc.).

Non-physical risks are related to various political, legal, technological and commercial issues affected by the challenges of climate change and the transition to a less carbon-intensive economy.

A study was initiated to assess and anticipate the impact of climate change on the Group's activities. Specific questions are addressed to the sites through the EraGreen environmental reporting tool on their risk assessment and the adaptation measures envisaged.

In 2018, nearly one in two sites reported that they could be affected by the consequences of climate change in the very long term. Most of them have already started considering how to limit the impact on their business.

At the Group level, climate change will lead to higher taxes on energy, and greater difficulty of access to financing for certain investments. At present, it is difficult to assess the consequences more accurately.

As a result of the processes implemented, energy bills represent a significant portion of the Group's production costs in the operation of its mines and industrial sites. The Group's competitiveness is therefore sensitive to energy prices and the control of its energy use.

European and Norwegian plants, representing approximately 25% of the Group's scopes 1 and 2 emissions, are subject to the European Union Emissions Trading Scheme (EU ETS), which entails increased financial risk due to the uncertainties inherent in the long-term quotas market, as well as uncertainties related to legal mechanisms that may evolve and be adopted in the future.

Indeed, there is currently no globally applicable carbon market or price, only fragmented and uncoordinated regional systems. The Group is preparing for the potential emergence of such a market by experimenting with an internal price for its investment projects, the evaluation of its strategic options, on the basis of €30 per tonne of CO₂. This value reflects a conviction that markets are moving towards a long-term price that is significantly higher (around 50%) than the European regional spot price as at the end of 2018. The consequence of this choice, throughout the entire Group and independently of the regions with an established carbon market and price, is a shift towards technological solutions that emit less carbon. In addition, the implementation of this policy of applying an internal Group carbon price helps to raise awareness of the climate challenge among all Eramet employees.

1.3.5.1.3 2°C scenario analysis

Eramet aims to take into account the impacts of climate change in its strategic process. The Group recognises that the world could react in different ways to combat climate change.

Two scenarios modelling a transition to a low-carbon society, compatible with the 2°C target of the Paris Agreement, were selected:

- the IEA 2°C scenario with CO₂ capture/storage (CCS – Carbon Capture Storage) as a benchmark;
- a variant of this first scenario, more cautious on the hypotheses of an improvement in energy efficiency and of CCS deployment kinetics.

In 2018, a business impact analysis was conducted to quantify the change in demand for metals needed for the energy transition. These scenarios highlighted, for example, the criticality of certain metals produced by the Group and necessary for the energy transition, which helped to guide the Group's strategy.

1.3.5.1.4 New opportunities related to climate change

Eramet is clearly positioned on the metals involved in the energy transition and the digital transition: lithium, nickel salts and cobalt salts. These markets are changing rapidly due to the demand for metals for batteries, particularly for electric vehicles, solar panels and electronics.

The development of batteries will lead to a very strong growth in demand for certain critical metals: demand for lithium is expected to increase sixfold by 2025, for pure nickel salts fivefold and for cobalt threefold. It is clear that securing access to critical metal resources is a structural competitive advantage in the supply chain.

Eramet is the only European player to have secured significant resources of critical metals in this fast-growing market. The Group's current mining assets offer key advantages: very rich geological resources allowing long-term mining.

These strategic developments are conducted in accordance with the highest Western health, safety and environmental standards, as well as in compliance with the highest corporate social responsibility and ethical standards: high metal recovery yields, environmental footprint, harmonious and respectful relationships with stakeholders and local communities. It is essential for us to ensure full product traceability to ensure strict compliance with Western corporate social responsibility standards and customer requirements.

Eramet is thus positioning itself as the supplier of energy transition metals produced to the highest standards of social and environmental responsibility.

This should enable the Group to diversify its asset base both financially and geographically:

- lithium, particularly via the Eramet deposit in Argentina;
- increased exposure to nickel salts and cobalt;
- development of short loop recycling, with a view to optimising the circular economy.

1.3.5.2 Governance

1.3.5.2.1 Reaffirmed policies

Eramet continues to implement its Climate Change and Energy policies, both in conducting its operations and in developing its strategy.

1.3.5.2.2 Creation of a new Energy and Climate Department

The Eramet Group takes the climate issue to the highest level of management. In 2018, this commitment was reflected in the establishment of an Energy and Climate Department, reporting to the Director of Strategy, Innovation and Investor Relations, a member of the Group's Executive Committee.

The topics of Energy and Climate are periodically reviewed during the Executive Committee's Business Review.

1.3.5.2.3 A network of supporting site energy contacts

In order to reinforce and improve the reliability of the operational deployment of the Energy and Climate strategy, the Group has decided to establish an efficient method of operation between the sites and the Corporate functions. Three types of interlocutors have been defined:

- the Group coordinator, whose main tasks are implementing the initiative to reduce the energy footprint, the methodological contribution (the Group coordinator is an AFNOR-certified ISO 50001 auditor and a member of the ISO 50001 expert committee), expertise on several of the Group's businesses, and regulatory and technological monitoring;
- site energy correspondents, who are representatives of site management within the meaning of ISO 50001 and whose missions are to locally support the process of continuous improvement around energy, in the aim of reducing the energy footprint of the scope in question;
- site management, whose main role is to manage an energy management system based on the principles of the ISO 50001 standard and to allocate resources that are suited to the challenges of each site. Division management is also involved to support site management.

1.3.5.3 Strategy to address climate challenges

In 2018, the Group conducted a review to define a target for reducing scopes 1 and 2 CO₂ emissions, based in particular on identified technical and organisational levers. These include the conversion of the Doniambo oil-fired power plant in New Caledonia (SLN, France) to LNG (liquefied natural gas) in 2023, as well as investments in solar panels at certain sites. In addition to these large-scale operations, many operational levers have been identified that contribute to the reduction in greenhouse gas emissions at each site. These include innovative technologies to control the gas-powered heating furnaces of the High Performance Alloys division and innovative systems to manage the variable speed of electric motors.

This work has led the Group to set a significant reduction target for the tonnes of CO₂ per tonne of production, i.e. for how carbon-intensive the Group's production activities are:



Group target for 2023 vs. 2018	-26%	tCO ₂ /t outgoing product ⁽²⁾
Impact of energy efficiency levers and decarbonisation of the energy consumed	-9.5% ⁽¹⁾	
Impact of the business mix effect related to the Group's strategic choice to develop its mining activity, which is lower in emissions than the Group's processing activities ⁽³⁾	-16.5%	

(1) With the level of mining and processing activity in the year of reference (2018).
(2) Tonne of product leaving the sites: ingots, powder, ores, etc.
(3) Mining activity is about 80 times lower in emissions per tonne of outgoing product than the Group's other activities.

One of the major levers identified is the switch to LNG (liquefied natural gas) by SLN's oil-fired power plant. A delay in the implementation of this lever would lead to a 20% reduction in tonnes of CO₂ per tonne of outgoing product instead of the target of 26%.

Eramet continues to reflect on defining a longer-term ambition, which implies transformations of processes that must necessarily be based on new R&D and Innovation levers.

1.3.5.3.1 ISO 50001 as a source of energy optimisation

An ISO 50001 certification process for energy management systems is being implemented across the Group: it aims to encompass all sites that consume more than 200 GWh per year by 2020. In this context, five sites have already established an ISO 50001 certified energy management system (Eramet Norway, Aubert & Duval Pamiers and Comilog Dunkerque).

Eramet participated in the development of the ISO 50001 standard with AFNOR experts. The Group also has a presence on the "ENERGEST" standardisation committee, which aims to promote and standardise energy efficiency practices.

1.3.5.3.2 Support for customers in reducing their GHG emissions

The Eramet Group also makes a significant contribution to the GHG emissions avoidance strategy by offering its customers innovative solutions that reduce emissions downstream of its business activities (scope 3). This goes far beyond the production of metals essential for the energy and digital transition, and relates in particular to the High Performance Alloys division.

For example, by producing aluminium-lithium alloy forged parts for the aeronautics industry as well as titanium forged parts, the Group makes a significant contribution to aircraft weight reduction, which has the direct consequence of reducing fuel consumption and associated emissions. A second example is the ML340 alloy, selected by customers for the turbine shaft of LEAP aircraft engines, and used in all new generations of single-aisle aircraft. This alloy significantly reduces fuel consumption compared to the current generation of aircraft. This result is linked, among other things, to the increase in combustion temperature that this innovative alloy enables.

The level of emissions avoided through these various activities has not been precisely quantified, but it is an order of magnitude of several hundred kt CO₂ per year of "emissions avoided".

1.3.5.3.3 Reducing emissions through the circular economy

Through its subsidiary EcoTitanium (France), the Eramet Group is committed to a circular economy and rational management of resources by recycling aviation-grade titanium off-cuts and shavings generated throughout the manufacturing process of the parts required by the major customers in the aeronautics industry. EcoTitanium, which was inaugurated in 2017, is Europe's first recycling facility for aviation-grade titanium alloys. A study conducted by an independent third party shows that EcoTitanium® avoids 26.4 tCO₂ per tonne of titanium produced by recycling compared to traditional methods. The volume of emissions avoided is expected to increase in the future as EcoTitanium® reaches its nominal production rate.

Another site of the Alloys division, Erasteel Commentry (France), also recycles metalliferous materials as part of its activities. This mainly concerns the processing of used catalysts. The metals recycled in this way are mainly iron, molybdenum, nickel and cobalt. The contribution of these recycling operations is measured by the lower quantities of GHGs emitted per kg of recycled metal compared to the primary production chain. The study conducted by a third party shows that this avoided about 2.8 kt of CO₂ in 2018.

1.3.5.3.4 The Digital Transition supporting the Energy Transition

The teams of the Energy and Climate Department are supported by the Digital Transformation Department in the implementation of energy efficiency or energy mix optimisation projects.

In 2018, a proof of concept (POC) at the Les Ancizes site (Aubert & Duval, France) demonstrated the performance of a tool for monitoring the energy consumption of furnaces for heating alloys before forging or annealing forged parts or rolled products. This POC required the installation of smart meters; the project will be scaled up from 2019 and this new technology is currently being deployed in the High Performance Alloys division.

1.3.5.4 Performance

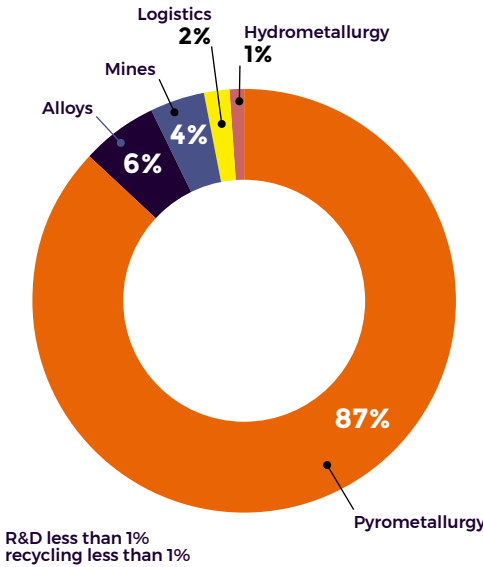
1.3.5.4.1 Energy consumption

To measure its performance, the Eramet Group's activities are grouped into seven business lines:

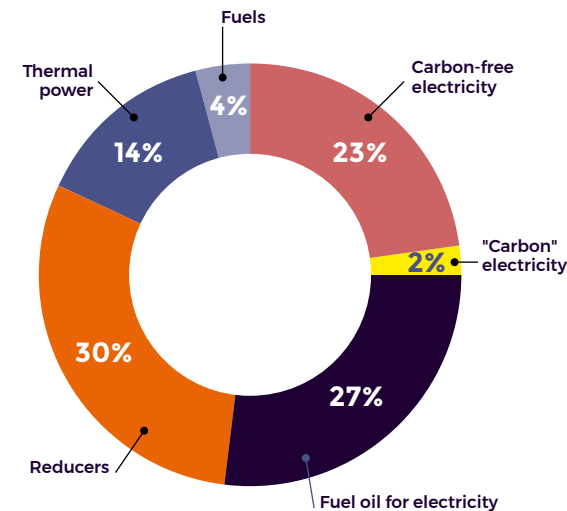
- **“Mining”**: energy consumption is mainly fuel for mining machinery and electricity for fixed installations. Consumption trends are particularly dependent on the structure of the deposit, its morphology, the activity (volumes of ores produced) and especially stripping and preparatory work ratios (total volumes handled);
- **“Pyrometallurgy”**, which is part of “extractive metallurgy”, consists of converting, through reduction reactions, the oxides contained in the ores into metal alloys which are then marketed. These processes require an energy supply to reach the temperatures of the reduction or smelting reactions (around 1,500°C), in the form of electrical energy and reducers that also contain carbonaceous energy. This consumption is directly dependent on the activity. Good process control also requires upstream monitoring of the water content of ores. The energy consumption for these uses is therefore also highly dependent on climatic conditions;
- **“Hydrometallurgy”**, which consists of producing metal salts, is also part of extractive metallurgy. The types of energy consumed are mainly electricity, steam and natural gas. Consumption is mainly dependent on the activity and type of manufacturing process;
- **“Internal logistics”**, which corresponds to the Group internal rail transport between mines and ports. For Eramet, it therefore comes under scope 1 and is completely distinct from the logistics activities traditionally defined in scope 3. Energy consumption is mainly linked to the diesel locomotives operated in our mining countries;
- **“Alloy metallurgy”**, the purpose of which is the production of alloys with high mechanical properties, their hot or cold processing and the associated heat treatments. These processes consume electricity and gas. Consumption is clearly dependent on the types of products delivered to customers and the complexity of the processes;
- **“Recycling”**, which consists of recycling metal waste by smelting it into alloys that can be used internally (concept of secondary mining) or directly by customers. The types of energy consumed are the same as for processing metallurgy;
- **“R&D”**, which operates upstream for all the Group's other business lines.

Energy consumption in 2018 was 16.4 TWh, down 3% compared to the average of the last three years (2015 to 2017). 87% of the Group's energy requirements are consumed by 14 pyrometallurgical plants.

CONSUMPTION PER ACTIVITY



ENERGY USE



The energy purchased by the Group is used for the following purposes:

- Electricity (4.1 TWh): includes all of the energy required for furnaces, motive power (motors and electric machines), lighting and services. As far as possible, the Group supplies electricity from carbon-free sources (hydraulic, nuclear);
- Electricity generation (4.4 TWh): use of electricity generated by “proprietary” heavy fuel oil power plants;
- Reducers (4.8 TWh): chemical and thermal energy provided by reducers in fusion reduction operations. Their consumption is determined by the degree of oxidation of the ores and must therefore be constantly adapted;

- Thermal (2.3 TWh): uses including drying, heating and heat treatment operations, necessary to ensure the quality of products produced by alloy metallurgy and for pyrometallurgy inputs;
- Fuels (0.6 TWh): used for combustion engine powered machinery, mainly for mining operations.

Purchases of very low carbon electricity
91% of the electricity purchased in 2018 (compared to 88% in 2017) was produced with little or no use of fossil fuels (Norway, Sweden, France, Gabon) and therefore with a low carbon footprint (73% hydroelectric and 19% nuclear). Electricity purchases represent approximately 75% of the Group's electricity consumption.

1.3.5.4.2 Greenhouse gas

Eramet first responded to the CDP questionnaire in 2018. It obtained a rating of C, which is in line with the average of companies in the sector.



Scopes 1 and 2

Greenhouse gas emissions amount to 4.1 Mt of CO₂.

Scope 1 emissions are mainly due to:

- the processing of ores using pyrometallurgy (47%), for which there is currently no economically viable alternative technological solution. The main focus of emission control would be to develop a method of capturing process gases for storage or sale as a precursor chemical. The development of such technologies would require extensive R&D and would therefore only be a long-term solution, as the technology is not yet available;
- electricity generation (32%). Studies are currently being carried out on facilitating the generation of electricity using lower-emission technologies (LNG and solar power plants);
- various heating requirements (17%).

Scope 3

Items related to metal purchases and freight appear to be the most significant within scope 3.

Total scope 3 emissions for 2018 are estimated at around 1 million tonnes of CO₂, including 780 kt for metal inputs and 180 kt for upstream and downstream freight.

1.3.6 Mining environment

This section looks at environmental protection actions deployed at the mining sites in operation (with the exception of measures concerning biodiversity, which are detailed in Section 1.3.7). Provisions for developing mining projects are included in Section 1.5.4 “Governance of Industrial and Mining Projects”.

The Group's mining operations do not include underground mines. The mining uses no chemicals.

The mine operated by Comilog (Gabon) on the Bangombé plateau is one of the richest manganese deposits in the world, covered by a layer of 4 to 5 metres of waste rock⁽¹⁾. The properties of the deposit and the ore result in the production of very little mine waste.

SLN operates 15 nickel mines in New Caledonia; the seven largest are operated directly by SLN and the others are subcontracted to local operators. The mines are located in rugged terrain at altitudes between 250 and 1,000 metres. In this type of deposit, it is necessary to move about 7-9 tonnes of tailings to produce 1 tonne of ore that can be processed by the Doniambo plant. Storing these tailings in conditions that guarantee safety and protection of the environment is, therefore, a key issue.

The Grande Côte Opérations (GCO) mineral sands mine in Senegal produces zircon, ilmenite, rutile and leucoxene. The deposit is located in the sand dunes near the coast to the north-east of Dakar. The extraction operations take place in an artificial mobile basin of 12 hectares and about 6 metres deep and follow a route which is optimised to exploit the deposit. The mining process involves a dredge with a capacity of 7000 tonnes per hour, connected to a floating concentration plant, where minerals are separated from the sand by a grading and gravimetric process. After extracting the recoverable fractions (around 1.7% of the treated sand), the sand is directly put back at the rear of the facilities to reform the dune. The resulting heavy mineral concentrate is transferred to separation plants located on land, where the commercial products are obtained by separation. The low volumes of products extracted and not processed in this stage are reincorporated into the reconstituted dunes. The water needed to run operations is pumped from a deep aquifer and recycled to the maximum extent.

The following table summarises the main environmental issues and risks for the Group's mining sites.

(1) Tailings is the material that remains after the ores are extracted from rocks mined with no or very little desired metal content.

TABLE SUMMARISING THE ENVIRONMENTAL ISSUES AND RISKS AT ERAMET'S MINING SITES

MINES	NICKEL SLN (NEW CALEDONIA)	MANGANESE COMILOG (GABON)	MINERAL SANDS GCO (SENEGAL)	COMMENTS
Pressure on water resources (quantity)	Low sensitivity	Low sensitivity	High sensitivity	The high levels of rainfall at the sites in New Caledonia and Gabon make the issue of water consumption relatively low in sensitivity. Conversely, in Senegal, the two aquifers used by the mine are important reserves for local residents and for the country. Measures are being taken to limit the quantities taken from these aquifers.
Erosion	High sensitivity	Medium sensitivity	Medium sensitivity	The nature of the soils and rocks, the topography of the deposits and the presence of fragile receiver environments make erosion a very sensitive subject in New Caledonia. In Senegal, protecting the dunes reconstituted after dredging against wind and water erosion is an issue, but outside the freshly reconstituted areas this subject is of minor importance. In Gabon, the recent extension of the deposit into a sloping area has increased the acuity of the issue somewhat, but it remains low in significance for the rest of the mine.
Acid drainage	No acid drainage	Low risk of acid drainage	Low risk of acid drainage	Generally, Eramet mining sites are little concerned by the risk of acid mine drainage. In Gabon, only a horizon of tailings located in the current extension of the deposit is likely to present this risk in a localised way. In Senegal, a sandy horizon containing intercalated peat lenses may be encountered during mining operations and may potentially generate low acidification.
Production of tailings	High sensitivity	Low sensitivity	Low sensitivity	The tailings from the Moanda mine are mostly returned immediately to the mining area. In Senegal, the sand is returned directly to the environment after extracting the recoverable fraction, which represents only 2%. By contrast, in New Caledonia, the production of tailings is much larger. The methods of exploitation used by SLN (New Caledonia) are increasingly changing from stockpiles to filling pits with tailings.
Production of residues	Low sensitivity	Medium sensitivity	Low sensitivity	Only the Comilog mine (Gabon) and the Tiébaghi and Népoui mining sites (New Caledonia) produce significant quantities of mine tailings resulting from concentration steps by mechanical means. These residues are chemically stable and are not hazardous to the environment. In New Caledonia, residues from processing plants are, moreover, commercially processed as mining by-products. The characteristics of the small quantities of residues produced in Senegal allow their return to the natural environment during the reconstitution of the dune.
Impact on biodiversity	High sensitivity	High sensitivity	Medium sensitivity	The biodiversity of the New Caledonian sites is recognised as remarkable due, in particular, to its very high endemism. The most recent studies conducted with regard to international standards in Gabon have shown that the Comilog mine is also located in an environment characterised by high biodiversity. The GCO mine (Senegal) does not have the same level of sensitivity. However, it should be noted that the Senegal mine is adjacent to major vegetable production areas.

1.3.6.1 Mining environment management structures

Teams dedicated to the consideration of the environment in mining are present at the sites and subsidiaries concerned in Gabon, Senegal and New Caledonia.

In the last few years, as part of its Sustainable Development policy, Eramet has strengthened the structuring, formalisation and international coordination of tools for environmental management at mines. As part of this, the following actions have been carried out:

- All mining subsidiaries have formalised a Mining Environment action plan; the progress of these action plans is reviewed regularly with the Group Environment, Industrial Risks and Products Department.
- A community of mining environment experts has been set up and meets regularly. Its role is to formalise good practices guidelines applicable throughout the Group and to encourage the exchange of expertise between sites. A compendium of Mining Environment good practices was published in November 2015.
- Environmental Management Systems compatible with the requirements of ISO 14001 have been deployed by the mining subsidiaries. In 2016, SLN became the first mining and metallurgical company to obtain ISO 14001 certification in New Caledonia. The certificate covers the mining activities of the seven main mines, which are operated directly by SLN. At the same time, in April 2016, Comilog successfully renewed its certification initially obtained in 2012 for a scope including the operations of the Moanda mine, the storage, the shipping of ore, the agglomerate activities in Owendo, as well as equipment maintenance. In Senegal, significant improvements are under way with the implementation of an environmental management system aligned with the requirements of ISO 14001 throughout the various functional units of GCO in collaboration with the Group's environmental team. In addition, in 2017, GCO updated its Environment, Biodiversity, Safety, Ethics, Quality and Communities policies and committed to a process leading to ISO 14001 certification.
- All SLN mining sites (New Caledonia) have updated their environmental impact assessments in recent years as part of the reform of the Mining Code of New Caledonia. This considerable work allows each site to have comprehensive studies on the environment and the ecosystems in which they are located, and effective environmental management plans adapted to their specific characteristics.
- At the same time, for the Comilog mine (Gabon), major environmental studies have been carried out to improve the level of knowledge of the environmental characteristics of the site with the aim of pursuing the development of a relevant rehabilitation strategy for the site. These studies focus on soils, hydrology and hydrogeology, as well as on biodiversity. Finally,

in cooperation with the authorities, Comilog (Gabon) chose to carry out a full environmental impact study, going beyond the applicable regulatory requirements, to extend the operation of the mine on the Bangombé plateau to the edges of the deposit (part of the sloping deposit located within the Comilog concession). This study was validated by the authorities in 2018. An environmental and social study aligned with best international standards was also started by Comilog (Gabon), concerning the Okouma deposit mining project and the construction of a new washing plant. This study will be completed by the second quarter of 2019.

- In Senegal, the Grande Côte mining site, following the audit and updating of its Environmental Management and Social Plan (EMSP), received its environmental compliance certificate on 24 October 2016 from the supervisory authorities, and then, in 2017, the joint ministerial decision granting definitive authorisation for all its classified establishments.

1.3.6.2 Responsible resource recovery

The recovery of mining resources is one of the Group's core businesses and a key component of the Group's contribution to the development of the circular economy. Indeed, maximum recovery of the mineral profile, i.e. the mining of ores at the lowest possible grade, or the recovery of materials previously considered to be waste rock or residue, makes it possible to improve the environmental efficiency of mining operations by increasing the quantity of metal resources produced for the same environmental footprint.

In this respect, SLN (New Caledonia) has developed techniques for recovering ores initially considered marginal, thus significantly extending the life of the deposits while reducing the final environmental impact. These results have been obtained with the construction of ore washing plants which allow the ore to be concentrated without adding any chemicals. Since mid-2010, SLN has been recovering by-products from the ore washing plants, as well as selectively stockpiled products (laterites and low-grade saprolites). In seven years, more than 3 million tonnes of low-grade saprolites and by-products from ore washing plants were recovered.

Another example: since 2016, more than 20,000 tonnes of sand containing zircon, initially considered as a residue, have been recovered by the GCO teams (Senegal).

In 2018, the Group decided to strengthen this momentum to improve the recovery of mining resources by formalising a new circular economy action plan. The objective is, over the period 2019-2023, through a series of innovative actions, to recover more than 2 million tonnes of materials previously considered as residue or tailings.

1.3.6.3 Water management

At mining sites in New Caledonia, and to a lesser extent in Gabon, the major issue of water management is to prevent the entry of suspended solids (SS) into the receiving environment through run-off caused by erosion due to surface stripping.

To avoid this, SLN (New Caledonia) has long since equipped its sites with sedimentation basins that trap suspended solids in order to prevent their transport into the natural environment. Upstream of these works, many precautions are taken to minimise erosion: roofing of sites to prevent water entry, minimisation of open areas, conservation of natural embankments at the edges of stripping sites, organisation of run-offs to reduce speed, implementation of hydraulic locks, etc. These measures are documented for each SLN mining site in a Water Management Plan that meets the regulatory requirements of New Caledonia. The implementation of these Water Management Plans as mining progressively evolves represents an ongoing commitment and considerable investment. Finally, monitoring of the proper functioning of the water management works is now carried out using drones. In total, investments dedicated to water management for these sites exceed €17 million over the last five years.

The special expertise of SLN on the topic of erosion prevention is compiled in a revised technical guide (the "Blue Guide"), which serves as an industry reference in New Caledonia and beyond for the Group.

In Gabon, the subject of erosion is less significant given the topography of the plateau deposit and the draining characteristics of the upper geological layers of the plateau. Nevertheless, operators are aware of the measures to be taken to limit erosion. Attention is still paid to the topic due to the ongoing extension of the deposit into the sloping part. A specific water management plan associated with the extension of the deposit has been developed. As part of this plan, in addition to the recommendations relating to the construction of safe slopes and the size of sedimentation basins, a specific environmental monitoring system has been put in place which confirms the effectiveness of the measures taken and makes it possible to verify that the very limited and localised phenomenon of acid mine drainage does not have a significant impact on the natural environment.

In addition, in recent years, major advances have been made at the Moanda site for the management of aqueous waste from the ore mill. Since 2010, discharges to the River Moulili were stopped with the installation of (ultra-fine) tailings ponds. These ponds were constructed in such a way as to be able to recover the overflow waters and redirect them to the concentration facility, thus eliminating any direct discharge into the river.

In Senegal, the subject of water management is important, as the operation of the mine uses two aquifers, one of which is very important for local inhabitants and the country in general. Given this situation, every precaution is taken to ensure that the impact of the mine is controlled and minimised. GCO (Senegal) has an expert team dedicated to hydrogeology. It makes monthly use of the services of the Ministry of Water, which thus monitors it systematically.

The water management system was designed and authorised by the competent department of the Senegalese government to avoid additional pressure on the superficial water table used to supply local residents' agricultural crops. All mining installations are controlled to ensure minimal variations in the level of this water table. This aquifer is subject to twice-daily monitoring. More than 80% of the mine's net water consumption is used to ensure a constant water level in the basin in which the facilities float. For this, the mine uses a deeper aquifer, for which limits on pumping rates have been set by the authorities and respected by GCO (Senegal) since the start of production. The water from this aquifer is recycled to the maximum extent possible. In addition, this aquifer is also subject to continuous monitoring. To this end, nine piezometers are used to control the deep (Maastrichtian) aquifer.

"Water policing" and monitoring operations are carried out internally on an ongoing basis by the Environment Department of GCO (Senegal). Monthly reports on this matter are sent to the relevant authorities. Since the start of the operations, monitoring has demonstrated the effectiveness of the measures taken and the absence of damaging consequences on water resources.

1.3.6.4 Tailings and mine waste management

Given the considerable volume of tailings being handled at SLN operations (New Caledonia), the storage of tailings in appropriate structures and their revegetation is a vital environmental task in order to minimise erosion and the impacts on the ecosystem and landscape.

Thanks to its extensive experience, SLN (New Caledonia) has developed effective techniques that have been validated by the authorities, one of which is to create tailings stockpiles. The works are carried out according to professional standards and their stability is guaranteed in the long term, even during exceptionally heavy rains. These tailings stockpiles are subject to continuous internal monitoring and regular audits by an external third party. In relation to water management techniques, SLN has published a technical guide, updated in 2012, which explains the construction methods of tailings stockpiles and their design rules. This guide applies to all SLN mining sites operated directly or by outsourcing. Moreover, in order to minimise land clearing and promote site rehabilitation, SLN prioritises the creation of flat-top piles in old mining pits, when the environmental conditions are favourable.

In Gabon, the problem is again less sensitive since, on the one hand, the volumes of tailings being handled are much less, and on the other hand because the technique of exploiting by the successive opening/closing of "compartments" allows the majority of tailings to be placed directly into the "compartments" after extraction.

The Senegal mine is not at all affected by this problem, since the sand dune is reconstituted after passing the dredge and extracting the recoverable part.

Mine tailings, which are produced in ore concentration plants at mines in Gabon or at the Népoui and Tiébaghi sites in New Caledonia, are chemically stable and therefore are not hazardous waste within the definition of the regulations. In New Caledonia, all processing residues from enrichment plants (Népoui and Tiébaghi) are also commercially recovered as by-products of the mine. In Gabon, mine tailings are stored in nine basins with a capacity of about one million cubic metres, consisting of closed dykes with a maximum height of 16 metres. The residues of the metallurgical enrichment plant are stored in a retaining dyke with a maximum capacity of 6 million cubic metres. These structures are continuously monitored for their stability. Furthermore, in 2016, in the framework of its risk prevention initiative, a specific audit of these dykes was commissioned by geotechnical and environmental experts of the Group. The audit found a good level of risk control by respecting the design and operation standards of these structures. While they are still modest in size compared to those elsewhere in the world, an action plan to further strengthen this level of control has been established and implemented.

The GCO plant (Senegal) produces a very small amount of residues. The residual products have characteristics that allow their return to the natural environment when the dune is reconstituted.

1.3.6.5 Rehabilitation of mining sites

All mining sites are continuously rehabilitated.

In New Caledonia

The work includes land reshaping and revegetation operations, the methods and results of which are described in Section 1.3.7 Preservation of biodiversity.

As part of the implementation of the environmental management system for mines, over the past few years SLN has carried out a comprehensive review of its internal procedures and rehabilitation instructions and a formalisation of the expertise developed over the past ten years or so. The objective is to share best practices, ensuring greater consistency between sites, as well as better integration of rehabilitation operations in mine planning in the short and medium term. In this context, two Technical Guide references were published by SLN, one dedicated to the optimal management of top soil (2015) and the other devoted to principles and techniques of mining redevelopment in 2016.

Of SLN's five mining centres, four have a formal rehabilitation master plan in place, and the plan for the fifth site is partially completed.

In recent years, major redevelopment work, allowing for definitive rehabilitation, has been carried out, continued or completed. In addition to the revegetation work carried out on a recurring basis (hydraulic sowing and planting, excluding topsoil spreading), other major redevelopment projects are also being undertaken by SLN. Some examples are:

- the massive project to redevelop the SM2E tailings stockpile on the Thio Plateau, which was completed in 2018;
- the redevelopment of the A&B Debris landfill, also on the Thio Plateau, which will begin in 2019 and will take more than 10 years. This involves restoring an old mining landfill, a remnant of old operating methods, characterised by:
 - a steep incline of 350 metres,
 - a steep gradient ranging from 30% to more than 60%,
 - a total volume of approximately 2 million cubic metres of waste to be handled, composed of a mixture of laterite and boulders,
 - a strong visual impact, resulting in the build-up of silt in a creek downstream.

The redevelopment will consist of stabilising the slopes (excavation and evacuation of material, lowering of the integrating slope and implementation of a sustainable water management system). To complete this redevelopment, revegetation work is planned in the long term to ensure the integration of the redeveloped landfill in the surrounding landscape;

- the redevelopment of ravines following past mining activities, for example on the Ningua massif in Thio (Absinthe Creek);
- the redevelopment of the Rachel tailings stockpile in Népoui, which is the subject of administrative winding-up proceedings, and on which SLN is developing a seed field and seed orchard (80,000 plants on 3 hectares), in order to develop a site with easy access to seed for its future revegetation work.

In terms of remediation of liabilities, over-silted waterways are also the subject of clean-up operations by SLN. In 2018, three creeks were treated in the Thio region.

In Gabon

Revegetation is much easier than in the New Caledonian environment because vegetation recolonisation occurs naturally. The challenge of redeveloping the sites is also landscaping with the need to remodel the tailings stockpiles of a few metres in size created by exploitation.

- Since 2010, the mining procedure has been revised to incorporate land remodelling as it evolves. An effort to remodel the areas disturbed before this date was undertaken in parallel and is subject to an annual target in the mine's environmental management system. The results are detailed in Section 1.3.7 Preservation of biodiversity. Beyond these concrete actions, preliminary studies for the definition of a

comprehensive rehabilitation strategy of the Ban-gombé mine plateau have been continued.

- In addition, operations to rehabilitate the River Mou-lili by extracting the ultra-fine deposits downstream from the mine's ore washing plant have continued since 2010. At the end of 2018, approximately 13.1 million tons of manganiferous sediments were excavated. These operations are carried out in strict compliance with the Environmental Management and Social Plan prepared after the impact assess-ment of this work. In a spirit of transparency and dialogue, Comilog also organised, in June 2014, a seminar dedicated to the rehabilitation of the downstream segment of the river. The seminar brought together all relevant stakeholders (govern-ment, civil society, NGOs, scientists, etc.). It helped define a consensus and recommendations for the downstream segment, which were then proposed to the supervisory authorities. Such a consultation process was a first in Gabon. In 2018, approximately 1,000 linear metres of the downstream section (MT4 site) were excavated using specialised equipment (amphibious hydraulic excavator).

In Senegal

The particular exploitation mode of this mine, with an enrichment plant moving progressively along the deposit, involves the clearing of vegetation consisting of grasses and thinly distributed trees in the area. The revegetation of the reconstituted dunes at the rear of the mobile mining facilities is a strong expectation of the resident populations, and also a challenge in the context of rainfall limited to a short rainy season.

After consulting the relevant authorities, local popula-tions and their representatives, a participatory rehabili-tation strategy with strong involvement of communities and local authorities was formalised in late 2013. The implementation of rehabilitation is accompanied by the creation of income-generating activities for the host populations participating in the emergence of a local entrepreneurial culture. Rehabilitation work is regularly monitored as part of a dedicated formal consultation framework set up in 2015 by the *sous-pré-fet* of Méouane, and consultations with local residents on their expectations regarding rehabilitation were renewed in 2016.

The success of the rehabilitation operations and the rigorous application of the rehabilitation strategy have been confirmed by regular audits by the Water and Forest Inspectorate as well as during the recent visit of the Minister of the Environment and Sustainable Development. Rehabilitation techniques are constantly being improved. With the implementation of a sup-plementary irrigation system in 2017, rehabilitation is now carried out continuously throughout the year, thus making it possible to cover increasingly large areas. Maintenance of the new plantations with the

supplementary irrigation system has resulted in very high survival rates (over 90%) and faster plant growth. The dynamics of natural resources (soil, flora, fauna, etc.) in the sites being rehabilitated are good. A doctoral thesis entitled "Contribution to environmental moni-toring and sustainable rehabilitation of mining sites: Case of the mining of mineral sands in Grande Côte, Senegal" was successfully defended at the University of Thiès (Senegal). Rehabilitation results are detailed in the following Section 1.3.7 on biodiversity.

1.3.7 Preservation of biodiversity

The locations of Eramet's various mining and metallur-gical activities have enabled it to acquire solid expe-rience in relation to biodiversity and to build a network of internal specialists. Based on this experience, Eramet decided to formalise its actions with the adoption of a Biodiversity Policy common to all mining and industrial sites, which was rolled out and communicated to Group employees in 2015.

The principles are to be adapted at sites in a manner proportionate to local issues. The full text of this Policy is directly accessible on the Eramet website at the following address:

http://www.eramet.com/sites/default/files/Eramet_politique_biodiversite_fr.pdf

In application of this Policy, for several years now the Group has been committed to:

- participating in *ad hoc* discussions at local, national and international levels;
- developing skills within Eramet;
- developing methodological tools for coordinated management of biodiversity across Group sites.

The aim is to reduce the impact of the Group's activities throughout the life of the sites.

At an international level, Eramet has always strongly supported the work of the Business and Biodiversity Offsets Programme (BBOP), an international think tank on biodiversity compensation issues.

In France, Eramet participates in the ongoing discus-sions on the implementation of the law of 8 August 2016 on the recovery of biodiversity, notably through the chairmanship of the MEDEF Biodiversity Working Group⁽¹⁾.



(1) MEDEF: Movement of Enterprises in France.

1.3.7.1 The challenges of biodiversity

Eramet, through its mining and metallurgical activities, may impact ecosystem species, habitats and services, which may be ordinary or remarkable biodiversity, depending on the location. As illustrated in the table

below, the Group's most important biodiversity issues currently relate to New Caledonia, Gabon and Indone-sia. Despite a moderate sensitivity to biodiversity at the operations site, Senegal is also the subject of specific focus given the significant rehabilitation and revege-tation issues.

ON THE SITES	NEW CALEDONIA	GABON	INDONESIA	OTHER
Number of species (flora and fauna) classified as Critically Endangered (CR) ⁽¹⁾ on the IUCN Red List ⁽²⁾	4	2 ^(*)	0 ^(**)	0
Number of species (flora and fauna) classified as Endangered (EN) ⁽³⁾ on the IUCN Red List	24	1	14 ^(**)	0

(*) These species may potentially be present, but they have not been observed on the Comilog and Setrag sites.
(**) These values are derived from the results of characterisation studies developed at the Weda Bay Nickel project.

The Group does not have any mining or metallurgical site in operation in a protected area. It should be mentioned, however, that the Setrag railway track crosses the Ramsar⁽⁴⁾ site of Bas-Ogooué (for 56 km), the Ramsar site of the Mboungou Badouma and Doume rapids (for 30 km) as well as the National Park of Lopé (62 km), a UNESCO World Heritage Site⁽⁵⁾. The Ramsar sites and the National Park were created between 2007

and 2009, that is to say, 30 years after the construction of the Trans-Gabon railway. Setrag is also engaged with the Gabonese Ministry of Water and Forests and the National Agency of National Parks in the fight against poaching by raising awareness among its staff and through its policy prohibiting the transportation of protected species. The protocol agreement was renewed in 2018.

Number of sites within 10 km of a protected area	21
Average distance of these sites from the protected areas	2 km
Types of protected area	Nature Reserve, National Parks, ZNIEFF ⁽⁶⁾ , ZICO ⁽⁷⁾ , Natura 2000 area ⁽⁸⁾ , Ramsar area, UNESCO World Heritage

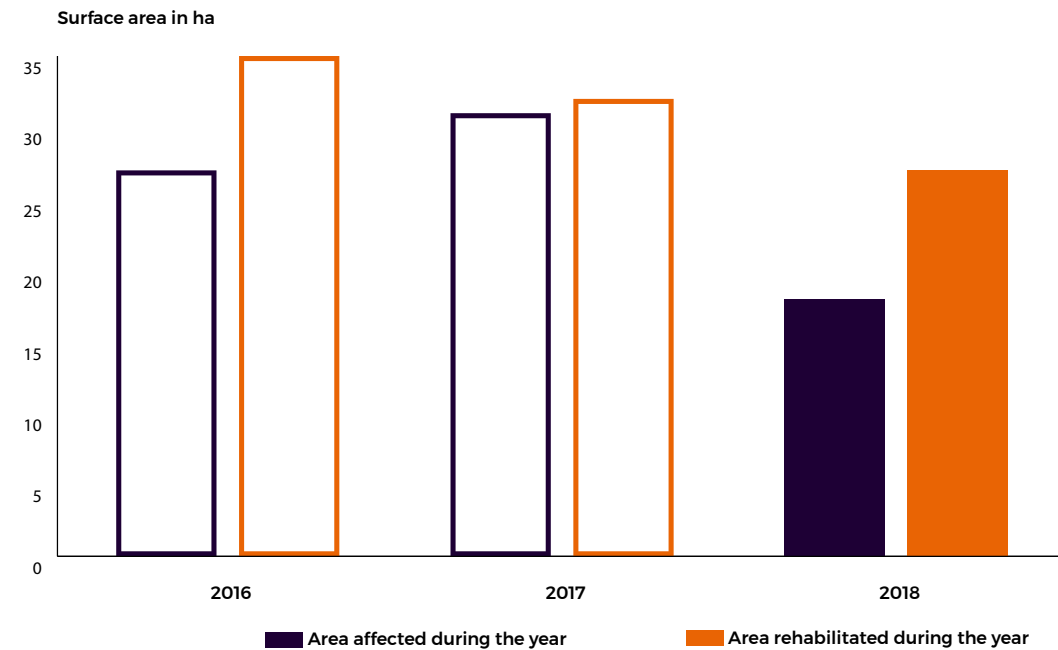
(1) CR: IUCN classification for Critically Endangered Species.
(2) IUCN: International Union for Conservation of Nature.
(3) EN: IUCN classification for Critically Endangered Species.
(4) The Ramsar List refers to wetlands of international importance.
(5) UNESCO: The United Nations Educational, Scientific and Cultural Organization.
(6) ZNIEFF: Natural Area of Interest for Ecology, Fauna and Flora.
(7) ZICO: Important Area for Bird Conservation.
(8) The Natura 2000 network is a European ecological network made up of Special Protection Areas and Special Conservation Areas designated by the Member States.

1.3.7.2 In New Caledonia

Société Le Nickel (SLN) operates nickel deposits on various sites in the heart of a region renowned for its rich biodiversity and a high rate of endemism among its flora and fauna species.

Since the 1980s, SLN has developed reliable and environmentally friendly rehabilitation methods. The naturally low fertility of the soils, rich in metals and poor in organic elements, as well as the extreme rainfall conditions, make it difficult to see the results of this work in the short term because of the very slow growth.

NEW CALEDONIA



In parallel, SLN is very committed to preserving biodiversity, working on the reintroduction of rare and threatened plant species through inventories of mining centres and phenological monitoring to better control their propagation. A partnership with the *Institut agro-nomique néo-calédonien* has enabled SLN to produce around ten production sheets that are now available for nurseries. The work and methods are also shared and pooled in an *ad hoc* working group established within the Union of New Caledonia Mining Industries (SIM). In 2018, a first rare and threatened species planting campaign was carried out on areas already rehabilitated and enhanced with topsoil, as well as in the natural environment.

In 2018, SLN also continued to monitor the wildlife (reptiles, birds, bats), the marine environment and the water quality of its mining creeks on all of its active sites.

Finally, SLN continues to actively participate in the ongoing reflections on the territory, and relating to the compensation and implementation tools, with the SIM and the North and South Provinces, as well as the specialised firms that support them.

In the field, revegetation can take different forms. It is carried out by spreading topsoil, planting or hydraulic sowing, having most of the time enriched the soil beforehand. The species used for revegetation are all local species, including some endemic species.

The revegetation effort has been maintained consistently since 2015 with about 30 hectares covered per year. The effort is made both on the sites directly operated by SLN and on contracted sites.

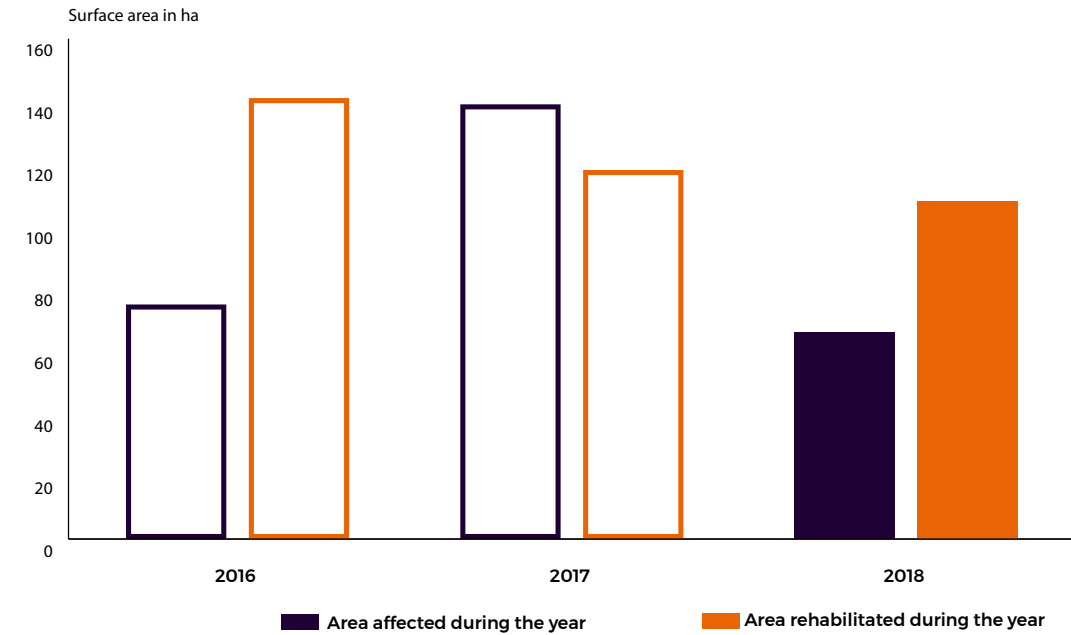
1.3.7.3 In Gabon

The Ogooué Mining Company (Comilog) has been exploiting manganese ore on the Bangombé Plateau in Moanda, Gabon for more than 50 years.

Although the manganese reserves of this plateau are still considerable and make it possible to envisage more than 10 or even 20 years of exploitation, part of the plateau has already been rehabilitated. The mining procedure has been revised to incorporate a remodelling step and the progressive upgrading of the topsoil. Since 2010, the gradual reshaping of historically disturbed surfaces has also been completed.

In 2014, a mining environment brigade was created, which contributed to the significant increase in rehabilitated areas: 581 hectares in five years.

GABON



At the same time, Comilog continues to improve its rehabilitation strategy, taking into account the results of the latest environmental studies developed for the Bangombé plateau and the exploitation of its borders, as well as the recommendations of the biodiversity specialists and experts involved in the Comilog 2020 project.

In addition to the mining activities, Lékédi Park (a subsidiary of Comilog), located 5 km from Bakoumba in the south-east of the Gabonese Republic, covers 14,000 hectares of savannahs, gallery forests, and bodies of water.

The park is dedicated to the preservation of protected species, the observation of animals and the reception of young orphans of poaching (mainly primates). It also conducts research on biodiversity and combating poaching in partnership with Gabonese and international scientists and organisations.

The park is mainly a rehabilitation centre for monkeys and primates; it is accredited by the Pan African Sanctuary Alliance (PASA — <https://www.pasaprimates.org>). Gabon's orphaned chimpanzees and gorillas are collected and raised in their natural environment.

Different groups of mandrill have also been introduced to the park and live in total freedom. They have been studied since 2012 by an international team of researchers: the *Mandrillus* Project. The aim is to answer fundamental questions about evolutionary ecology, anthropology, food ecology, animal communication (etc.), as well as more applied conservation and epidemiological questions.

A programme to reintroduce chimpanzees, gorillas and mandrills to the Batéké Plateaux National Park started in 2018 with the release of three gorillas in partnership with the Aspinall Foundation. An initial group of seven

chimpanzees is in quarantine at the *Centre international de recherche médicale de Franceville* before their introduction in early 2019. They will be followed by a group of about 20 mandrills to start the National Park's large wildlife restoration programme.

In addition, since 2013, the Park has also been involved with the NGO Conservation Justice and the Haut-Ogooué Regional Water and Forest Administration to carry out mutual awareness-raising and anti-poaching campaigns. In 2018, four major anti-poaching operations were carried out. The last operation, which took place in December, resulted in the seizure of two rifles. A new partnership agreement was signed in October 2018 with the Provincial Directorate of Water and Forests to carry out awareness and monitoring missions around the Park. Six to eight missions are planned for 2019.

1.3.7.4 In Senegal

In Senegal, the Grande Côte operations began in 2014. The exploitation of mineral sands involves the clearing of vegetation as a floating dredge moves along the deposit.

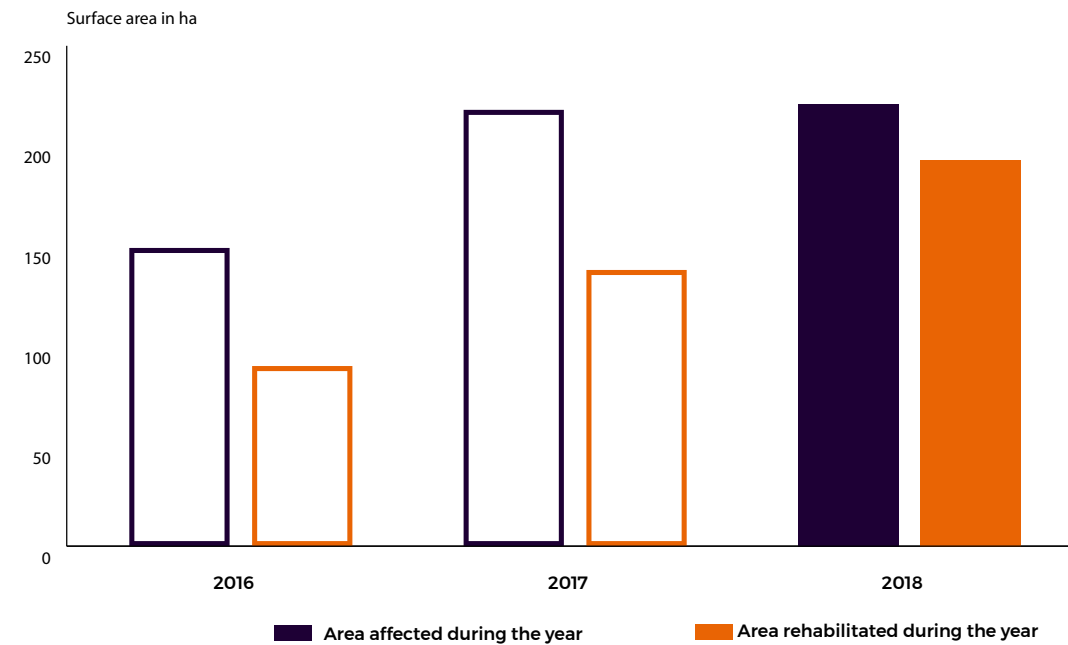
Biodiversity is of medium sensitivity in the currently exploited areas. However, the mine is in an area where there is still significant plant and animal diversity despite the strong human impact. Three endemic grass species from Senegal have been identified in the mining pass for the next five years. The Senegal mine is also adjacent to very large vegetable production areas. The issues are mainly related to the rehabilitation and revegetation of large areas, as and when the exploited sites are made available, as well as to the management of biodiversity through a participative and inclusive approach.

To best reflect the original landscape (dunes), rehabilitation will begin with the reshaping of the slag heaps. Then, nets will be installed to fight against wind erosion, and the surfaces will be covered with manure and vegetation.

The revegetation and soil improvement methods implemented in the field since 2014 are convincing. They include:

- the planting of woody species produced in the nursery;
- planting herbaceous seedlings from seeds harvested on site;

SENEGAL



GCO is also considering the services and products that the site will be able to offer after closure. A compendium of local biodiversity management practices is being developed in collaboration with the University of Dakar.

1.3.8 Responsibility for chemicals

1.3.8.1 Issues and risks

The Eramet Group is characterised by its dual role as a user and producer of chemical substances and mixtures.

Eramet is one of the world’s leading producers of alloys, superalloys and high-performance steels. Some

- the use of sheep and goat manure for soil fertilisation and indirect seed supply. Initially the soil was improved with additional topsoil, but this practice proved to be less effective than spreading manure during field tests.

Since 2016, GCO has put in place an additional irrigation system to allow the continuity of revegetation operations during the nine months of the dry season. The area planted in 2017 was thus increased by 50% compared to 2016, and it was further increased by 40% in 2018.

generate a series of chemicals: hydrometallurgical, pyrometallurgical or recycling processes.

At the same time, the production of alloys requires the use of ores, minerals, recycled secondary materials and a series of metal inputs to adjust the right compositions of the desired grades. The use of chemicals as “commodities” (acids, bases, salts, etc.) is also important. It is also necessary to manage the numerous products used at the laboratory level, as well as in maintenance of installations and for other specific purposes such as water treatment or the capture of vapours and aerial particles.

The Group pays particular attention to the management of the chemical substances and mixtures it uses or produces in order to substitute as far as possible the most dangerous substances and to ensure a high level of risk control, protection of human health and the environment.

The principles that guide the Group’s action in this regard are as follows:

- characterise and be familiar with the products used;
- translate regulatory or normative constraints on the monitoring of occupational exposures and chemical risk assessment into a global approach for continuous improvement.

1.3.8.2 Improving technical and scientific knowledge of Group products

The complexity and diversity of Eramet’s activities and products has led to the centralisation of the Group’s toxicological and ecotoxicological expertise at Group level. This structure makes it possible to capitalise on the knowledge accumulated in the Group’s various business sectors (nickel, cobalt, manganese, titanium, etc.) to improve the quality of available knowledge and reduce the investments and time spent on tests in order to obtain it. This knowledge is essential for defining appropriate and proportionate risk prevention measures.

Eramet is taking a proactive stance by pursuing research partnerships with Norwegian universities and official bodies to improve its knowledge of dust exposure in manganese alloy activities. Eramet also supports the scientific initiative by the Nickel Producers Environmental Research Association (NIPERA) in Europe and the US to establish methodological standards for linking the toxicity of a metal or alloy to its surface and solubility properties in biological liquids. The toxicity of an alloy does not simply result from the sum of the toxicities of its components. This last point was considered in 2018 by ECHA (European Chemical Agency), which appointed a group of experts to review the method for deriving a safe dose for a metallic carcinogen. The method was initially derived for organic compounds.

Knowing the products used also means having access to information quickly and clearly. Databases have been created – one for each site – which will include information from the Safety Data Sheets (SDS) and use a Group internal hazard scale. This makes it possible to group the classification according to five main categories and to simplify the identification of the product’s hazard.

This continual support for the Group’s sites also applies to the traceability of the products used, from the receipt of raw materials to the delivery of the finished product to the customer. Being able to trace upstream products makes it possible to guarantee the source of supply of raw materials and anticipate possible regulatory changes, such as a “hard Brexit”, which could potentially impact the REACH registrations of our suppliers and supply deadlines.

1.3.8.3 Harmonising chemical risk management methods

Eramet Group production sites are found on five continents, and they must, therefore, follow and respect various regulations concerning hygiene and controls of chemical exposures in the workplace. In this area of regulation, there may be significant differences from one country to another for the same substance. Harmonisation and communication between sites is therefore important for exchanging, explaining and implementing practices and references, ensuring a level of protection that is greater than or equal to the regulations in force in the relevant country.

This harmonisation and synthesis action was consolidated in 2018, in particular through a Group document repository, which includes:

- a Group procedure for chemical risk prevention;
- a methodological guide for measuring exposure;
- 10 standard toxicological data sheets for the Group’s main substances;
- a common chemical risk assessment method that allows each site to develop an improvement action plan, which can then be consolidated at Group level, to define common priorities.

At the end of 2018, this new methodology was deployed across two thirds of the sites and was accompanied by more than 100 hours of training for HSE and occupational medicine teams. This work will be continued in 2019, to reach 100% deployment.

As a result, the Group now has a centralised inventory of 3,500 chemicals used within the deployment area. 71% of the Group’s sites have a synthetic statistical analysis of the exposure measurements carried out over the last three years, and nearly 650 biological measurements have been made by occupational medicine departments.

1.4 Social and societal commitments of the Group

1.4.1 Commitment to Human Rights

1.4.1.1 Human Rights risk assessment

In 2017, Eramet formalised its mapping of the risks of violations of Human Rights and Fundamental Freedoms, with the support of external expertise.

A risk universe was established by matching the impacts of the Group's activities with the list of rights contained in the UN Universal Declaration of Human Rights of 1948, the two UN International Covenants of 1966 (International Covenant on Civil and Political Rights; International Covenant on Economic, Social and Cultural Rights), as well as the European Convention on Human Rights of 1950. Sector benchmarks on the identification and management of risks of Human Rights abuses were also taken into account. The criteria for assessing these risks, in terms of severity of harm and probability of occurrence, were also defined. They involve an assessment of the severity of the impact, not directly for the Group, but for the potentially affected third party(ies) (employees, local residents or other people).

The assessment of the level of severity and probability of occurrence of these risks was carried out by a representative panel of the different Corporate functions and Group entities across all geographical areas.

The risk universe of Human Rights violations defined during this exercise for the Eramet Group can be broken down into the following three broad categories, and the main risks were assessed for each of them:

- the risks for Group employees, mainly those related to health, safety and security at work, and to a lesser extent those related to discrimination and harassment;
- risks for local communities related to potential impacts associated with the activities of Group entities;
- the risks generated by contributors to the supply chain, such as, for example, non-compliance with the fundamental conventions of the International Labour Organisation.

This assessment, which is integrated into Eramet's risk management, will be updated every three years. Assessments of the situation of the sites and entities with regard to these risks also allow regular monitoring between each update. These assessments are updated based on Human Rights audits, two of which took place in 2018. Carried out by the Risk Management, Internal Control and Audit Department, they are administered on the basis of a dedicated internal audit framework, based on the Quick Check published by the Danish Institute for Human Rights.

1.4.1.2 Organisation of the Human Rights approach

By placing respect for Human Rights at the core of its CSR performance, the Eramet Group has decided to strengthen its commitment to Human Rights through a declaration of principles.



This specific declaration will enable Eramet to reaffirm the essential place of this topic in its managerial and operational approach, as well as in its relations with stakeholders. This commitment will complement the Human Rights commitments already included in other Group policies and charters, such as the Ethics Charter and the Sustainable Development Policy, which are presented in Section 1.2.3.1. Supported at the highest level of the Company, the final text of the commitment will be signed by General Management.

A Steering Committee was created in 2018, tasked with preparing and implementing a Human Rights commitment. This Committee is also responsible for rolling out the commitment to all employees. To this end, it brings together representatives of the Group's various Corporate departments who are involved in Human Rights issues, like the CSR Committee: the Communication and Sustainable Development Department, the Compliance and Ethics Department, the Human Resources Department, the Legal Department and the Risk Management, Control and Internal Audit Department. Depending on the topics discussed, other experts are invited to participate in this Committee.

The draft text is undergoing a consultation process with the Group's stakeholders, both internally and externally. Indeed, the theme of Human Rights is by nature universal, addressing all employees across all business lines and in all countries. Internally, this consultation process, which was initiated in 2018, aims to ensure a better understanding of the principles set out in this text released in April 2019.

The opinion of external stakeholders, such as Human Rights organisations, is also required in order to measure civil society's expectations of the Group's commitments.

Once the stakeholder consultation is completed, the milestone to be achieved in 2019 is the adoption and communication of this commitment to all sites. The

Steering Committee reports to the CSR Committee on the effective implementation of the commitments made in the CSR Roadmap, under objective 8 – Be a reference company in terms of respect for Human Rights in our field of activity.

1.4.1.3 Risk management and development of opportunities

As can be seen in Section 1.2.2 summarising the assessment of these risks, the Eramet Group's Human Rights risks can be divided into three main categories. The risk management measures and opportunities developed for each of these categories are managed by different departments, and are thus presented separately.

The approach to managing risks related to employees' Human Rights is described in Section 1.4.2 Commitments to employees, which also contains the Group's main social data.

Section 1.4.3. Commitments to communities details the measures implemented to manage the impact of the Group's activities on local communities, as well as the development of opportunities for them, following the Eramet Group's approach to positively contribute to local areas.

Section 1.5.2. Responsible value chain presents in particular the risk management approach relating to the supply chain.



FOCUS AREA	OBJECTIVE	KPI 2023
Commitment to people	1 – Ensure the Health and Safety of employees and subcontractors	Zero facilities Workplace accident frequency rate with and without work stoppage FR2 <4
	2 – Build skills and promote talent and career development	100% of employees participate in at least one training course per year
	3 – Strengthen employee engagement	Group employee engagement rate >75% (barometer)
	4 – Integrate and foster the richness of diversity	30% of managers are women

1.4.2.1 Employee safety

1.4.2.1.1 Main safety issues and risks

Methodology

The prevention of risks of work-related accidents is based primarily on the analysis of risks in the workplace, conducted within the plants. This highly operational analysis makes it possible to secure a specific operation by identifying all the risks to which the operators are exposed and the means of control implemented to manage them.

As Human Rights is one of the objectives of the Group's CSR Roadmap, the implementation of the Human Rights approach is regularly monitored by the CSR Committee.



By 2023, the Group will consider itself to have succeeded in "Being a reference company in terms of respect for Human Rights in our field of activity" when it has been recognised for its application of the United Nations Guiding Principles. The Group measures its maturity on the subject by using the Reporting Framework in line with the United Nations Guiding Principles which was developed by RAFI (Shift Project – Mazars), and it aims for a mature level of reporting by 2023.

1.4.2 Social commitments to employees

Eramet considers its employees as the first pillar of its performance.

The first four objectives of the CSR Roadmap are thus dedicated to employees, focusing in particular on health and safety, professional development and employee engagement, as well as on diversity within the Group. The Group's progress on these priority themes is the subject of this section, which will focus on Social Commitments to Employees.

These local analyses are compiled in the risk register of each site (known as the "single risk assessment document" for French sites). These risks are assessed according to a scale based on the Frequency x Gravity pair (FxG), taking into account the protection measures in place. This methodology makes it possible to identify the most critical risks and thus feed into the site's Safety Improvement Plan. Risk registers make it possible to group the risks by standard activities specific to each site. For example, they include mechanical handling, machine driving, walking, etc.

At Group level, the risk analysis is based on this segmentation by type of activity. The risk assessment is based on actual accident statistics taken from the reporting of accidents over a period of several years, according to the frequency of accidents actually observed and the average potential severity evaluated on a case by case basis.

Risk segmentation

The Group's risk analysis of workplace accidents allowed the risks identified to be grouped into three distinct categories:

- **Technological risks** associated with processes and facilities present the greatest potential severity: an explosion, a toxic gas leak, or equipment failure can impact several people in a single incident. The frequency of occurrence of these events is the lowest in our history.
- **Critical activities** are dangerous tasks that are carried out on a daily basis as part of the operation of our facilities. They include machine work, work at height, vehicle traffic, working in confined spaces, working with liquid metal, etc. Failure to control these risks can lead to serious accidents. In 60% of cases, the consequence of lack of control of these critical activities is work stoppage and, in a little over 10% of cases, serious injury.
- Finally, the Group's operations involve many routine activities, such as walking, lifting and moving objects and using hand tools. About two-thirds of the Group's accidents involve these activities, but the severity of the accidents associated with them is statistically less serious than for critical activities. For these routine activities, the accident rate that triggers a work stoppage is only 40% (compared to 60% for critical activities), while the rate of serious accidents is less than 1% (compared to more than 10% for critical activities). Eramet Groups these activities which are difficult to categorise under the heading "non-standardised activities".

1.4.2.1.2 Safety governance

The issues around Group employee safety are elevated to the highest level by the Group's Executive Committee. Eramet's Human Resources Director provides leadership for the dedicated actions.

This commitment is reflected in a Safety Charter, which was revised in 2015.

The Safety and Prevention Director reports to the Human Resources Director. Together, they establish and propose to the Executive Committee the Group's safety policy and guidelines. Once validated, these guidelines are defined in the Divisions by the Deputy General Managers, assisted by Health and Safety coordinators, and then by the Site Managers, who are themselves assisted by a site Health and Safety coordinator.

The prevention of accidents is at the heart of the system, and it concerns both Eramet employees and subcontractors who work on the sites. It is based on the analysis of risks in the workplace, which determines the actions and preventive measures to be implemented.

In relation to Safety, actions at Group level are coordinated within the framework of the "Group Safety Committee", which includes the Human Resources Director, the Deputy CEOs, the Safety and Prevention Director, and the Health and Safety coordinators of the Divisions.

The proper operational implementation of the Safety Policy is monitored through corporate audits. An annual programme is established and validated by the Group Safety Committee every year to focus these audits on the major issues of the year. They are conducted by the Group Safety Director and his/her team, or a Division coordinator. The audit reports are communicated to the General Management and the site and are tracked by the Division coordinators.

The effectiveness of accident prevention is monitored on a monthly basis by measuring accident frequency rates (FR). The Group has established a reporting system that makes it possible to monitor frequency rates on a monthly basis (FR1: frequency rate of accidents with work stoppage, FR2: frequency rate of accidents with and without work stoppage, FR3: frequency rate of accidents with first aid), and to react in the event of drift or non-achievement of objectives. Results and serious accidents are reviewed monthly by the Executive Committee.

1.4.2.1.3 Risk prevention strategy

The Eramet Group recognises that accident prevention tools must be adjusted to the types of risks: tripping is not prevented with the same tools used to prevent the rupture of a furnace in an industrial unit.

The **prevention of technological risks** is based on the implementation of barriers (technical, organisational and human) as a result of industrial risk analysis and hazard studies. The effectiveness of prevention depends greatly on the technical expertise of the teams that has been acquired over years of operations and their ability to identify and respond to weak signals.

The risks associated with **critical activities** are too important to leave the choice of method of operation to the stakeholders; these activities are also strongly governed by rules. Eramet has compiled a set of minimum essential rules – "Essential Safety Requirements" – that are required to be implemented by all sites.

Finally, **non-standard activities** cannot reasonably be governed by simple rules. It is not practical to write rules on how to use a hammer or adjust one's pace depending on the condition of the ground. For these work situations, Eramet develops the situational intelligence of its teams so that the stakeholders learn to make safety-related decisions.

These prevention tools must be part of a broader **safety management system**, the internal reference system for which was revised in 2018. Largely based on international standards (OHSAS 18001 and ISO 45000), it includes requirements that cover the following elements:

- regulatory compliance;
- risk analysis;
- action plans and progress loops;
- reception at the workstation and training of staff;
- monitoring, audits and inspections of field activities;
- the handling of safety events;
- and finally, leadership, objectives and safety management.

Safety roadmap

In 2018, the Group continued the roadmap established in 2017 to improve safety risk management with the objective of reducing the frequency rate of accidents with and without work stoppage (FR2) to less than 6 in 2020. The following areas have been defined:

- make the barriers robust following the review of technological risks at all sites. The Group is implementing a programme to support the sites in reviewing the "hazard studies", which will allow them to formalise the barriers and identify their criticality. Each site will then be able to set up barrier monitoring actions;
- comply with the Essential Requirements for critical activities: The Group requires each site to implement a plan to comply with the Essential Requirements for the critical activities it has selected, with the objective of achieving 100% compliance by the end of the plan. The Group aims to achieve at least 70% overall compliance with the applicable Essential Requirements by 2020 and 100% by 2023;
- work towards safe behaviour through coherent and repeated feedback, especially by using "safety interactions": this activity consists of observing a worker in a work situation, giving him/her feedback on his/her conscious or unconscious choices that impact his/her safety (positively or negatively) and finally, after listening to understand the reason for a dangerous choice, engaging in discussion with the worker to find another way to make it less dangerous. A "safety fundamentals" training course teaches this activity in a practical way to the Group's managers;
- address risks at their sources by updating risk analyses so that they match real-life situations on the production shops and by training employees to "Take 5" (think before action), a simple technique simple to implement before any intervention;

- implement "consequence management" in relation to safety. In addition to feedback from the field during interactions, the control and the willingness to apply the Group's prevention strategies must be an assessment and development factor both for operators and managers. The Group affirms that involvement in safety matters will have an impact on career development at Eramet.

Review of 2018 actions

Deployment of Essential Requirements

In 2018, each Group site self-assessed its compliance with all the Essential Requirements using Group-wide grids. This global overview makes it possible to improve the understanding and deployment of the requirements with cross-functional actions that are common to all these requirements.

More than 30 Group audits have also enabled us to support the sites in their adoption of the requirements. Conducted in pairs by a senior Corporate auditor and an auditor from another site, these audits also enable the exchange of information between sites and the establishment of internal benchmarks.

For all Group sites, the average compliance rate with the Essential Requirements is 63%⁽¹⁾, ahead of the CSR roadmap for 2018.

The specific training of stakeholders and the verification of equipment specific to critical activities are the areas that have made the most progress in 2018.

Risk analyses and compliance checks in the field remain the weakest points, on which particular emphasis will be placed in 2019.

Continuation of "safety fundamentals" training and implementation of safety interactions

More than 300 supervisors have completed the "Safety Management Fundamentals" training course. In total, since 2016, more than 2,000 supervisors have attended the one-day training at an industrial site with theoretical presentations and the practical application of safety interactions.

Once trained, managers must implement the interactions. More than 30,000 interactions were counted across the Group in 2018.

Formalisation and deployment of consequence management

The Group has formalised the classification of risk behaviours and clarified the violations that need to be penalised and the errors that need to be treated in a non-punitive manner. The behaviour of stakeholders cannot be analysed without simultaneously observing the behaviour of management. This systematic approach is implemented across the entire Group through the training of site management committees. To this effect, the Group is relaunching the "Safety Trophies" which reward sites which they achieve either two years without an accident with work stoppage, or 1 million hours worked without work stoppage.

(1) Compliance is assessed by taking the weighted average of the hours worked and the compliance of each site. Out of a total of 100% of the applicable requirements to be assessed, 22% were assessed by corporate audits, 56% by "self-assessment" where the site, led by its safety correspondent, established the level of compliance with the requirements, and 22% of the requirements could not be assessed.

Plant STOP Day and World Safety Day

After a series of accidents at the beginning of 2018, the Group's Executive Committee decided that each site should devote a full day to safety. Therefore, between February and March, each the Group sites convened all of their teams and subcontractors to attend safety events, which took the form of a risk hunt in the field, an awareness stand on a particular danger or a review of critical activities. The head office also participated in these events by bringing together all its staff for workshops focused on the risks of business travel and good practices to be implemented as part of the move.

Finally, Eramet supported the World Day for Safety and Health at Work on Friday 27 April at its sites by organising safety workshops, equipment demonstrations and awards for the best performers.

More than 9,000 employees will have actively participated in these events.

1.4.2.1.4 Safety Performance

2018 was marked by a fatal accident at the Doniambo site. A walkway at a height of about ten metres gave way while an operator was walking across it. The rescue

teams arrived very quickly but were unable to revive the victim. Internal investigations identified a failure in the fixing of the metal grating. An inspection campaign was launched to immediately identify and correct faulty fixings of similar installations across all Group sites, and the annual inspection protocols were all reviewed. Finally, the fixing procedures have been reviewed with the subcontractor concerned.

Besides this tragic event, the Group measures its safety performance by means of the Frequency Rate and Severity Rate performance indicators, which are defined as follows:

- FR: frequency rate of accidents at work with and without stoppage of Eramet employees and temporary workers. The severity of these accidents corresponds at least to treatment of the victim by a health professional (doctor) going beyond first aid (e.g. closing a wound with stitches, prescribing regulated drugs, applying splints, etc.). FR2 is expressed as the number of accidents per million hours worked;
- SR: severity rate of accidents, calculated as the quotient of work days lost due to accidents with work stoppage (in thousands of days) by the number of hours worked (in hours).

The following tables show the trends of these indicators⁽¹⁾:

FR2	2012	2013	2014	2015	2016	2017	2018
Eramet Group	20.03	17.28	16.84	13.64	13.22	10.30	7.91
Eramet Manganese	6.30	5.89	7.94	4.19	5.68	2.99	3.77
Eramet Alloys	28.00	24.60	21.60	21.30	20.20	17.60	11.30
Eramet Nickel	42.77	34.44	34.49	27.72	22.24	15.52	12.68

FR1	2012	2013	2014	2015	2016	2017	2018
Eramet Group	4.30	5.54	5.40	4.76	5.26	4.60	4.54
Eramet Nickel	4.86	4.28	6.81	5.23	9.00	5.72	7.78
Eramet Alloys	7.73	13.42	10.38	10.21	8.86	9.06	7.75
Eramet Manganese	1.89	1.53	2.62	1.47	1.72	0.90	1.23

FR2 fell to 7.9 in 2018, a decrease of 23%. This significant decrease is concentrated on the least serious accidents (accidents without work stoppage), while accidents with work stoppage remain stable.

The SR deteriorated, amounting to 0.32, an increase of 15% compared to 2017. 84% of the days of work stoppage are concentrated in the two subsidiaries SLN (New Caledonia) and Aubert & Duval (France), which account for 36% of the hours worked.

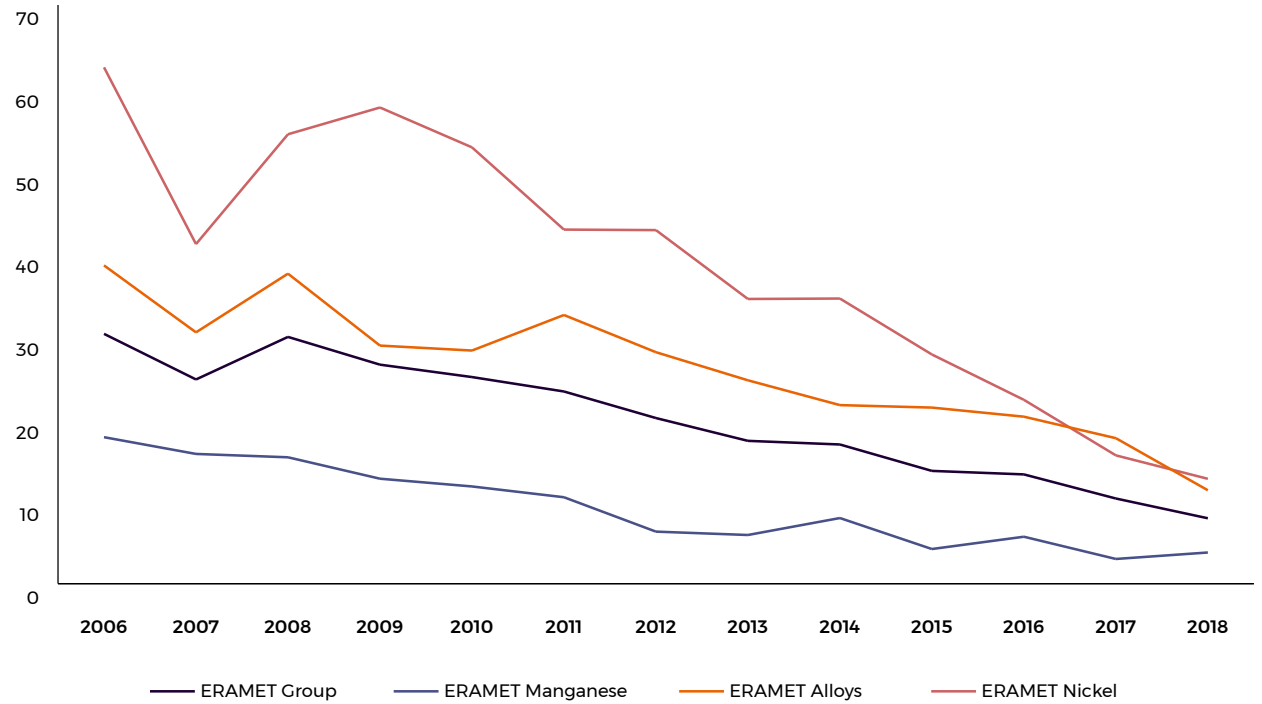
The control of critical activities measured by the frequency rate of these activities improved by 19% compared to 2017. Accidents related to critical activities represent only 20% of total personal injuries. Mechanical handling and working on or near machines are the main causes of accidents.

Non-standard activities also increased according to the same frequency rate criterion of 23% (rate down from 8.2 to 6.3 in 2018). The main causes of accidents are walking and access to workstations (falls, slips, shocks and trapping fingers in doors), followed by manual handling and the use of hand tools.

Finally, accidents related to technological risks are stable with frequency rates slightly below 0.2.

(1) The tables and graphs in the Safety section this year still maintain the distinction between the Nickel, Alloys and Manganese divisions, effective in 2018.

GROUP FR2 TREND (ERAMET AND EXTERNAL COMPANIES)



1.4.2.2 Employee health

1.4.2.2.1 Main health issues and risks

Methodology

The prevention of health risks is based on workplace risk analyses conducted by the health and safety teams.

The documents that identify these risks (see safety risk mapping above) allow health professionals to build their action plans for the individual medical monitoring of employees and actions to improve working conditions.

The Group's Medical Advisor coordinates these actions and organises the network of health professionals.

Risk segmentation

Based on the analysis of workstations and safety risks, occupational health professionals identify risks that may have a lasting or deferred impact on the health of employees.

These risks are:

- either physical (noise, vibrations, awkward postures, repetitive movements, night or alternating work, electromagnetic fields, extreme temperatures, exposure to dangerous chemical agents, including asbestos);

- or have a risk of impact on psychological health (workload, organisation of work, social support in the workplace, autonomy).

Deferred risks are risks of occupational diseases, which are reported separately based on reports sent to the employer or which result in investigations by internal or regulatory prevention services. In France, a Table of Occupational Diseases is regularly updated (Social Security Code)

In the other countries where the Group operates, there are regulations specific to each state.

The health risks of local populations are assessed by mapping the health risks of employees and the results of their assessment.

These risks may give rise to specific health risk surveys published to the various stakeholders: example of the Moanda epidemiological survey distributed to the Gabonese Ministry of Public Health and the local Cooperation group.

1.4.2.2.2 Health governance

The Group Medical Advisor reports directly to the Human Resources Director. He/she establishes and proposes to the Executive Committee the Group's health policy and guidelines. Once validated, these guidelines are defined in the Divisions by the Deputy General Managers, assisted by Health and Safety coordinators, and then by the Site Managers, who are themselves assisted by a site Health and Safety coordinator.

Employee health is monitored by Occupational Health professionals. The main French sites of the Group (Les Ancizes, Pamiers, Commentry, Interforge, Issoire, La Pardieu, Clermont and Gennevilliers) for Aubert & Duval, Eramet Sandouville, Comilog Dunkerque, all employees of La Tour Montparnasse and then 10 Grenelle (Paris), Trappes (Eramet Research and Eramet Engineering) are now grouped together under the autonomous department of Occupational Health, whose certification by DIRECCTE IDF was awarded on 29 April 2017. This service consists of three centres:

- North Centre: one Occupational Doctor and two Occupational Health Nurses;
- Auvergne Centre: three Occupational Doctors and six Occupational Health Nurses;
- South Centre: one Occupational Doctor and two Occupational Health Nurses.

The Doniambo sites for SLN (New Caledonia), Moanda (Gabon) for Comilog and Owendo (Gabon) for Setrag have an Occupational Health Service with one or more occupational doctors and nurses.

Eramet's Gabonese subsidiary (Comilog) manages a level 2 hospital structure (according to the classification of the Gabonese Ministry of Public Health): Marcel-Abéké Hospital (HMA).

This facility provides first-level care (General Medicine – General Surgery – Paediatrics – Maternity) for all employees and their dependants and has a public service mission by treating external persons by agreement with Gabon's "Caisse nationale d'assurance maladie et de garantie sociale" (CNAMGS).

Various specialists provide care at the HMA: ophthalmology, cardiology, gynaecology.

1.4.2.2.3 Risk prevention strategy

Health strategy and prevention actions

The health prevention strategy is based on the Group's health policy, which was presented to the Executive Committee on 29 August 2017.

The actions developed and measured in 2018 include:

- reducing and managing the effects and impacts of the Group's activities on the health of employees and local residents in 2017 and 2018. The Group has established eight standard sheets for products that constitute a health risk and which are handled by Group employees (manganese – nickel – oil mist – polycyclic aromatic hydrocarbons – chromium 6 – carbon monoxide – crystalline silica – cobalt). The application of these standards has been audited since 2018 in the sites concerned;
- continued employment for all employees during their working life, including when affected by poor health. Occupational doctors periodically monitor employees with a health problem with the departments and HR services. The indicators concerned are the number of visits made by doctors and nurses,

the number of posts adapted after a health event, the number of posts permanently adapted and the number of occupational diseases.

Management of asbestos risk

For the Group, the asbestos risk is divided into environmental asbestos at nickel mines and also the management of asbestos products at industrial sites.

In New Caledonia, specific operating procedures exist to control veins of asbestos-containing ores in the event that the mining activity uncovers them. The operators are trained in the precautions to be taken, and special medical monitoring has been set up, in consultation with the authorities, social partners and other mining operators.

No industrial site of the Group has ever produced or processed asbestos, nor marketed composite materials made up entirely or partially of asbestos. This material has never been used as a raw material by Eramet but rather only as a component of certain materials of thermal protection equipment. As an example, refractory materials containing asbestos, used in the past at the Les Ancizes site, represented less than 1% of all refractory materials used at the site.

In accordance with applicable regulations, particularly in France, the Group has carried out asbestos technical diagnostics (DTA) on its industrial sites, by authorised firms, the conclusions and recommendations of which are then translated into detailed action plans.

The monitoring indicators for these actions are conveyed on a quarterly basis and analysed at the level of the General Management responsible for Health. These indicators specifically include declared and recognised occupational diseases (OD). In France, the ODs are grouped together in the form of tables. There are currently 99 of them. Each table has three criteria, namely:

- designation of pathology;
- care time limit (maximum time between the cessation of risk exposure and the first medical diagnosis of the disease). For example:
 - for carpal tunnel syndrome (TMS) this period is seven days,
 - for deafness, it is one year,
 - for lung cancer linked to asbestos, it is 40 years;
- indicative or restrictive list (according to the table) of work likely to cause the disease.

Excluding exceptions, occupational disease is recognised by the CPAM when the three criteria are met.

In 2018 for the Group sites based in France, 10 occupational diseases (ODs) were recognised by the CPAM and 10 occupational diseases were under investigation:

- **recognised ODs:** six Tables 30 and 30 bis (asbestos) and four Tables 57 (musculoskeletal disorders);
- **ODs under investigation:** two Tables 30 (asbestos), one Table 42 (noise), seven Tables 57 (musculoskeletal disorders).

1.4.2.1.4 Health performance

The indicators are included in the 2017 Registration Document.

The analysis performed in 2018 is as follows:

	T1	T2	T3	T4	TOTAL
Clinical examinations	1,813	2,365	832	727	5,737
Information and Prevention visits	96	214	135	127	572
Aptitude restrictions >3 months	115	29	78	59	281
Definitive reclassifications	14	23	6	6	49
Recognised Occupational Diseases					10

The measurement of the indicator on the application of standards on products that are toxic to health showed a compliance rate of 60% for the sites concerned; the target set for 2018 was 50%.

The Joint Monitoring Committee for the Occupational Health Service for sites based in France met twice in 2018 to review the actions of the Occupational Health Service in terms of administrative organisation and budget.

The other actions implemented in 2018 concern the Marcel-Abéké hospital in Moanda, Gabon.

Continued improvement in care processes and activity management continued in 2018:

- change of head of the facility;
- implementation of the computerised management of activities and a monthly dashboard;
- continued improvement of technical services:
 - start of the renovation of the Analysis Laboratory,
 - waste management process for healthcare activities,
 - sterilisation process,
 - hospital drug procurement process,
 - consultation and emergency reception process.

The Gamma programme, whose objective is to set up HIV-AIDS prevention and screening actions, provided care for more than 200 employees or beneficiaries in 2018 and coordinated the Awareness Day within Comilog and Setrag on 1 December.

1.4.2.3 Employee security

1.4.2.3.1 Main issues and risks

The Eramet Group's mining, industrial and commercial activities take place in many countries on all five continents. Some of these countries may at times experience unstable political, security or climatic situations, even if only temporary in nature. The Group's Security approach is centred around the protection of people, installations, information and business intelligence to support the Group's development and economic efficiency.

1.4.2.3.2 Security governance

The Group's Security policy is centred around protection of the people, facilities and information that support the Group's development and economic efficiency. Three objectives are pursued:

- a strategic objective that assesses the nature of the threats and measures the risks to the Group's people and assets;
- an operational objective that puts in place the resources and means necessary to prevent and protect;
- an educational objective that informs and raises awareness among Eramet Group employees about the reality of the risks, the means implemented to address them, and the behaviours to adopt.

This policy is supported by the Group's Security function. The Security function thus assists the Executive Committee and operational managers in the execution of their mission to protect:

- the physical assets;
- the intellectual assets and sensitive information;
- facilities held under the Group's responsibility;
- the Group's employees, whether on business travel, foreign residents or local residents, as well as relating to business intelligence.

The Group Security Director, who reports to the Group Human Resources Director, is responsible for:

- proposing the Group's security policies to the Executive Committee;
- leading and coordinating the network responsible for their implementation, in conjunction with the Group's Divisions;
- reporting to the Executive Committee on the application and effectiveness of this implementation;
- ensuring the application of the Group's regulatory and contractual security obligations;
- sharing feedback and best practices within the Group;
- acting as an interface with the competent authorities to define the policies in this area in France, in the countries where the Group operates and with international institutions.

The Security function is an integral part of the development of the approach presented in Chapter 5 on risk management in the countries where the Group operates mining activities, as well as in the countries in which it develops, processes and/or markets its products and services. The Security Department is one of the main contributors to the Country Risk Committee (CRP), created to manage and limit Eramet's exposure to "Country and Geostrategy" risk in the countries in which the Group operates as well as in those where it would like to develop activities.

1.4.2.3.3 Risk prevention strategy

The protection measures put in place by the Security Department are the result of analysis and monitoring of the security situation and the assessment of the threat. They also depend on the nature of the activities carried out by the Group's units in the region and the effectiveness of the public institutions in the countries concerned.

In all the countries or regions where the security situation and Eramet's activities justify it (Gabon, New Caledonia, Senegal and South Africa), a protection coordinator (the equivalent of a security correspondent) has been established. Acting as a local correspondent, he/she oversees the implementation of Eramet's security policy in coordination with the Group Security Department.

Various media are used to communicate and help memorise the safety instructions set up by Eramet, as detailed below:

- country sheets and/or assessments of current situation: written in English and/or French and regularly updated, these provide general information, advice on behaviour, and even instructions and directives. They are available on request from the Security Department and are communicated to the employees directly concerned once they are recorded in the travel register;
- security alerts: sent by email to managers, and then forwarded to all staff, these alerts provide rapid information in case of emergency as well as instructions and recommendations (attempted fraud or scams by telephone, etc.), or when a situation suddenly deteriorates in a country (demonstrations, attacks, specific threats, etc.);
- a Security/Health booklet: distributed on request or during on-site awareness sessions, it contains advice on how to behave in different situations depending on their seriousness, etc., for Group staff on business travel;
- awareness sessions: individual or group sessions, organised in particular before departure abroad, they are supplemented by the protection coordinator (where available) in the country of destination.

Before each trip abroad, employees must register online in a travel register. They then receive, based on the security analysis of the country concerned, infor-

mation and advice for their upcoming trip. They also have access to a smartphone app that allows them to geolocate themselves if necessary.

1.4.2.4 Promotion and development of employees

1.4.2.4.1 Main social risks and general governance

1.4.2.4.1.1 Main risks

The main social risks identified are risks related to attracting and retaining talent, social relations and discrimination/harassment.

Risks related to attracting and retaining talent and social relations are included in the Group risk map and risks related to discrimination/harassment are included in the Human Rights map.

1.4.2.4.1.2 The Group's Human Resources Policy

The Eramet Group considers that the women and men who make up its community are the main drivers of its performance. Dependent upon them is the quality of customer relations which are at the heart of the Group's business plan. Dependent upon them are future developments based on enhanced technical leadership and the fullest possible expression of their managerial and technical skills. Dependent upon them is the proficiency of management and the operational excellence of each of their fields.

The Eramet Group's Human Resources strategy is a reflection of the Group's strategy to meet the challenges facing the Group. It aims to strengthen the commitment of the Group's employees and is structured around six strong strategic areas:

1. Identify, attract, retain and develop talent, which translates into the desire to attract the best talent, diversify our talent pool in order to make it more international, with a better representation of women at the managerial level, develop local talent, anticipate skills needs, develop cross-functionality, versatility and mobility to staff our projects and absorb cycles, prepare the leaders of tomorrow, develop and transmit skills.
2. Develop and recognise value-creating performance by ensuring the implementation and management of the performance cycle, accompanying employee performance and strengthening the link between compensation and performance: basic, variable and long-term remuneration.
3. Strengthen managerial skills, define and promote the role of managers, by associating them and training them to manage their teams.
4. Participate in the implementation of a work environment that is respectful of employees and of the Group's values by aiming at "zero accident", through

the promotion of well-being at work illustrated by fairness, transparency and exemplary management, ethics and respect for the Group's values, active management of Occupational Health issues, application of national regulations and ILO directives at all Group sites, while ensuring to all of our employees social protection to cover the major risks while preserving our competitiveness.

5. Develop and promote a constructive relationship with our social partners by ensuring the implementation of a decentralised but coordinated approach, anchored in the economic realities of companies and sites, by facilitating a transparent and continuous dialogue, by ensuring that structures and organisations evolve and are exemplary in their social treatment.
6. Develop the operational excellence of the HR function, by acquiring efficient and adapted tools, as part of the Group's digital transformation, by demonstrating a clear and readable organisation serving its internal customers, putting the HR function at the heart of strategic and business challenges.

The Eramet Group, while having a very strong international dimension (approximately 60% of the Group's workforce works outside Metropolitan France), also relies on subsidiary companies that have significant local presence and awareness. The Group's human resources management must take this into account, while relying on unifying principles and tools common to all of the Group's companies and sites.

1.4.2.4.2 Attracting and retaining talent

1.4.2.4.2.1 Employees involved in the Group's transformation

In line with the extensive NeWays transformation programme launched in 2017, aimed at unlocking the Group's performance potential and creating a change in mindset and corporate culture to achieve profitable and sustainable performance, in September 2018 the Group launched a vast engagement survey among all its employees worldwide to enable them to express themselves in relation to 12 key areas: work and decision-making processes, organisational transformation, relationship with their direct supervisor, agility and innovation, etc. More than 6,700 employees took advantage of this opportunity and responded to the survey.

The engagement rate measured in 2018 for the Group as a whole was 67%. Around 400 team managers received personalised results for their area and have been developing action plans since December 2018 in collaboration with their teams, which will be implemented throughout 2019.

The Group's main strengths highlighted by the survey are employees' understanding of the role of their job in achieving their Company's objectives (91% favourable score), respectful treatment by managers (83% favourable score) and finally employee motivation to

go beyond expected performance levels to help their Company succeed (82% favourable score).

A new survey, planned for 2020, will measure progress in each of the areas.

1.4.2.4.2.2 A fair and competitive remuneration policy

The skills and level of responsibility of the employees are remunerated by a fixed salary in line with the experience gained and the practices observed for each trade on the market. The Group's remuneration policy aims to be fair and competitive but also tailored to the specific local factors of host countries.

One out of two managers benefits from individual variable remuneration schemes based on quantitative and qualitative annual objectives. As of 1 January 2018, the Group deployed a new variable compensation system common to all eligible managers worldwide: it is based on collective objectives (safety and financial indicators) for 60% and on individual objectives for 40%. The Group makes available a common framework for setting and assessing annual objectives.

Collective performance remuneration schemes may exist in certain countries, be they mandatory legal schemes (profit-sharing in France, etc.) or schemes voluntarily implemented by the Group in accordance with local practices (profit-sharing calculated in the light of the Company's results, collective savings plans). The profit-sharing plans are often based on negotiated criteria related to safety, environment and the activity of the Company. Depending on the arrangements in force, these bonuses may be invested in savings schemes on advantageous terms.

We conduct pay scale analyses every year to ensure our remuneration packages are competitive relative to practices in other companies operating in the same sectors.

In each country in which the Group operates, the remuneration policy implemented aims to reward individual and collective performance, while adapting to the local context.

Personnel costs — social security contributions

Salaries represent the largest component of staff remuneration.

In 2018, personnel costs for the Eramet Group amounted to €702 million, compared to €676 million in 2017.

More than 8,500 employees, or 65% of the workforce, benefited from a revaluation of their fixed salary in 2018, whether through a general increase or an individual merit-based increase.

Social benefits

In line with the Group's agreements relating to the provision of insurance against major risks and the uncertainties of life, the Eramet Group wanted all of its employees in Metropolitan France to benefit from

additional health insurance. In France, a new collective agreement was signed in December 2016 by all the organisations representing staff. This agreement ensures that social protection is brought into line with legislation on responsible contracts, but also improves the reimbursement of certain costs, such as pharmacy, dental implants, alternative medicine and laser eye surgery.

In the area of pension insurance, a new agreement was signed for France in June 2016. It provides for a 10% reduction in employee and employer contributions and a 10-month moratorium on contributions in view of the excellent results of the scheme, but also the improvement of the death benefits, the introduction of a "Caregiver Assistance" guarantee allowing the employees concerned to have access to a solution of listening, assistance and advice from professionals.

Provisions are set aside for retirement benefits, severance payments, medical coverage, pension plans and other commitments for active or retired employees in accordance with the conventions in force in each country.

The portion not covered by insurance companies or pension funds, in particular for US and Norwegian companies, is also provisioned (defined benefit plans in general). The specific commitments for these schemes are in the United States, Norway, New Caledonia and France. Other plans are defined contribution plans where employer contributions are recognised as an expense in the period to which they relate. The main quantitative assumptions used to calculate these commitments are detailed in the consolidated financial statements.

Finally, an additional pension plan (Article 39) for a group of managers is also fully funded. The estimated actuarial value of the plan for active beneficiaries is €31.9 million as at 31 December 2018.

Employee stock ownership plan

In order to build Group membership in all areas of the world where it operates, and share the created value, the Eramet Group has opted, since 2009, for the deployment of global bonus share plans. This programme, called EraShare, originally consisted of allocating 5 bonus shares to each of the Group's employees, regardless of the country of activity, Division, occupation or level of responsibility.

Since July 2011 in France and Italy, and since July 2013 in other countries, employees have benefited from all the rights attached to the Eramet shares: voting and dividend rights. An information leaflet on EraShare was also prepared in the nine languages used within the Group to support the worldwide implementation of the plan.

Nine new bonus share plans were implemented from 2010 to 2018 with the same scope, and allowed the allocation of two additional shares each year to more than 12,000 employees.

Employee incentive plans

In Metropolitan France and New Caledonia, profit-sharing agreements are regularly negotiated and signed with the social partners. They complement, where they exist, the regulations governing participation. The incentive is paid to members of staff with more than three months of service as at 31 December in an amount that is partly uniform and partly dependent on gross annual remuneration. In 2014, the Group's Human Resources management specified, in a framework memorandum, the three components that the Eramet Group wishes to find in the new agreements renewed from 2014 onwards:

- Group financial result, with a criterion common to all entities in France;
- financial result of the entity;
- operational criteria specific to the entity (safety criterion, service rate, reject rate, variation in WCR, etc.).

In 2018, Group companies in mainland France paid profit-sharing for the year 2017. A gross amount of €9.4 million was paid to the beneficiaries concerned.



SLN in New Caledonia in turn paid over €4.9 million in profit-sharing to the employees concerned.

Employee savings plan

In Metropolitan France and New Caledonia, Eramet Group employees can sign up to a Company Savings Plan to build up their savings. The Savings Plan may receive the incentive bonus, profit sharing, as well as voluntary payments made monthly or on a one-off basis by the employees. Group companies participate in the savings plan through a system of matching the sums paid by employees (the methods for paying the matching contribution vary from company to company).

A range of diversified corporate mutual funds (*fonds communs de placement d'entreprise* or FCPE) is offered to Group employees. A collective retirement scheme also exists in the form of a PERCO (Collective Retirement Savings Plan), into which the payments are paid.

As at 31 December 2018, 6,784 employees and former employees of Eramet in mainland France were signed

up for an Employee Savings Plan, with total assets representing roughly €80 million, or €11,800 per saver. Total assets are divided between the FCPE of the PEE/PEG (85% of the assets) and the PERCO (15%). In 2018, the Group's French companies paid approximately €3.1 million in contributions (gross value) to the Group Savings Plan (PEG) and the PERCO, or €951 per employee on average.

1.4.2.4.2.3 Employee development and career management

1.4.2.4.2.3.1 Career management process

The development of people is a key value of the Group, and the first theme of its HR Strategy.

The Group's Career and Mobility Development Charter defines the roles and responsibilities of each person (employee, manager and HR) so that the development and career paths of the Group's men and women can be promoted and encouraged within a clear, defined and shared framework, and with the help of tools and processes.

It places particular emphasis on promoting the initiative and the proactivity of the employee in his or her own career development.

In order to optimally implement these career developments, management processes are set up and run throughout the year.

The Annual Appraisal Interviews make it possible to identify mobility objectives and to take them into account both at monthly HRD network meetings and during People Reviews. These Talent reviews are organised at site, business unit, entity and even country level. They allow the identification of people to be developed, their potential, etc.

Other meetings are organised by business line according to the needs expressed by operational staff, making it possible to review these development needs in a cross-functional manner, and to assess medium-term needs and available business resources by business line.

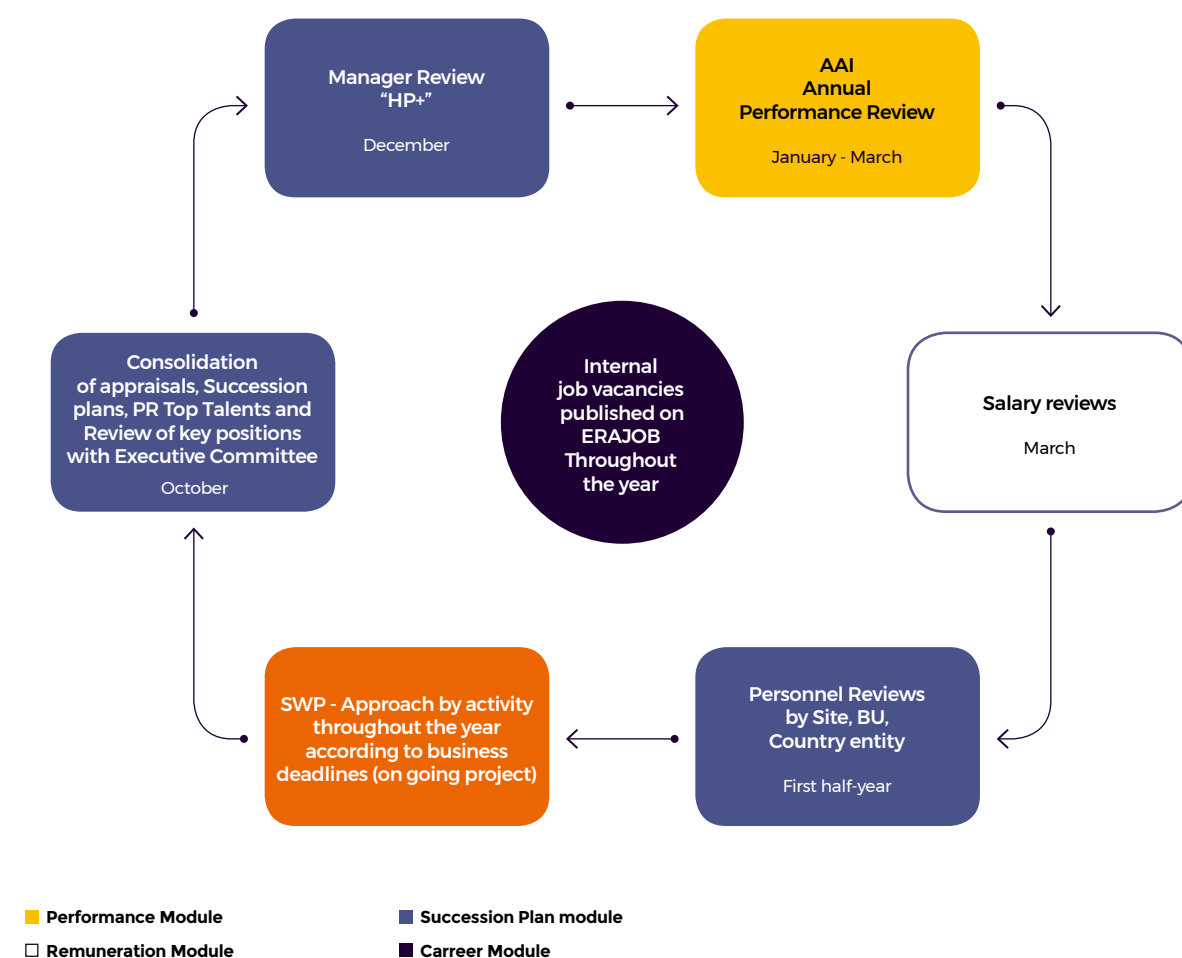
These exchanges are consolidated at the Division level during the reviews of Division management, thus making it possible to approach the Annual Appraisal Interviews with concrete development elements to be submitted.

A review of senior executives and holders of key Group positions is performed regularly with the Executive Committee.

Reports are drawn up and the Succession module of Talent@work, the Group HRIS, is used to record these outlooks.

A review of succession plans for key positions in the organisation is carried out on the occasion of the Selection Committee or Remuneration Committee of the Boards of Directors of Eramet or its subsidiaries.

THE HR PROCESSES ARE INTEGRATED INTO TALENT@WORK



In addition, a project relating to the implementation of an SWP (Strategic Workforce Planning) process was initiated in mid-2018 and will result in the implementation of a pilot on the mining activities in early 2019, which will then be extended to the Group's other business lines.

Lastly, the Professional Interview (set up in the framework of the application of the Act of 5 March 2014 on vocational training, employment and social democracy – Article L. 6315-1 of the Labour Code) for all employees in Metropolitan France has been deployed since 2015. It is devoted to the prospects for professional development, in particular, in terms of qualification and employment. It focuses on the employee's career path, career development, and training needs.

1.4.2.4.2.3.2 Performance evaluation

Successful mobility or career development involves the combination of three elements:

- performance;
- existence of an opportunity;

- willingness to demonstrate functional and/or geographical mobility.

As the cornerstone of operational improvement plans, performance is assessed individually in the context of Annual Appraisals based on objective evidence, with each assessment based on factual evidence.

In 2018, 6,427 employees (including managers as well as non-managers) benefited from an Annual Appraisal Interview. Many sites have extended the benefit of this scheme to non-management staff.

The supporting material for the Annual Appraisal Interview has been modified to take into account performance appraisal in the context of the responsibilities of a position, and the assessment of professional behavioural competencies.

Following on from the desire to better monitor and evaluate performance, the implementation of this new format, led by a working group, along with the Goal Management module, allows managers to evaluate the performance of their employees, to initiate actions with them and to develop and monitor, throughout

the year, the progress of the goals set for the team, to adjust these if necessary, to use it as a tool for mid-year interviews, etc.

The now widespread use of the Annual Appraisal Interview form in Talent@Work means a significant improvement in access to information on expressed mobility wishes, better consideration of them in the career management and people review, and an optimised follow-up.

1.4.2.4.2.3.3 Erajob, career and Onboarding module

The Group's job vacancies are published via the HRIS on Erajob, the Group's internal career website, and on Eramet's careers website, making it possible to apply online, share job vacancies with others, or create alerts for specific positions.

The Recruitment module, developed in the HRIS, enables HR and managers responsible for recruitment, through internal or external mobility, to be able to track the progress of the process, from job description to filling the position.

To support managers in their role as career managers, a training module on recruitment and mobility is available as part of the training courses offered by the Group.

This module enables managers and HR staff to be trained in the same selection interview tools, to make their choices in an objective and transparent manner, to ensure high-quality feedback to internal and external candidates, and to educate their participants on the subject of non-discrimination.

Moreover, the use of a personality test by appropriately trained and authorised personnel within the HR teams makes it possible to complete candidate evaluations in the context of recruitments or certain mobilities.

In 2018, in order to facilitate the integration of employees into the Group, the Eramet Group developed an Onboarding module integrated into the Group HRIS, which is currently being deployed in France. The Onboarding module is a platform which is accessible to external employees as soon as they are recruited, making it possible to create a privileged link between the future employee and his or her future working environment (information on the Group and its business lines, welcome message from the manager, introduction to future colleagues, schedule of integration programme, etc.).

1.4.2.4.2.3.4 Vocational training

The Group designs training courses for Group employees:

- to facilitate their integration by giving them the keys to understanding the organisation and management processes of the Group;
- to develop their skills by giving them access to business and management programmes;
- to promote exchanges of best practices among participants;
- to build development paths.

Integrate, improve know-how, raise awareness of specific risks, share experience and best practices, develop cross-functionality at the Group level, foster the deployment of managerial methods, further strengthen the Group's expertise and technical leadership; these are the points of the training programmes and of the training effort initiated by the Group, each year, at all its sites and locations.

In relation to vocational training for its employees, the Eramet Group also gives priority to safety training and business skills development, which are aimed in particular at ensuring better control of processes and their environment.

Training courses are therefore offered to employees.

Programmes designed to improve executives' managerial skills are part of a broader managerial training path that also integrates key competencies in Safety, Project Management, Change Management, Continuous Performance Improvement and Communication.

In 2018, IMAge (Eramet Group Institute of Management) designed a digital training programme consisting of five modules (Engaging and leading transformation and change, Empowering and delegating effectively, Providing effective feedback, Managing difficult situations, Creating value: an essential principle) aimed at all Group executives, with the objective of supporting the Group's managerial transformation (NeWays). This digital e-Learning format makes it possible to quickly reach all managers and offers complete organisational flexibility to the participant. It was offered to more than 1,600 participants in 2018 and recorded a completion rate of more than 70%.

A Mentoring Programme was launched in 2018. It is open to 14 managers who hold a key position in the Group: they are selected by the Executive Committee and monitored over a one-year period in order to support and facilitate the transition to their new responsibilities, to develop and support potential young talent, to improve the relationship between these managers and Executive Committee members, and to support the NeWays transformation.

In November 2018, the Eramet Leaders Program (ELP) gathered together 21 Group managers for a week for its 14th year, bringing the number of executives who have participated in this programme since 2006 to 288, enabling them to build a network, improve their knowledge of the Group, exchange with managers on strategic development themes, etc.

In 2018, IMAge provided nearly 27,400 hours of training. About 5,000 employees followed the various programmes. This institute now offers a body of 50 training courses designed to integrate and develop our employees.

The development programme for the Group's executive managers (EDP – Executive Development Program), which began in 2015, is continuing with a new format that will be offered for the programme's fourth year in 2019. This programme takes place over several months and is designed to strengthen the leadership of participants and prepare them for their advancement within the Group.

Training on the Ethics Charter, for example, aimed at all Group managers and “sensitive” staff, was completed by more than 2,773 additional employees in 2018.

Emphasis has been placed on the digitalisation of the training offer (“blended” learning, e-learning, training via videoconference, etc.) to reach a rate of 30% of all the training offered.

Overall, in 2018, Eramet employees received more than 472,000 training hours, approximately 37 hours per employee for the year. Almost 9,000 employees, or 71% of the total workforce, benefited from training in 2018 (compared to 374,000 hours in 2017, which corresponded to 30 hours per employee, with almost 8,600 employees trained last year).

1.4.2.4.3 Dynamic and meaningful social dialogue

The social policy of the Eramet Group is based on the clear desire:

- to strongly involve the Group’s management (information and exchange seminars, development paths, meetings with the Group’s management and the companies that comprise it, mobility and intra and inter-Division career development);
- to connect employees with the life of their Company and the Group through clear and regular information (regular company and site newspapers, Group intranet, integration days for new hires);
- to communicate with social partners, both formally (remuneration policy, training, social protection, employment management) and on a daily basis at the sites.

1.4.2.4.3.1 Social implications of Eramet’s strategy

In 2018, the social aspect of the Eramet Group’s strategy was marked by numerous transformative projects, such as the mapping and the organisation of the work of representative bodies, which have strengthened the relevance and richness of social relations, an essential factor in competitiveness.

Multiple in-depth and didactic exchanges on strategic issues with the social partners in the organisations and countries concerned made it possible to explain the technical and strategic choices and their organisational impacts.

In addition, during the two annual meetings of the European Works Council and the Group Works Council, the Group’s Executive Management was able to address social, financial and environmental questions in a direct exchange with the social partners. They also discussed the Group’s research and investment priorities.

1.4.2.4.3.2 The SLN 2020 Performance Plan

At SLN (New Caledonia), management and unions worked together to identify priority actions to restore competitiveness in order to stop the cash outflows as quickly as possible and thus achieve the expected

gains. In late 2017, the draft SLN 2020 performance plan was presented to the Central Works Council together with target organisation charts and the proposed employment and skills management dynamics, which will be implemented in 2018-2019 to achieve the target organisation by 2020.

At the same time, discussions commenced between management and the unions to initiate the necessary productivity initiatives at the mining sites. This led to the implementation of a work organisation at 147 hours per week. This agreement, which applies to employees of the Thio, Népoui, Kouaoua and Tiébaghi mining centres, was signed on 22 November 2018 by the trade unions SICINC, SAMNC, SGCINC, SGTINC and SOENC Nickel.

1.4.2.4.3.3 The establishment of a new research organisation

At the beginning of 2018, after several months of discussions, the project to bring together the employee representatives of Eramet Research and Eramet Engineering to form an Economic and Social Union (ESU) took shape with the election of a joint Economic and Social Committee for both entities. In line with this, in May 2018, a project to create an internationally recognised European centre of excellence in innovation in extractive metallurgy was presented to the Committee. Eramet Ideas will be established on 1 January 2019.

1.4.2.4.3.4 Dynamic industrial relations

As in 2017, 2018 saw a variety of social developments in France, in particular with the negotiation of the Macron orders, leaving more room for social dialogue, and more negotiation opportunities for companies.

Eramet’s management and employee representatives have committed in a concerted manner to a negotiation process on the transformation of social dialogue with the aim of adapting the reform to the specific requirements of the Eramet Group in mainland France and reaching an agreement that proposes methods of operation that go above and beyond the legal framework, such as training management in social dialogue and supporting future elected officials in their new responsibilities; social dialogue on the ground with local representatives; the establishment of health, safety and working conditions committees at all industrial sites; and other measures as appropriate.

After several months of consultation and discussions, management and the trade unions CFE-CGC, FO and CFDT signed an agreement on 6 November 2018, however this agreement cannot be implemented because it has not been signed by CGT, the largest trade union within the Group.

At the level of each of our companies, management and staff representatives have initiated discussions and even negotiations on topics that have recently emerged: Gender equality, Quality of life at work, Teleworking, etc. The majority of Eramet sites around the world signed new agreements in 2018. These mainly concern remuneration, profit sharing and participation, and working time.

In addition, two new employee directors, employee representatives on Eramet’s Board of Directors, were appointed in 2018 for a period of four years by the members of the European Works Council and Eramet SA’s Works Council. This year, they will be able to enrol in a diploma course that will enable them to fully perform their role of ensuring that employees’ points of view are taken into consideration during Board deliberations, and helping all employees to adopt the Company’s strategy.

1.4.2.4.4 Equal opportunities – measures to foster non-discrimination and diversity

1.4.2.4.4.1 Respect for gender equality

Women now account for 16% of the total workforce of the Group, specifically: 7% of operators, 26% of supervisors, technicians and employees, and 22% of management.

% of women in the total workforce	16%
% of women in management	22%
% of women among new hires (permanent roles) in 2018	23%
% of women among new management hires (permanent roles) in 2018	25%

A large number of Group entities are mobilising to take action to promote the employment of women, including in jobs traditionally held by a workforce that tended to be male.

Efforts are thus being made locally to promote the technical professions to secondary school pupils and to students, to adapt facilities to accommodate female staff and to promote the provisions set out in the collective agreements for gender equality signed for numerous sites in metropolitan France.

In October 2018, the “Women at Eramet” network was launched, which aims to encourage all women employed by the Group to take an active part in their professional development, achieve job satisfaction and be sufficiently represented in all our organisations. This movement is at the heart of the Group’s strategy.



1.4.2.4.4.2 Work/life balance

In 2018, the Group stepped up its efforts to raise team awareness of the need to respect rest periods and personal and family life with the implementation of the agreement on the right to disconnect signed in December 2017 by all trade union organisations representing sites in metropolitan France. No radical or restrictive measures were taken, rather awareness-raising and prevention actions based on dialogue and

the communication of positive, pragmatic practices by management.

Attention is also paid during the Annual Appraisal Interview to the prevention of psychosocial risks. Indeed, part of the exchange between the employee and his/her chain of command is devoted, at this important annual meeting, to the organisation of work, the workload and work-life balance.

In this area too, the Group promotes a number of local initiatives of a different nature but intended to promote this necessary balance: a listening service provided by an occupational psychologist, sabbatical leave was granted to employees wishing to devote time to a personal project, teleworking systems and agreements have been deployed in several entities, measures favouring parenthood: organisation of working time, allocation of CESU cheques (Cheques for Universal Employment Services) for the employment of domestic help (child care, tutoring, housework, etc.), inter-company nursery, concierge services, and workshops on the theme of quality of life at work, led by professionals (nutrition, sleep, sophrology, etc.) have also been implemented at some sites.

1.4.2.4.4.3 Employment and integration of persons with disabilities

The Eramet Group is paying attention to the employment and integration of people with disabilities.

The Group has 269 employees with disabilities (data from the CSR survey). This count is probably underestimated, as the regulations of certain countries do not permit the accounting of employees with disabilities.

At most Group sites, various actions are regularly undertaken to promote the employment of people with disabilities: adapting premises, access ways and workstations, awareness campaigns, financing of hearing aids, and contributing to organisations or associations dedicated to helping people with disabilities.

Subcontracting activities are also carried out by work centres or associations employing persons with disabilities. The accessibility of the premises is also a topic discussed at many of the Group’s sites.

1.4.2.4.4.4 Employment of Youth and Seniors

One of our priorities, highlighted in our Human Resources policy, is to participate in preparing young people for working life through all the school/company programmes: internships, apprenticeship contracts, work-study agreements, International Volunteers in Business programme (VIE), theses, etc. In 2018, we welcomed more than 1,400 young people, representing approximately 12% of the Group’s workforce (compared with 1,240 young people in 2017, representing 10% of the Group’s workforce). The commitment and actions taken across all sites contributed to this significant increase.

Since 2013, Eramet has been involved with numerous major groups, and within the framework of the AFEP (French Association of Private Enterprises), for the employment of young people. The Group is a signatory to an initiative called “*Jeunes et Entreprises*” (“Young People and Companies”).

With a strong commitment from the Trappes research centre (Eramet Ideas) and its teams, Eramet participates in numerous forums for schools in metropolitan France or in the countries in which it operates. This is an opportunity to introduce the Group and its businesses, to exchange ideas with young people and to advise them on their career directions. Many of the Group’s employees also volunteer, for the most part in teaching courses, to present the Company or to deliver specialised technical courses. Some of these experts are also involved in school guidance councils or their Board of Governors. Scientific exchanges are also carried out on certain projects with the laboratories of *grandes écoles* or universities, and teachers.

The Group is also very involved in partnering with major schools through the payment of grants (graduation trips, etc.), the apprenticeship tax, in particular, to the National Chemical Engineering Institute in Paris (Chimie ParisTech), the National School of Geology (ENSG of Mines in Alès (Geology), the Mines ParisTech (ENSMP Soil and subsoil specialisation), the Central School Supélec (Energy specialisation), etc.

SLN engages in a partnership with the preparatory classes of the Jules-Garnier secondary school in Nou-méa. The SLN competitive exam proves valuable for the young New Caledonians who end up continuing their scientific studies in Metropolitan France.

With regard to the employment of seniors, across the Group as a whole, 52 people aged 10 years younger than the statutory retirement age were recruited on a permanent or fixed-term contract.

1.4.2.4.4.5 Employees and compliance with ILO fundamental conventions and Human Rights
Eramet complies with the applicable regulations in the countries where the Group operates.

NUMBER OF EMPLOYEES AS AT 31 DECEMBER (PERMANENT AND FIXED-TERM CONTRACTS)

	2016	2017	2018	2018 BREAKDOWN
France	5,136	5,049	5,089	40%
Europe (excluding France)	1,165	1,218	1,221	10%
Americas	325	250	265	2%
Africa	3,789	3,746	3,801	30%
Asia	245	298	381	3%
Pacific	2,117	2,029	1,948	15%
Total	12,777	12,590	12,705	100%

As the Group points out in the Ethics Charter, Eramet respects the international standards of the International Labour Organisation and, more generally, complies with the principles of international law relating to human rights. In particular, the Group refrains from using any form of forced labour or child labour, either directly or through its suppliers or partners, and respects the right of association.

The Group also ensures fair treatment of all its employees in terms of professional equality by fighting against discrimination at work, ensures the integrity of those present at each site, and respects the moral integrity of each employee. The Group ensures the quality of human relations within work teams. In particular, it engages in the fight against all forms of violence and helps promote respect for others and fellowship in working relations.

During the annual collection of feedback from the Group’s sites on non-financial matters, the Group’s various sites are asked whether they comply with the provisions relating to the fundamental ILO Conventions (freedom of association or the right to collective bargaining, the abolition of child labour, the fight against illegal work, the elimination of discrimination at work) and it is important to note the excellent feedback (96% positive replies out of 56 sites surveyed in 2018) demonstrating the attention paid to this subject.

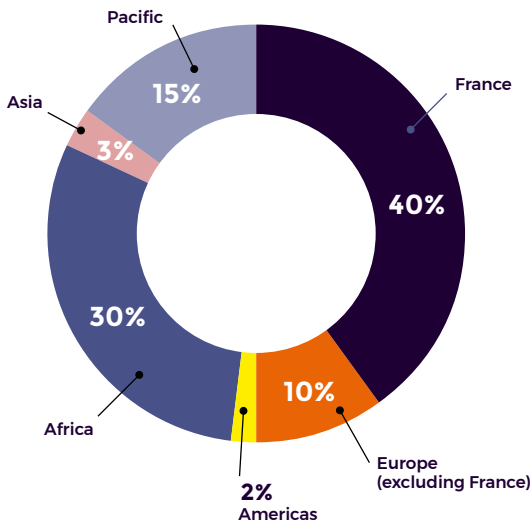
The Group wants to make an even greater commitment to respect for Human Rights, setting the objective of becoming a benchmark company in terms of respect for Human Rights in our field of activity by 2023. The elements concerning this Group approach are presented in Section 1.4.1 Commitment to Human Rights.

1.4.2.5 Social indicators

1.4.2.5.1 Total workforce and breakdown by geographical area

As at 31 December 2018, the Group employed 12,705 employees in 20 countries, compared to 12,590 employees at 31 December of the previous year. The Group’s HR reporting in force concerns the consolidated workforce and the managed workforce.

WORKFORCE REGISTERED IN 2018 BY GEOGRAPHICAL AREA



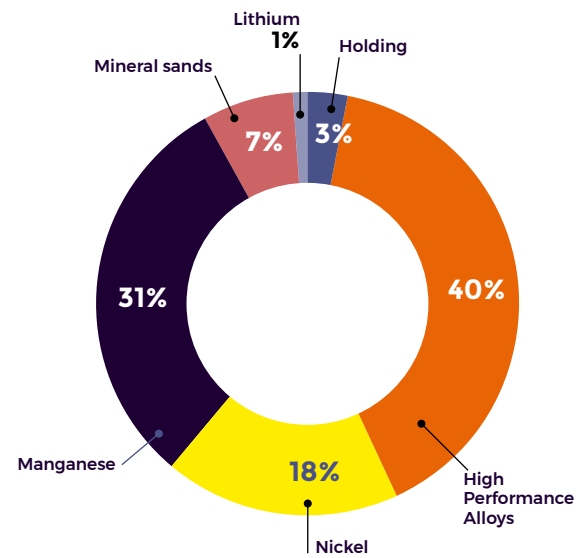
1.4.2.5.2 Breakdown of total workforce by Division and BU

The workforce increased by 0.9% between 2017 and 2018: it remained stable for the Mining and Metals division, and increased for the Holding company (+8.8%) and for the High Performance Alloys division (+1.4%). The increase in the number of employees is largely due to the increase in the number of apprentices on fixed-term contracts at Setrag in Gabon.

	2017	2017 RESTATED ⁽³⁾	2018	2018 BREAKDOWN
Holding ⁽¹⁾	440	386	420	3.3%
High Performance Alloys	5,021	5,021	5,092	40.1%
Aubert & Duval	-	3,942	3,984	31.4%
Erasteel	-	966	987	7.8%
Other ⁽²⁾	-	113	121	1%
Mining and Metals	7,129	7,183	7,193	56.6%
Nickel	2,320	2,320	2,282	18%
Manganese	4,809	3,909	3,923	30.9%
Mineral Sands	-	900	921	7.2%
Lithium	-	54	67	0.5%
Total	12,590	12,590	12,705	

(1) Holding: Eramet SA, Eramet Services, Eramet Ideas, Eramet International.
(2) Other: Forges de Monplaisir, Brown Europe, Construction Moules Métalliques.
(3) According to the new structure.

BREAKDOWN OF THE 2018 WORKFORCE BY DIVISION AND BU



1.4.2.5.3 Breakdown of total workforce by contract type

As at 31 December 2018, 95% of Group employees had permanent employment contracts.

The technical nature of the mining and metallurgy professions requires a long professional training period, and the use of short-term employment contracts remains very minor.

Employees on fixed-term contracts within the Group have the same rights and benefits (pension systems, healthcare costs, profit share, etc.) as employees on permanent contracts.

WORKFORCE BY CONTRACT TYPE

	2016	2017	2018	2018 BREAKDOWN
Permanent	12,285	12,113	12,098	95%
Fixed-term	492	477	607	5%
Total	12,777	12,590	12,705	100%
Temporary workers (IN FULL TIME EQUIVALENT)	680	900	930	

1.4.2.5.4 Breakdown of total workforce by socio-professional category

Eramet extended the French notion of socio-professional category to all its entities, which share the following definitions:

- Workers: workers (blue collars);
- Supervisory staff: clerks, technicians, foremen (white collars);
- Management: executives, managers, post-graduate staff, civil engineers (white collars).

BREAKDOWN OF WORKFORCE BY SOCIO-PROFESSIONAL CATEGORY

	2016	2017	2018
Workers	52%	53%	52%
Supervisory staff	34%	33%	33%
Management	14%	14%	15%

1.4.2.5.5 Average age and age distribution

The average age of Group employees was 41.4 years as at 31 December 2018.

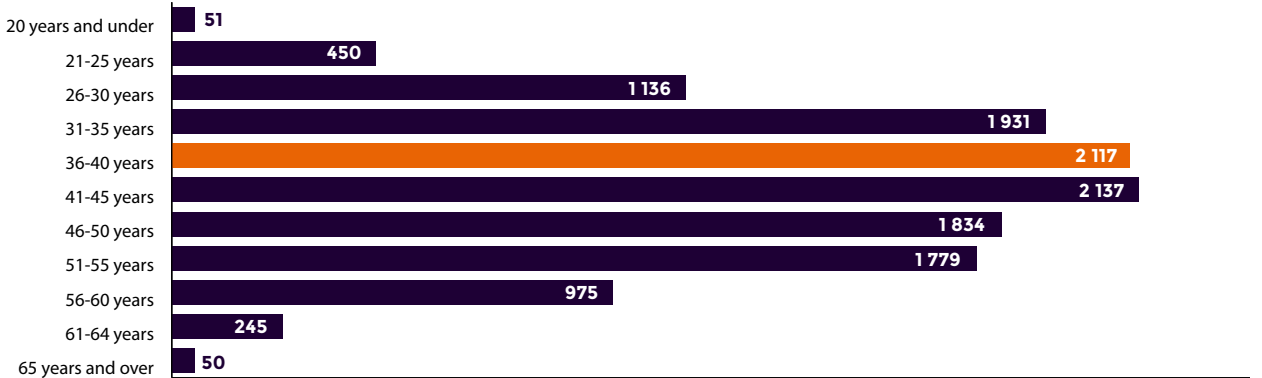
WORKERS	SUPERVISORY STAFF	MANAGEMENT
40.9	43	43.4

Employees aged 50 and over represent 27% of the total workforce; those aged 30 and under represent 13% of the total workforce.

Eramet carefully monitors the evolution of the age distribution of its managerial staff, particularly in order

to anticipate the retirement of its key employees. Since the implementation of the People Review process at the local, Division and Group level, Eramet has succession plans updated every year for all its key positions.

AGE DISTRIBUTION OF THE GROUP



1.4.2.5.6 Recruitment

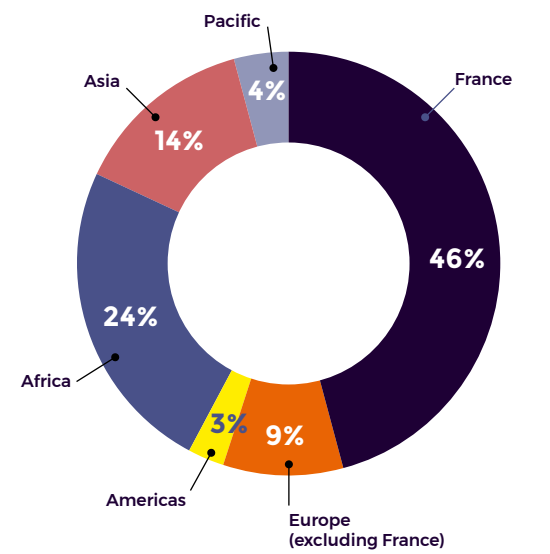
Group companies recruited, excluding transfers between Group companies, 1,254 employees in 2018, up 31.6% compared to 2017.

NEW RECRUITS BY REGION (EXCLUDING TRANSFERS WITHIN THE GROUP)

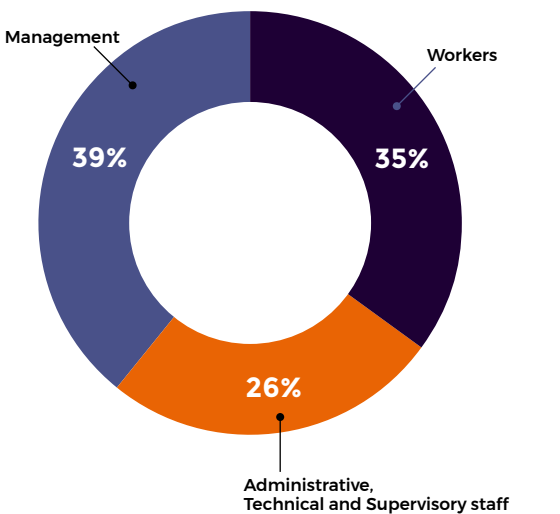
	2016	2017	2018
France	579	544	579
Europe (excluding France)	42	135	114
Americas	81	67	42
Africa	519	166	305
Asia	32	23	171
Pacific	16	19	44
Total	1,269	954	1,255

The external recruitment of 603 permanent employees is divided into the following professional categories:

NEW RECRUITS 2018 EXCLUDING TRANSFERS



PERMANENT CONTRACT RECRUITMENTS 2018 EXCLUDING TRANSFERS



Since 1 January 2013, Eramet has prioritised the recruitment of permanent employees under the age of 30 and over 55.

	PERMANENT CONTRACT RECRUITMENTS 2018	
	< 30 YEARS	> 55 YEARS
Total	247	52
% of total permanent contract recruitments	41%	9%

1.4.2.5.7 Departures

In 2018, the total number of departures (this concept includes resignations, redundancies, retirements and terminated contracts, but does not include Group transfers) amounted to 1,107, of which 242 were resi-

gnations (22% of departures), 230 were redundancies (21% of departures) and 224 were retirements (20% of departures). The other reasons for leaving (37% of departures) mainly consisted of end of fixed-term contracts.

DEPARTURES BY REGION (EXCLUDING TRANSFERS WITHIN THE GROUP)

	2016	2017	2018
France	570	592	514
Europe (excluding France)	206	85	109
Americas	419	140	32
Africa	495	208	244
Asia	603	29	85
Pacific	106	102	123
Total	2,399	1,156	1,107

Absenteeism

(Data from the CSR survey)

The reasons for absence taken into account here are random and unplanned absences, such as sickness, maternity, accidents at work, commuting and unjustified absences.

The average absenteeism rate for the Group was 3.0% in 2018. The average absenteeism rate in France is 4.1%. For the rest of Europe, the average rate is 2.7%. The Americas has a rate close to 1.5%. Africa has an average rate of 2.0%, Asia 2.6%. Finally, the average rate recorded in the Pacific zone is 7.0%.

1.4.3 Commitments to communities

1.4.3.1 Management of impacts on local communities

1.4.3.1.1 Organisation

Eramet places its social commitment at the heart of its vision, especially its contribution to local populations. While the Group has previously focused on limiting and compensating the impacts of its activities and ensuring societal acceptability, it is now seeking to build a partnership relationship, a move which is appreciated by local residents. This challenge is addressed by objective 5 of the Roadmap, “Be a valued and contributing partner of our host communities”. A five-year programme in respect of host communities is implemented by the Divisions for this purpose. The achievement of the objective will be measured against two targets by 2023:

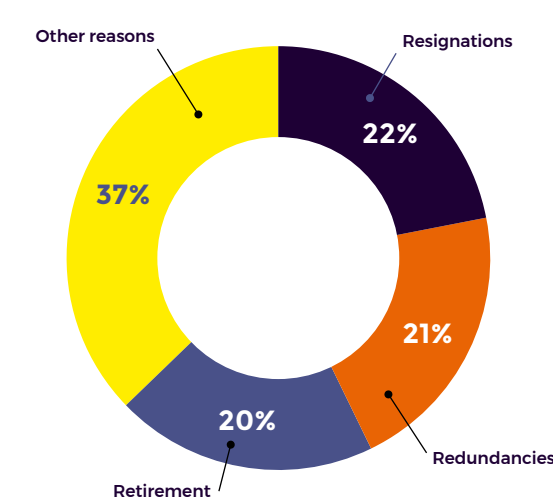
- 100% of sites have established a mechanism for dialogue with local stakeholders;
- 100% of sites have implemented an investment programme to contribute to local development, with a focus on actions in favour of young people.



At the same time, tools necessary to take into account the needs and issues of communities are being developed, in line with international benchmarks, to prevent the risks inherent in the Group's activities. The Group is implementing a specific approach to managing the possible impacts of activities on local communities.

The prevention of these impacts is primarily achieved through the implementation of dialogue mechanisms with the relevant stakeholders or their representatives. More targeted risk control measures are also implemented by the sites concerned, depending on the assessed risks for certain activities.

BREAKDOWN OF DEPARTURES (EXCLUDING TRANSFERS) BY REASON IN 2018



1.4.2.5.8 Labour organisation

Working time

The organisation of working time depends on the companies, the nature of their activities and their location and is defined in order to best meet the requirements of the activity and the wishes of the employees. Wherever it operates, the Eramet Group complies with legislation on working time regulations. As an indication, the working hours are:

- in Metropolitan France: 35 hours per week;
- in Norway: 37.5 hours per week;
- in New Caledonia: 38 hours per week;
- in China, Gabon, the United States and Sweden: 40 hours per week over five days;
- in Senegal: 40 hours per week.

Part-time workers

Part-time employment contracts exist in many countries where the Group operates. The number of staff concerned by this arrangement represents 1.7% of the total number of staff.

As at 31 December 2018, 210 people were part-time, three fifths of whom were women.

71% of part-time employees, or 150 people, work in France and they account for 3% of the total workforce in Metropolitan France.

Organisation of work

In 2018, 55% of employees worked fixed days, while 45% worked shifts.

On large industrial sites, this issue is most often addressed by Health, Safety and Environment managers, as the impacts on local residents are mainly related to environmental issues.

In the case of mining activities, the management of community relations covers much broader themes. For this reason, the Group's mining sites have resources dedicated to these societal issues, which are essential for the development of responsible mining operations. These professionals are part of a network managed by the Group's Communication and Sustainable Development Department. The aim is to provide a platform to exchange documentation and good practices in order to increase the Group's internal expertise on community relations. Group Community Relations initiatives are shared with employees via the intranet to illustrate the Company's commitment to corporate citizenship.

1.4.3.1.2 Forms of dialogue with local communities
Sites that may have an impact on the environment and local residents carry out information and consultation

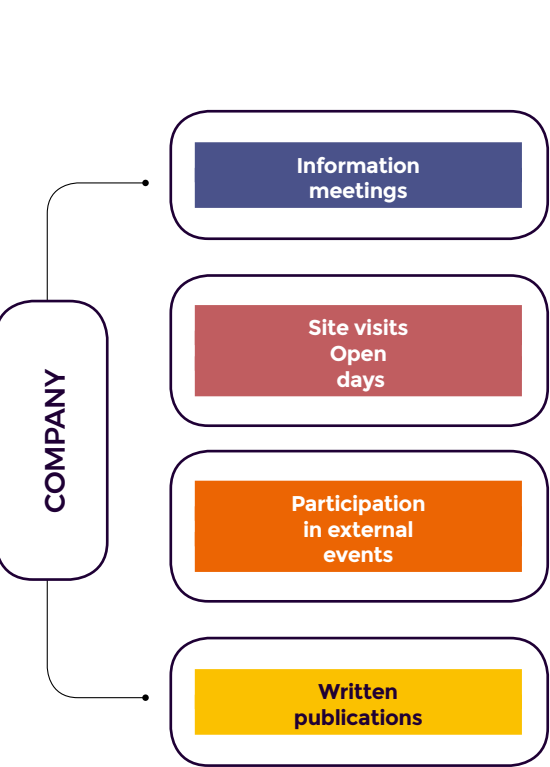
actions with them, whether due to regulatory obligations or voluntary initiatives. Knowing the local populations and establishing dialogue with them anticipates and prevents the potential impact of activities. This universal approach is adapted by each entity according to its specific challenges.

In 2018, almost 60% of the sites – including 100% of the mining sites and projects – developed a dialogue with the communities, in an informative or consultative manner.

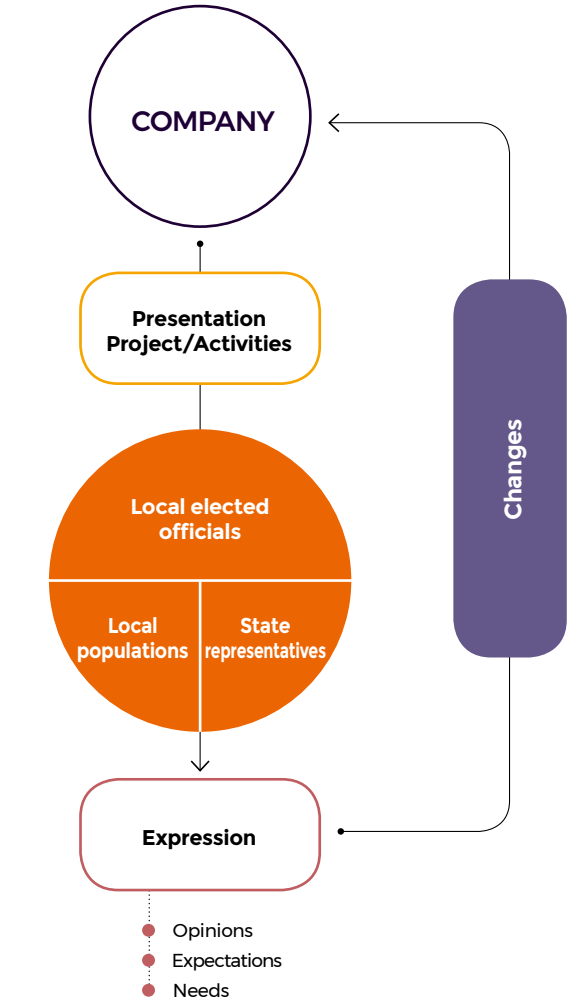
Sites that have initiated an information sharing process for their communities participated in information forums or organised information meetings with local residents.

In addition, certain sites, including all mining sites and projects, have established specific mechanisms for consulting with local residents to ensure that their expectations are taken into account as part of the decision-making process, whether in relation to the management of environmental and societal impacts, or the development of common opportunities.

INFORMATION: PREFERRED TOOLS



CONSULTATION: PROCEDURE



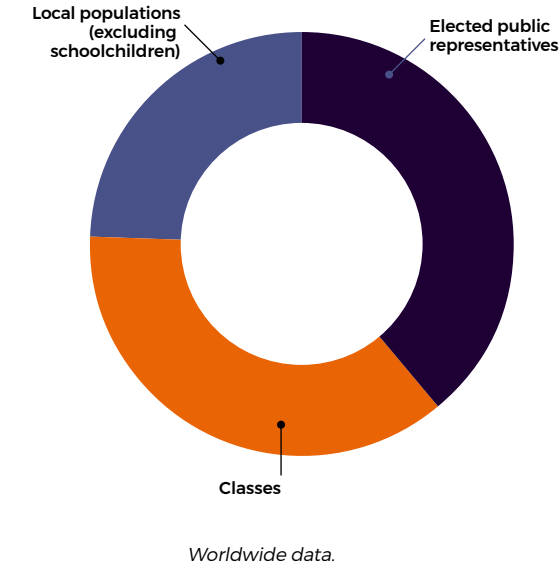
Information meetings are the preferred way for sites to communicate with local populations. The information shared encompasses the site's activities and also the environmental and/or societal impact.

For projects or sites developing new activities, these information meetings are essential to explain their characteristics and present the measures implemented to control the impacts. For example, in addition to maintaining its permanent contact with the communities, GCO (Senegal) organises periodic information and awareness meetings with local populations in their respective villages, in town halls or territorial administrative offices.

The sites in operation also have the opportunity to regularly inform their local residents. In France, because of their Seveso "High Threshold" status or their ICPE (Installation Classified for the Protection of the Environment) status, some sites participate in "Site Monitoring Committees", composed of representatives of the national government, local authorities, local residents, farmers and employees. These committees constitute a framework for the exchange and monitoring of site activities. In addition to regulatory obligations, some sites organise voluntary information meetings, such as Eramet Norway's sites.

In 2018, half of the Group's sites organised visits, during open days or special events. This openness was appreciated by the various visitors, which allowed them to visit the facilities and thus better understand the activities and challenges of the sites.

CATEGORIES OF PUBLIC PARTICIPATING IN SITE VISITS



In 2018, the SLN facilities (New Caledonia) welcomed more than 900 visitors from the general public. The mines – and in particular the Thio facility, which hosts monthly visits in partnership with the Tourist Office – account for the largest number of visitors, showing the level of public interest in the nickel business. Comilog Dunkerque (France) organised its first open day to coincide with the plant's 40th anniversary.

The presence of sites at external events organised locally, such as fairs or exhibitions, also allows them to communicate about their activities and their social commitments to various audiences. This type of communication is particularly favoured by industrial sites, such as the entities of Eramet Norway and Aubert & Duval (France).

Consultation, a more engaging form of dialogue with the communities, is continuing at a steady pace. Its frequency varies according to the sites and the needs of the consultation: from once or twice a year to as often as quarterly. This is particularly the case for Comilog in Gabon, which carries out at least one quarterly action through its consultation framework, and Eramine Sudamerica (Lithium Project in Argentina), which organises its consultation meetings at municipal centres.

Consultations may also be required for specific projects. As part of its project to restore the Transgabonais railway line, which particularly affects the Owendo area, Setrag (Gabon) organised public consultation sessions and monitoring committees with the municipality concerned.

Establishment of local complaint management mechanisms

More than half of the Group's sites, including the mining sites in Gabon, Senegal and the projects in Argentina and Indonesia, are developing their own mechanisms to receive and handle complaints from local communities. The procedures for the receipt and processing of complaints are managed directly by the sites. Like the management of community relations, for industrial sites, complaints are received and handled by local managers in charge of health, safety and the environment. For mining sites, this falls under the responsibility of community relations. Complaint tracking updates are most often presented to the site's Management Committee, thus receiving the attention of top management.

1.4.3.1.3 Management of specific risks

Some activities at Eramet sites may have impacts on local populations and are subject to control measures in compliance with the "mitigation hierarchy" of avoiding, reducing or compensating these impacts, in addition to the general information and dialogue approach presented above.

The presence of a company near an inhabited area is an additional source of business risk for local populations. As regards the risks for populations due to economic activities, two types of preventive measures can be implemented: measures to protect populations (infrastructure, security, access restrictions, etc.) and measures to inform the population of the risks involved (information display, raising awareness, etc.).

As Eramet pays particular attention to preventing these risks as early as possible in its industrial or mining projects, an industrial risk prevention approach is continuously implemented by the Group, as detailed in Section 1.3.1.4. The sites concerned control access to the sites, set up barriers and information signs, and some sites also use security guards.

Information relating to business risks is shared as part of the dialogue with local communities. In 2018, Setrag (Gabon) organised a large-scale communication campaign to raise awareness of the risks of collisions between trains and people due to non-compliance with safety instructions. A video clip broadcast on national television, which included accidents that had taken place and safety instructions, was supplemented by radio ads in several local languages. In areas identified as more at risk, direct discussions with people living beside the tracks were carried out over several months, and tens of thousands of people were met.

Security measures protecting employees and infrastructure, such as security guards, are governed by the Security Policy adopted by Eramet. This is in accordance with international law, French law and the law of the countries in which Eramet operates. As part of this policy, the prevention of security risks first requires dialogue and a relationship of mutual respect with local residents. Training and rules governing the use of force and the equipment of the security personnel are decided, designed and controlled by a Site Security Officer, who acts within the framework defined by the Group Security Director. The use of force is strictly limited to cases of extreme necessity and must be proportional to the threat.

The activities of certain Group mining sites require the acquisition of land from communities that reside or carry out economic activities (agricultural or commercial) in the area. These operations may present risks of Human Rights violations (property rights or the right to an adequate standard of living of these communities). The sites concerned set up dedicated teams to manage the potential impact, which refer to the strict principles set out in the Performance Standards of the International Finance Corporation (World Bank Group) concerning these relocation activities, with particular focus on the implementation of resettlement action plans.

This is the case of Grande Côte Opérations in Senegal, which performs mobile mining activities as part of the mining concession granted by the State. Due to the specific problems relating to this site, the Environment and Communities Department has a team specialised in population displacement and restoration of the living conditions, which is responsible for anticipating displacement requirements and working on the implementation of resettlement action plans, requiring long-term work with the populations concerned.

In Gabon, as part of Setrag's project to restore the Transgabonais railway line, work is planned on the first 30 kilometres of railway from Libreville to guarantee the safety of the track and local residents. This work resulted in the displacement of populations and traders occupying the area surrounding the railway line, which is non-transferable State property. A resettlement unit has been established within the project's management team. This unit is responsible for driving the implementation of resettlement action plans and local development plans (livelihood restoration) in the context of involuntary population displacement in accordance with the international standards mentioned above. For

example, in 2018, traders were displaced from a market located along the tracks in Owendo, but these traders will be installed in a new market in 2019.

Comilog (Gabon) has maintained long-term dialogue with communities on the subject of project-related travel. As part of the mining of the edge of the Bangombé Plateau, meetings have been organised since 2007 between Comilog, the administration and representatives of the main districts concerned. These meetings continued throughout 2018 with residents, in the presence of representatives of public and local authorities. The final construction project, a development of more than 400 housing units and public infrastructure, is expected to involve some 20 national and local companies for two years. As regards the Comilog 2020 project, public consultations will continue in 2019 and relate to agricultural land.

Some sites also present environmental impact risks that may affect local residents. The Group is deploying all necessary means to reduce its environmental footprint, both at its operating sites and in the context of its development projects. The measures implemented to mitigate environmental and industrial risks (part 1.3 Environmental conservation) also aim to limit disturbances to local communities and avoid pollution risks and those related to a reduction in their access to natural resources.

Nearly half of the Group's sites have special relations with local public or community organisations regarding environmental issues. These mainly consist of direct discussions organised by the sites or meetings within the framework of regular meetings organised by local authorities.

Going even further, some entities have also developed partnerships with specialised organisations. This is particularly the case for Eramet Norway's sites, which for several years now have been working with the NGO Bellona on environmental issues. SLN, which is also a member of Scalair, also supports New Caledonian research organisations such as the Environment Observatory (*L'Œil*), which monitors the marine environment and air quality. Eramine Sudamerica (Lithium Project in Argentina) has developed a network of environmental observers consisting of local volunteers trained in the measurement of pollution and environmental emissions, in conjunction with the University of Salta. This partnership approach aims to encourage local populations to take an active role in managing the environmental risks associated with the project. In 2018, Setrag signed a partnership agreement with the *Agence nationale des parcs nationaux*, a Gabonese public scientific and environmental institution, which aims to preserve biodiversity and combat the poaching of protected species.

In 2018, the mining centre of Kouaoua (SLN, New Caledonia) was physically blocked by a group of young local residents protesting against the start of mining operations at three deposits, which had been authorised in May of the same year after several years of consultation with public authorities and the local traditional authorities. The site was able to resume its

activity after consultation with all stakeholders (young people, traditional leaders, trade unions and authorities). This event helped to establish a new structure for the relationship with the site stakeholders.

1.4.3.2 Development of opportunities for communities

As a corporate citizen, Eramet aims to become a company that contributes to public interest issues in the territories where it operates, dedicating one of the objectives of its CSR Roadmap to this topic. Especially in its relations with local communities, the Group is working to move from an approach limiting and compensating the impacts of its activities to a partnership approach, seeking to contribute positively to local populations by improving their situation according to their priorities and aspirations. This is all the more true for the Group's mining activities, for which the development of good relations between all stakeholders in the region is essential for the creation of shared value in the long term.



1.4.3.2.1 Local job creation

The major subsidiaries of the Group contribute significantly to job creation in the areas in which they operate, recruiting the vast majority of their teams locally. The Eramet Group, through its subsidiaries Comilog and Setrag, directly employs nearly 3,000 people in Gabon. 98% of the positions created are occupied by Gabonese citizens, making the Group Gabon's second largest private employer. SLN, New Caledonia's biggest private employer, provides more than 2,000 direct jobs. The Auvergne-Rhône-Alpes region accounts for more than half of the jobs created by the Group in metropolitan France.

In Senegal, Grande Côte Opérations (GCO), which represents more than 700 direct jobs, created a Recruitment Committee with the municipal authorities in order to foster the dynamism of a local employment pool. Eramine Sudamerica (Lithium Project in Argentina) has also developed a community development programme for local communities focused on employment. Nearly 45% of employees come from the villages closest to the project, with the rest from the capital of Salta Province.

In addition, many sites are working to develop local skills over the long term in order to develop employability in the regions.

In Gabon, Comilog continued its contribution to the Moanda School of Mines and Metallurgy (E3MG, which opened in 2016), the result of a public-private partnership between the Gabonese State and Eramet Group. This school, which aims to train young Gabonese people in the fields of geoscience, process engineering, mining research and mining, celebrated the school's first graduation in 2018, in the presence of the Gabonese

President and the Group's Chief Executive Officer. The Jacques Libizangomo Joumas class has 27 graduates, several of whom have signed a contract with Comilog.

Setrag has developed a partnership with a Gabonese public institution, the National Employment Office, with the aim of creating apprenticeship contracts for young people. 282 young people were trained in 2018. The majority of these young people were recruited by the Company at the end of their apprenticeship.

Aubert & Duval (France) has also made learning assistance and support one of its long-term commitments. It supports the activity of local structures that offer mobility and accommodation solutions for work/study students in Auvergne, such as Sira and Corum Saint Jean.

In 2018, more than 55% of Group sites welcomed and trained trainees, apprentices or PhD students, ranging from a few weeks to several months. This represents several hundred students or apprentices each year.

1.4.3.2.2 Local economic development

The Eramet Group contributes to the development of economic activities in the areas in which it operates, both through its purchasing practices and by supporting initiatives aimed at developing local activities.

95% of Group entities reported local purchases in 2018. The share of local purchases made by the entities surveyed, representing 40% on average, can reach up to 90%. In 2018, two thirds of SLN's purchases of services and products (taking into account local purchases as a percentage of total expenditure, excluding payroll and CAPEX) were made in New Caledonia. For the same year, 65% of Comilog's purchases were made in Gabon. 2018 was marked by significant investments (equipment and machinery not produced in Gabon), which slightly decreased the share of domestic purchases compared to previous years (75% on average).

The activities of the Group's sites may require subcontracting, which encourages the establishment of local companies. This is particularly the case with SLN in New Caledonia, whose mines, plant and support services subcontract activities and draw from the base of local businesses.

Some sites support local micro-entrepreneurship in particular. Setrag (Gabon) participates in the development and rehabilitation of markets, as was the case in Franceville in 2018. In New Caledonia, SLN continued its financial support for the Association for the Development of Economic Initiative (ADIE), of which it has been a partner for 18 years, which offers support services to micro-entrepreneurs, as well as to the Créadie competition at which SLN awards a prize, the "Social media award", which was given in 2018 to a home help service in Thio. Through its contribution to the association *Initiative Nouvelle-Calédonie*, it participates in the creation and development of sustainable companies based in New Caledonia that generate added value and employment, including projects developed by SLN employees, subcontracting projects and projects by

inhabitants of the municipalities in which the Company is located – amounting to 20 in 2018.

1.4.3.2.3 Construction and rehabilitation of local infrastructure

In 2018, the Group's mining sites continued to participate in the construction and rehabilitation of local infrastructure, promoting the communal and economic development of the areas in which they operate.

In New Caledonia, SLN contributes to the implementation of municipal facilities through tripartite agreements with mining municipalities and the provinces. In 2018, for example, the Company participated in the financing of drinking water supply works and cultural infrastructure (music school, cultural centre, multimedia library, etc.) for the municipality of Koumac (North Province) and in the renovation of the sports centre and studies for the creation of a footpath for the municipality of Thio (South Province).

GCO has established a social mining programme with the Senegalese government, which commits the Company to making annual investments in local communities. These expenses are managed by the Company, which decided to create a tripartite committee for this purpose. This committee, which includes mayors and representatives of GCO, local residents and civil society, is responsible for allocating the funds for the actions to be taken. The area covered by this programme, which includes several villages, is quite extensive. A system of rotating allocations has been established, allowing a concentration of funds per municipality each year, and therefore more substantial investments.

In Gabon, Comilog and Setrag are heavily involved in the development of the surrounding areas. Comilog has provided the populations of four villages around Lastourville with water and electricity infrastructure. The Company was also approached by the local authorities of Moanda to rehabilitate the city's laterite roads. Setrag's work this year focused particularly on water. For the benefit of the areas based around the network, the railway company contributed to the rehabilitation of public fountains, the drinking water supply in residential areas, and sanitation works.

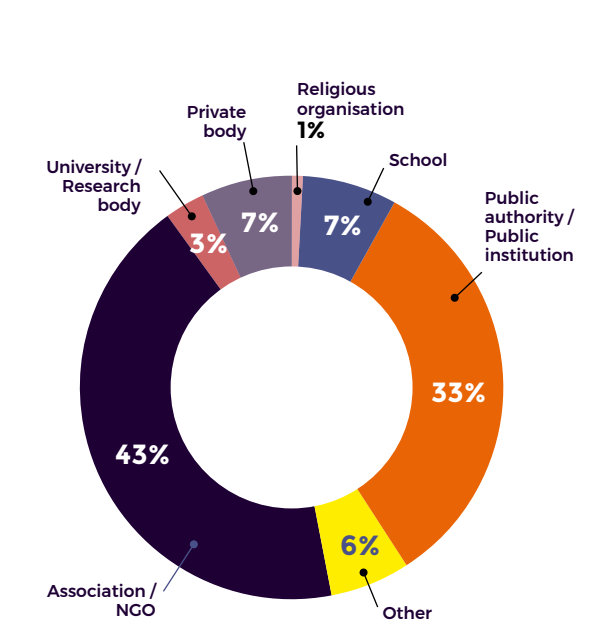
Municipal development also includes actions relating to health and education infrastructure, as presented below.

1.4.3.2.4 Societal initiatives and skills transfer

The Eramet Group is involved at various levels in actions in favour of the communities surrounding the sites, aiming to develop local life through a partnership approach. The societal expenditure presented here is mainly provided through collaborations for the benefit of communities, the environment or the region.

In 2018, the Group's entities carried out more than 140 partnership or sponsorship actions.

PRESENTATION OF ACTIONS BY TYPE OF PARTNER⁽¹⁾

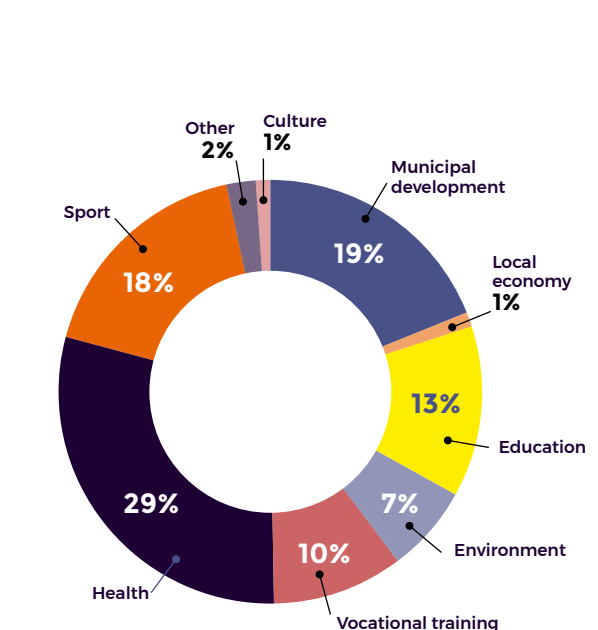


As can be seen in the diagram above, which shows the breakdown of partnerships concluded (in number) by organisation type, associations (sports, cultural or local) and NGOs are the main beneficiaries of the Group's partnership approach. The second type of preferred partner for the Group consists of public players, including local authorities (government, municipality, region, department, etc.) and public institutions (public agencies, national parks, hospitals, chambers of commerce, etc.).

In terms of amounts, this time the Group's entities allocated more than €7.4 million to partnerships and sponsorships during the year. Comilog Gabon's management of the Marcel-Abéké Hospital also contributes to the Group's social commitment through an annual grant of €3 million. It should be noted that this significant contribution is not included in the amount of partnerships and sponsorships above, as it is a structure operated directly by a Group entity.

(1) The graph also includes Comilog Gabon's annual contribution of €3 million to the Marcel-Abéké Hospital, managed by Comilog, which is not included in the amount of partnerships/sponsorships during the year.

BREAKDOWN OF EXPENDITURE BY AREA OF ACTION⁽¹⁾



The main areas of action supported by Eramet are health, communal development, sport and education.

Health

Health is one of the Eramet Group's priority areas of commitment.

The Group's entities in Gabon are particularly active in developing local residents' access to health infrastructures. Marcel-Abéké Hospital is open to the entire population. The rates for services were lowered in 2018 to facilitate access to treatment.

Section 1.4.2.2 Employee health presents the organisation and developments of the Hospital in 2018 in more detail.

Setrag continued its action on free consultations and health care for local residents in the railway line's seven health centres, spread over some 600 kilometres, in addition to its sponsorship actions for the stations' medical centres.

Comilog is also continuing to develop its Gamma programme in support of the Government of Gabon's HIV/AIDS awareness actions. Set up by Comilog in 2006 to fight AIDS, this programme covers a wide range of actions: from general public information on the disease to anonymous screening and comprehensive care for employees or beneficiaries. For example, during a scientific rally organised with the Moanda Students' Association in 2018, the Company raised awareness of the benefits of voluntary testing, allowing everyone to be tested free of charge and anonymously.

In Senegal, vaccination is the subject of a specific commitment by GCO. As a long-term partner of AFRIVAC, the Company supports the foundation's projects, which include the implementation of campaigns to vaccinate children in Senegal and raise parents' awareness on the subject.

In Argentina, the Eramine Sudamerica project (Lithium Project) provides logistical support to various public agencies, by facilitating access to health specialists on the plateau or representatives responsible for conducting a health and social census, making it possible to better identify and meet the needs of isolated populations.

Communal development

Communal development means the financing of public infrastructure covering one or more areas for the benefit of a municipality or local area (economy, health, sport, education, etc.). This particular point is addressed in Section 1.4.3.2.3 above. This is an imperative issue because of the Group's mining activity, which is part of its ongoing commitment to local communities.

Sport

The Group's involvement in sport is universally shared by its entities. This commitment pursues several objectives, including supporting local associations, often aimed at young people, and developing the attractiveness of the region for employees. More than a dozen sites directly support local sports associations, particularly in Auvergne-Rhône-Alpes, but also in New Caledonia, the Scandinavian countries of Eramet Norway and Erasteel Kloster (Sweden), and in Gabon.

For Comilog (Gabon), the main contributor to AS Mangasport, the active support of several Moanda sports associations is a key element of its commitment to young people, enabling local youth to achieve fulfilment through sport, in addition to its actions in favour of education.

(1) The graph also includes Comilog Gabon's annual contribution of €3 million to the Marcel-Abéké Hospital, managed by Comilog, which is not included in the amount of partnerships/sponsorships during the year.

Education

The Group is committed to a policy of active support for education for local communities, and young people in particular. This support is provided in several ways on Group sites and projects, in particular through financial or in-kind donations, and also through actions aimed at schoolchildren.

In this context, Comilog (Gabon) has established a multi-year programme to support schools in the city of Moanda. This takes the form of donations of teaching and computer equipment, as well as water and electricity supply and building repairs. In 2018, the rehabilitation of schools in Moanda and Bakoumba was an important achievement by Setrag (Gabon), which also continued to provide school transport to about 400 secondary school students from the areas around its stations.

Many sites and subsidiaries maintain close relations with educational structures. This is reflected in site visits organised for classes at all levels to promote Eramet's business lines and industrial and mining challenges – in 2018 more than half of the Group's entities ran such activities.

There are also collaborative actions with educational institutions, in the form of interventions by employees in institutions or skill-based sponsorship, as carried out by employees of more than a third of the sites in 2018. Representatives of the sites or of the Group contribute as experts to specialised training courses, such as the *École des mines de Moanda* in Gabon, the CFTMC in Poro in New Caledonia, or vocational secondary schools at the request of the Regional Chambers of Commerce in France.

Aubert & Duval Foundation

Created in 2010, the Aubert & Duval Foundation aims to develop initiatives that contribute to the dynamism of the French regions where the Company's sites are located, and to support projects in the non-profit and micro-economy sectors. The Foundation collects sponsorship requests from French Aubert & Duval sites, reviews the projects and decides which ones to support. Five sites were involved with the Foundation in 2018, allowing the Foundation to carry out more than 30 actions in favour of local participants in education, sport and culture in the Auvergne-Rhône-Alpes region.



1.5 Governance

1.5.1 Ethics, Compliance and Anti-Corruption

The Group undertakes to conduct its activities, everywhere in the countries in which it operates, in strict compliance with the laws and regulations applicable to it. Rigour, transparency and sincerity are the values that form the basis of Eramet's ethical conduct.



In order to preserve the integrity of its business and to better understand international challenges, particularly with regard to compliance with the highest ethical standards and the conduct of its activities in a constantly changing environment, the Group has adopted an Ethics Charter, which forms the basis of the Compliance Programme.

This document is translated into the Group's 12 main languages (French, English, Italian, Spanish, Portuguese, Japanese, Korean, Chinese, German, Swedish, Norwegian and Indonesian) and can be viewed directly on the Group's website:

http://www.eramet.com/en/system/files/publications/pdf/eramet_group_ethics_charter_2018_en.pdf

The Ethics Charter states that the fight against corruption is an absolute priority for the Group, recalling the principle of compliance with the OECD Convention and local laws.

The members of the Executive Committee undertake, alongside all Group employees, to uphold these values. In 2018, this commitment was demonstrated through communications from General Management to all employees, emphasising the importance of ethics and the need to act in full accordance with them.

1.5.1.1 Main risks

In 2017, the Group – in addition to the existing Group risk mapping, and in accordance with the Law of 9 December 2016, known as the "Sapin 2 Act" – produced a map of its Corruption and Influence Peddling risks, relying on a qualified external contractor to ensure transparency and independence during the financial year.

In accordance with a proven methodology for analysing the criticality of the risk of Corruption and Influence Peddling, depending on its impact and probability of occurrence by business sector and/or geographical area, the "Eramet risk universe" was assessed through interviews, workshops and a self-assessment questionnaire involving the Group's key functions, i.e. more than 151 people in all the geographical areas in which Eramet operates.

The main categories of risks identified have been addressed by dedicated action plans and are monitored at the highest level of the Group in close collaboration with the Audit, Risks and Ethics Committee, which every year will assess the need to update the risk map to reflect changes in the Group's business activities.

1.5.1.2 Ethical governance

In 2018, the Group decided to implement a new ethical dynamic by strengthening its organisation and Compliance Programme, which was approved in 2016 by the Executive Committee.

This resulted in the creation of an Ethics and Compliance Department. A new Chief Compliance Officer was appointed, who reports to General Management, to ensure regular and structured ownership by the Group's top management bodies of these priority issues.

Eramet's Compliance function is organised as follows:

- the Executive Committee defines the overall approach to ethical compliance and periodically reviews the corruption prevention policy;
 - a Compliance session of the Executive Committee is held on a quarterly basis, during which a review of confidential alerts is carried out with respect for the rights of whistleblowers;
 - the "Ethics Compliance" Steering Committee, composed of members of the corporate HR and legal functions and chaired by the Chief Compliance Officer, meets when convened, at least every two months. Its mission is to monitor ongoing actions to improve the Compliance Programme, to reflect on major actions to promote a culture of ethics within the Group, to ensure the communication and implementation of the Ethics Charter and its principles, and to make recommendations regarding Ethics Compliance and in particular regarding related procedures. The Committee also develops the content of ethics training courses for Group employees;
 - an Ethics Compliance network consisting of:
 - 19 "Ethics Compliance Officers" (ECOs), appointed by the Executive Committee and covering the entire Group, a key element of the system, local and operational representatives of the Ethics and Compliance Department.The mission of the ECOs is to ensure the local implementation of and compliance with Group procedures, ensure communication with employees, and implement the necessary training programmes. As part of the Group's whistleblowing procedure, the ECOs can be contacted by employees directly.
- To this end, in full respect of the rights of whistleblowers, they ensure full confidentiality and the immediate communication of the alert to the Chief Compliance Officer. With explicit prior delegation by the Chief Compliance Officer, they may be required to conduct field investigations in accordance with the Group's alert management

procedure — a professional whistleblowing system, available on the intranet.

In 2018, the Group significantly improved its approach and decided to appoint new Ethics Compliance Officers, including the appointment of Ethics Compliance Officers dedicated to the Group's three major operational projects;

- 45 "Ethics Compliance Ambassadors" (ECAs), appointed by the Area/Division Ethics Compliance Officer. In order to ensure close communication with its employees, in 2018 the Group decided to appoint new local Ethics Compliance Ambassadors (for example, in New Caledonia, five Ethics Compliance Ambassadors were appointed per mining site, and in GABON, new Ambassadors were appointed for each main station on the railway line operated by Setrag, a Group subsidiary).

Their duties consist of supporting the Ethics Compliance Officer locally in promoting, communicating, raising awareness and training Group employees.

This Ethics Compliance Network is regularly informed by the Chief Compliance Officer of ongoing actions, in particular through access to an Ethics SharePoint where all Group procedures are posted, a regularly updated communication framework (infographic), as well as the reports of the "Ethics Compliance" Steering Committee. In addition, there is a six-monthly plenary session of the Ethics Compliance Network organised by the Ethics and Compliance Department (two French/English sessions in compatible time zones organised in September 2018).

Finally, in 2019, specific training sessions for this Network, particularly on Corruption and Influence Peddling issues, will be conducted specifically by the Chief Compliance Officer, by video or for certain areas through on-site training sessions (New Caledonia, Gabon, Senegal and Argentina). The Chief Compliance Officer regularly interacts with the Ethics Compliance Network and promotes close collaboration through regular travel to the different areas.

1.5.1.3 Risk prevention strategy

Risk mapping

An action plan has been adopted by the Executive Committee to ensure that all the risks identified by the risk mapping exercise relating to Corruption and Influence Peddling are covered by procedures and controls. A real risk prevention strategy, both internally and externally, has thus been defined.

Reference frameworks and procedures

A reference framework, supported by the Ethics Charter, provides all Group employees with information and guidance on the main ethical issues, including the fight against corruption. It consists of several policies and procedures implemented and regularly updated

to prevent, identify and mitigate the occurrence of risks. For example, a specific "gifts and entertainment" procedure and a "conflict of interest management" procedure, both supported by an annual reporting system by area involving the Ethics Compliance Officers, were implemented in 2017. It is already planned to update this process in 2019.

In parallel with this reference framework, several campaigns to raise awareness about the Ethics culture have also been launched since 2017. In 2018, the Chief Compliance Officer continued these awareness-raising activities through training sessions coupled with site visits. Following these visits, an analysis of the situation was carried out and dedicated action plans are being drawn up for 2019.

Training

With regard to training, in addition to the regular awareness campaigns planned and organised with the support of the Group Communications Department, Eramet ensures that all its employees are regularly trained in these important matters through on-site training conducted by the Chief Compliance Officer, the Ethics Compliance Network and, above all, through an e-learning course entitled "Ethics Charter Awareness" deployed two years ago and made mandatory for all new employees joining the Group, which is monitored by Human Resources.

In 2017, 4,324 employees registered for and attended this training, and in 2018, 2,273 employees were trained.

Regular awareness and training campaigns are carried out each year.

Priority for future actions is given to improving information systems, with the support of the Group Information Systems Department, in order to provide online access to all employees equipped with computers or, alternatively, in some countries to make self-service computer workstations available to the rest of the Group's employees. Finally, the Ethics Compliance Ambassadors, alongside the Chief Compliance Officer, are responsible for conducting local training. These actions are currently under way.

Since 2018, the Group has actively participated in the meetings of professional associations dedicated to business ethics (Transparency International, *Cercle Éthique des Affaires*, *Cercle de la Compliance*). In addition, the Chief Compliance Officer regularly attends internal seminars of the Division Management Committees and support functions in order to constantly raise awareness about these issues among all Group employees.

Whistleblowing system

The Group's Compliance framework also includes a professional whistleblowing system. This system allows each employee to alert the Group's highest authorities about unethical behaviour and/or violation of Group

rules. Several whistleblowing channels are available to employees: the Group Chief Compliance Officer, the Ethics Compliance Officer (ECO) of the employee's entity, or the IT system deployed, namely: a dedicated, secure and confidential e-mail address and a telephone alert number. Any employee anywhere in the world can notify the Company of anything that might violate the principles and commitments of the Ethics Charter and the laws or rules relating to ethics applicable to our business activities.

In particular, the Group encourages employees to disclose the following:

- corruption, fraud, conflict of interests;
- anticompetitive practices;
- discrimination and harassment at work;
- conduct contrary to the Group's policies and standards in relation to health, hygiene, safety at work and protection of the environment.

The Group is also working to ensure that, in 2019, alerts are received regarding violations or risks of violation of Human Rights by Group employees or external parties affected by the Company's business activities.

The whistleblowing procedures are set out in the Ethics Charter available on the Group's website and made available to all employees, and an infographic is displayed on the premises of each entity.

These alerts can be submitted anonymously where permitted by local regulations.

Alerts are dealt with following a dedicated procedure, which can be viewed on Eramet's intranet. This procedure guarantees that the employee giving the alert has complete confidentiality, and insofar as the employee acts selflessly and in good faith, it also guarantees that no action can be taken against him or her as a result of the use of this mechanism. Finally, in full compliance with the new legislative provisions, the protection of whistleblowers who disclose information in good faith is ensured.

The Group, with the aim of ensuring constant improvement and compliance with the latest and highest ethical standards, has decided to review these issues on a regular basis.

It also plans to establish *ad hoc* monitoring committees to manage and monitor alerts, as described below.

Transparency

In addition to these internal actions, Eramet also promotes transparency in the extractive industries. Eramet has been a member of the Extractive Industries Transparency Initiative (EITI) since 2011. This initiative is based on a set of principles and rules, bringing together governments, companies, civil society groups, investors and international organisations to promote revenue transparency at a local level. By adhering to

these principles, Eramet demonstrates its willingness to ensure the responsible development of natural resources and to ensure transparency in financial flows between companies and host countries, and also to ensure regular accountability to its stakeholders.

Eramet has sites in three EITI member or candidate countries: Senegal, Indonesia and Norway. In Senegal, Grande Côte Opérations (GCO) is contributing to the preparation of the country's EITI reports; in 2018 Senegal was recognised as the first African country and the fourth in the world to achieve satisfactory progress in the implementation of the EITI standard. In Indonesia, Eramet does not yet have a mining operation, and it only has non-extractive sites in Norway: its subsidiaries have not been required to contribute to the EITI reports of these two countries.

1.5.1.4 Performance

Several key performance indicators have been identified and are regularly monitored by the Group. In addition, specific KPIs have been taken into consideration and are already included in the Group's internal control framework with control points dedicated to Compliance, which will be regularly reviewed as part of the internal control self-assessment campaigns from 2019.

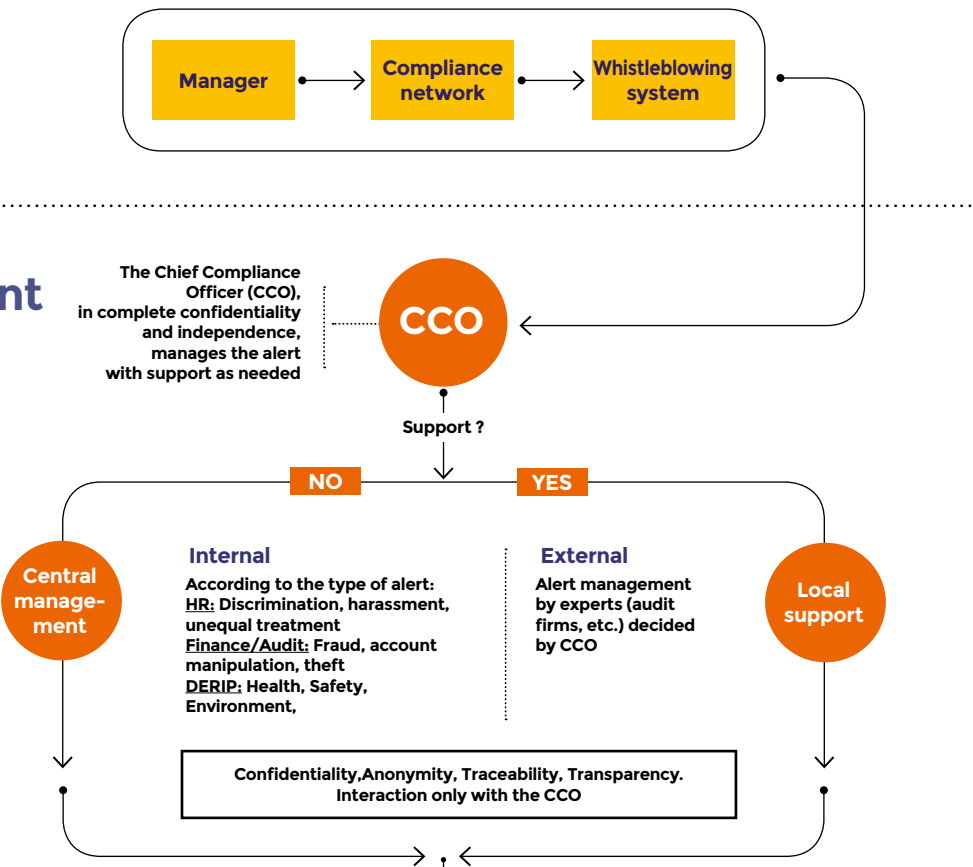
Furthermore, several specific audits have been launched by the Group Internal Audit Department and the Ethics component has now been incorporated into the internal control audit framework.

These indicators are monitored as part of the annual CSR Roadmap and the action plan for monitoring Group risk mapping, as well as at meetings of the Risk, Audit and Ethics Committee. The Ethics and Compliance Department and the Group Internal Audit Department work closely together on these matters.

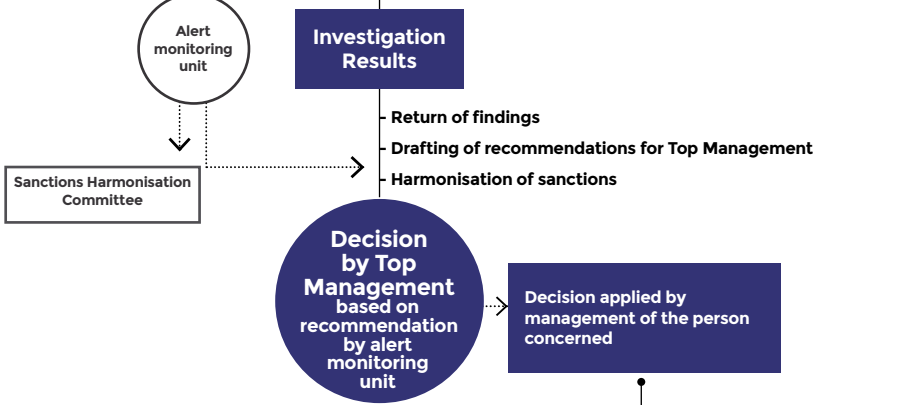
Alerts are now monitored in accordance with a new procedure entitled "Alert Management Procedure — Professional Whistleblowing System", detailed below. The entire process is supervised in complete independence, confidentiality and transparency by the Chief Compliance Officer.

1
Receipt
of alert

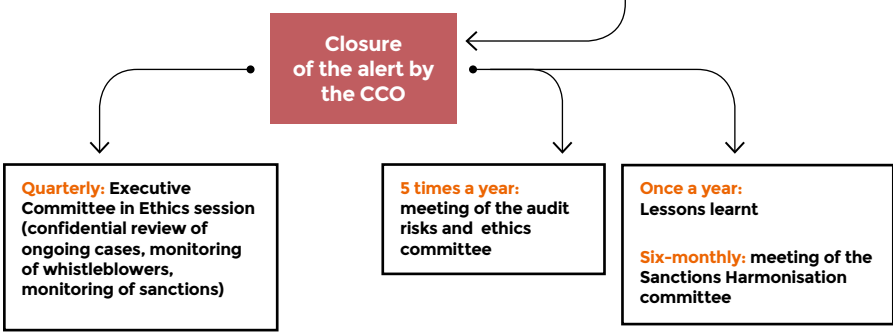
2
Management
of alert



3
Monitoring
of alert



4
Closure
of the alert



Investigations may be monitored, again in accordance with the above procedure, either internally or by the external expertise of audit firms.

Given the rate of alert escalation, it is already planned to significantly improve the entire system in 2019, both with regard to the alert channels made available to employees and the automated system already in place, as well to update its reference frameworks and the organisation dedicated to the requirements of the latest legislative provisions on sanctions policy, whistleblower protection and personal data protection (GDPR).

Statistics will be regularly communicated, in particular to the Audit, Risks and Ethics Committee.

It should be noted that, in 2018, all Group procedures in terms of Ethics and Compliance were implemented. These procedures have all been standardised and disseminated more widely. It is planned to provide communication on these dedicated procedures and any updates via the Ethics Compliance Network on a regular basis.

Finally, as part of its development of a responsible value chain, the Group has carried out an evaluation of all its suppliers according to pre-defined criteria.

In this context, two dedicated Responsible Purchasing and Sales Committees, described in detail in Section 1.5.2 have been established, supported by a training campaign aimed at the employees concerned, in particular through on-site training and the deployment in 2019 of e-learning modules dedicated to Corruption issues. It is also planned to improve the existing conflict of interest reporting system, which should be automated in the near future.

This approach is governed in particular by the Eramet Responsible Purchasing Charter. This charter formalises the Group's desire to strengthen the integration of sustainable development issues related to procurement, and promotes a dynamic of continuous improvement. Eramet's expectations with regard to its suppliers, subcontractors and service providers primarily target three main areas: Human Rights and working conditions, environment and products, and good business practices. It is available on the Eramet website at the following address:

http://www.eramet.com/en/system/files/publications/pdf/eramet_responsible_purchasing_charter.pdf

The Responsible Sales Committee is made up of members of the Sales Departments, the Group Legal Department and the Group Communication and Sustainable Development Department. The Committee oversees the gradual implementation of the Group's CSR and ethical commitments to customers, as set out in the Group's Ethics Charter. In addition, particular vigilance is exercised in relation to exports potentially involving countries subject to international sanctions.

Following the work begun by the committees in 2017, two internal procedures for the CSR and ethics assessments of suppliers on the one hand, and customers and commercial intermediaries on the other, were formalised and implemented in 2018.

These procedures and their application have been the subject of awareness-raising sessions within the various Group entities. In 2019, e-learning training courses on this subject will also be deployed for the employees concerned.

The progress of the "Responsible Value Chain" approach is monitored through one of the objectives of the Commitment to Economic Responsibility focus area of the CSR Roadmap.



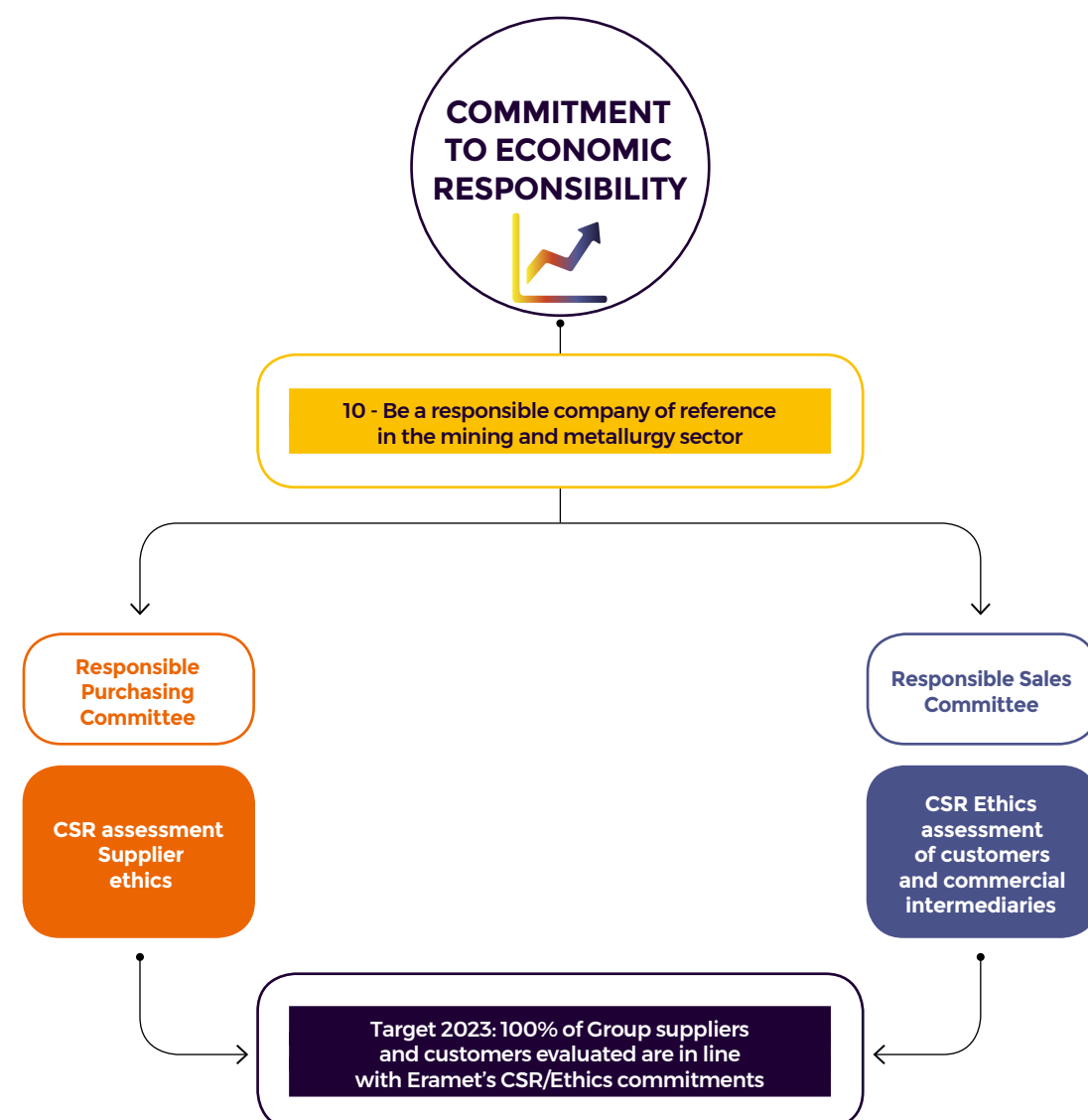
1.5.2 Responsible value chain

1.5.2.1 Governance

As a responsible economic player, Eramet has established a structure to address new challenges in the value chain. Two dedicated committees, stemming from the Ethics Compliance Committee (mentioned in 1.5.1), meet on a quarterly basis to manage the responsible value chain approach, both upstream and downstream of Eramet's operations.

The Responsible Purchasing Committee includes members of the Group Communication and Sustainable Development Department, the Group Legal Department and the Purchasing Departments, including a Supplier Performance Coordinator recruited in 2018, with specific responsibility for CSR matters. The Committee leads the Group-wide responsible purchasing approach.

GROUP RESPONSIBLE VALUE CHAIN APPROACH



By suppliers and customers evaluated, the Group is referring to third parties evaluated as “critical and/or sensitive” (in terms of importance to Eramet or CSR risk – depending on the business activity or country concerned). These parties must comply, according to the results of CSR/Ethics evaluations, with the Group’s commitments on these themes. If there is a discrepancy between the evaluation results and the Group’s expectations, the Group encourages dialogue and support, but reserves the right to terminate the business relationship.

1.5.2.2 Responsible purchasing

Due to the issues associated with the Group’s businesses, purchases are the subject of particular attention and also strong expectations from stakeholders in this issue. Eramet is committed to a responsible purchasing approach, which aims to favour suppliers offering products or services that respect environmen-

tal and social criteria while maintaining a high level of competitiveness. 93% of the entities surveyed as part of the annual CSR reporting process are aware of this responsible purchasing approach.

Moreover, in France the Eramet subsidiary Aubert & Duval is a signatory of the “Responsible Supplier Relations Charter” (formerly the “Inter-Company Relations Charter”), which was jointly developed in 2010 by the Business Ombudsman and the association of purchasing managers in France (CDAF). This promotes equitable relationships between buyers and suppliers with respect to everyone’s rights and duties, with particular attention on the relationship between major contractors and SMEs.

Supplier and subcontractor performance evaluation

In order to reinforce existing practices at the level of certain sites or subsidiaries, Eramet launched a comprehensive and progressive approach to evaluating

the CSR performance of its suppliers. As a first step, in 2017 the Group’s top 50 suppliers and subcontractors in terms of purchasing volume were invited to complete an evaluation questionnaire that was checked and analysed by an external third party (EcoVadis). The questionnaire focuses on CSR criteria, such as respect for the environment, the management of the value chain, respect for Human Rights and labour relations, and business ethics.

In parallel, and with reference to the obligations imposed by the Law of 27 March 2017 relating to the duty of care of parent companies and contractors, the Group formalised its responsible purchasing approach by structuring it around a risk approach. The Responsible Purchasing Committee created a mapping of the CSR risks related to the activities of its suppliers and subcontractors, and defined a procedure for assessing the situation of its suppliers and subcontractors with regard to these risks.

Based on the results of this mapping, an evaluation campaign was launched between the end of 2017 and mid-2018 to assess suppliers that had been highlighted due to the high CSR stakes of their activity and their importance for the Group’s business. Eramet chose to focus its evaluation efforts on the Group’s 180 or so suppliers in the seven highest-risk business categories, using the same operating method as that used in the 2017 campaign, mentioned above. In 2018, suppliers in these categories were evaluated in accordance with the internal procedure and will be the subject of more targeted risk management actions led by the Responsible Purchasing Committee.

Among the actions to control potential risks, dialogue with suppliers, the development of targeted action plans and on-site audits are given priority. A pilot audit was carried out this year, and the Group’s Purchasing Department has determined the target for potential audits for next year.

Additional elements relating to this approach are described in the Eramet Group’s Vigilance Plan, which is attached to this Registration Document.

Monitoring of the “conflict ores” theme

Some of the Group’s activities require the use of tungsten in metal form in their manufacturing processes. This metal comes from ores that may be called “conflict” ores if their exploitation is used to finance armed groups and fuel civil wars in some parts of the world. Eramet is therefore very attentive to the conditions of supply of these materials and in particular to compliance with the specific provisions of the “US Dodd Frank Act”, as well as the guidelines set by the OECD for multinational companies.

The Eramet buyers in charge of these supplies thus systematically require their suppliers to provide information concerning the origin of the ores used for the manufacture of tungsten metal sold to the Group. They are also asked what due diligence measures they have put in place to verify this origin. To this end, buyers use the Conflict Minerals Reporting Template (CMRT), supplied and updated regularly by the Responsible Minerals Initiative (RMI).

To expand its commitment to this theme, this year Eramet became a partner member of the Responsible Minerals Initiative (formerly known as the Conflict Free Smelter Initiative). By supporting the RMI, the Group is contributing to the advancement of best practices in the sector.



The RMI, created in 2008 by the Responsible Business Alliance (RBA) and the Global e-Sustainability Initiative (GeSI), implements due diligence measures regarding conflict ores, in particular through audits of foundries supplying T3C (Tungsten, Tin, Tantalum and Gold). This initiative is currently working to also encompass Cobalt from sensitive areas.

1.5.2.3 Responsible sales

As part of its commitments in terms of ethics, governance and responsible performance, the Group attaches particular importance to CSR and Ethics issues and risks related to its value chain. The approach to the downstream part of the value chain was officially launched in 2018, following the establishment of the Responsible Sales Committee in 2017.

The internal procedure mentioned in 1.5.2.1 formalises the CSR and Ethics risk analysis measures adopted by the Group to evaluate its customer’s situation in relation to these issues. Eramet is committed to ensuring that the practices and behaviour of third parties with whom it interacts do not generate risks of the same nature as those assessed by the Group in the context of its own activities. In particular, it covers corruption and influence peddling, the violation of Human Rights and fundamental freedoms, the health and safety of individuals, damage to the environment, as well as the CSR and ethical situation of suppliers and subcontractors of these third parties.

In order to carry out this first evaluation, the Group uses a specialised Know Your Customer (KYC) database. The results of this platform are then reviewed by the Responsible Sales Committee, which is tasked with following up on these evaluations and implementing additional due diligence actions as necessary.

Implemented in 2018, all customers identified as risk carriers were the subject of this first CSR Ethics assessment. The potential risk carried by the business relationship is evaluated using two criteria: the amount of turnover achieved in 2017 and the risk of the country in which the third party operates, according to the results of an evaluation carried out by an external service provider. Nearly 1,000 customers underwent this first evaluation in 2018, thus the annual target set by the CSR Roadmap was achieved.

1.5.3 Combating tax evasion

As stated in its Ethics Charter, the Group works to develop lasting relationships with local populations, local authorities and communities in the regions where it operates. Eramet's employees demand exemplary behaviour from themselves, ethical conduct that does not violate the laws of the countries in which they operate or the values to which they adhere.

The Group's activities are subject to tax regulations that are specific to their geographical location (see Chapter 5 of the Registration Document, "Monitoring specific tax systems").

In accordance with its legal obligations, Eramet has carried out its "country by country reporting" by declaring to the French tax authorities the distribution of its profits, taxes and activities by tax jurisdiction (Article 223 *quinquies* of the French General Tax Code), as well as its "mining reporting" on its extractive activities, which includes payments made to governments (Article L. 225-102-3 of the French Commercial Code).

This "mining reporting" obligation is directly inspired by the Extractive Industries Transparency Initiative (EITI), of which Eramet has voluntarily been a member since 2011. The EITI aims to contribute to the fight against corruption by promoting transparency in money transfers between oil, gas and mining companies and the countries that host their activities. The Group's financial transparency reporting is available on Eramet's website — www.eramet.com.

1.5.4 Governance of the sustainable development of industrial and mining projects

All projects carried out by the Group are developed in accordance with the internal procedure "Integration of HSE/CSR factors into projects", which was renewed in 2018. This procedure requires compliance with both national and local regulations of the country where the project is located, Eramet policies and standards, and the requirements of the project funders. In addition, international financing standards (Equator Principles, World Bank Group standards) and best practices of the Group's businesses are referenced and applied as far as reasonably possible to the economic performance of the project. The compliance of the Group's projects with this standard is verified at regular intervals.

The aim is to build a long-term trusting relationship with the communities present in the settlement sites and to prevent any risk of infringement on the fundamental rights of these communities, particularly, where applicable, indigenous communities. This requires the

implementation of mechanisms for dialogue with the representatives of relevant stakeholders.

Environmental, social, societal and health aspects are taken into account from the most upstream phases of projects. Sustainable development experts and specialists are integrated into the industrial, technical, legal and financial teams, and participate in the various steering committees, from pre-project phases to feasibility studies and pre-construction. Likewise, they participate in acquisition audits in the case of merger or acquisition projects, as well as in due diligence related to the transfer of assets.

The following sections detail the consideration of sustainable development factors in the main projects undertaken by the Group in 2018.

1.5.4.1 Project to improve the safety and reliability of the railway in Gabon

The Transgabonais railway, which crosses Gabon from Libreville to Franceville, has a total of 710 km of tracks, 52 bridges, and 22 stations. In addition to transporting the ore from Comilog to the port of Owendo, it plays a strategic role in the economic development of the country.

Setrag (the Transgabonais operating company) operates the railway under a Concession Agreement established in 2005 and updated in 2015. Setrag is the manager of the railway infrastructure, traffic and operations (passengers, timber, ore and other goods).

For several years, Setrag has stepped up the pace of maintenance and rehabilitation work on the Transgabonais railway. However, the overall condition of the track continued to hinder the operation of the network so Setrag decided to intensify the infrastructure renovation programme. The Company applied to the International Finance Corporation (IFC) and Proparco (French Development Agency Group) to finance the programme, and it successfully obtained funding in 2016.

The concession contract stipulates a contribution from the concession grantor, the State, to certain works, in particular those associated with the reinforcement of infrastructures, the rehabilitation of civil engineering structures, the securing of level crossings and the renovation of "employee" housing developments. In this context, the State has taken steps similar to Setrag to obtain financing from the French Development Agency, whose terms were finalised in December 2016.

The work, which began in September 2017, continued in 2018.

In accordance with Eramet's standards, the project was designed to minimise the potential associated environmental or societal impacts, based on comprehensive

and relevant studies. Among these we can mention: an environmental and social diagnosis, an impact notice dedicated to a production unit of steel-concrete sleepers, an impact notice for the rehabilitation of the track and an impact study for the exploitation of the sandpit feeding the sleeper unit. On this basis, management plans and dedicated actions have been developed and implemented.

Setrag reports its results in terms of Environment, Health, Safety and Stakeholder Dialogue to the two financial institutions once a year. It hosts on-site representatives twice a year for follow-up visits to verify the project's compliance with the environmental and social requirements of IFC and Proparco.

1.5.4.2 The Lithium project in Argentina

The project aims to produce 24,000 tonnes per year of lithium carbonate, used in the manufacture of cathodes for lithium-ion batteries using an alternative process for the manufacture of lithium salts from brines that differs fundamentally from the conventional process for the natural evaporation of brines.

The project is located in the province of Salta, in northern Argentina, on the Centenario-Ratones salt lake.

The social and environmental studies required for the development of the project have been completed and are currently being considered by the local authorities. These include the environmental and social baseline study and the environmental and social impact assessment, and involved more than 25 external experts, local teams and Eramet's corporate support functions.

A special effort has been made to integrate sustainable development criteria into the design of the project and the plant. For example, this ongoing effort has reduced projected water consumption by about 30% in two years, which is very important in this very arid region of the world. This progress has been accomplished either by modifications that reduce water requirements, or by adding elements that better recycle water in the process. The recycling rate of water within the process is now over 60%. Finally, it should be pointed out that thanks to the improved extraction efficiency of the innovative process implemented by Eramet, the impact of evaporation losses on the water balance of the catchment area is significantly reduced compared to the conventional evaporation process.

Eramine Sudamerica maintains regular multi-channel dialogue with the inhabitants of the few communities surrounding the project site as well as with all project stakeholders (local and provincial authorities, etc.). Eramine Sudamerica is also implementing a robust Community Development Plan, the focus of which has been decided in conjunction with the communities. These include the revitalisation of quinoa cultivation for the purpose of economic development and to fight against malnutrition, the partnership with the Ministry of Health to develop access to health services for the inhabitants of the *Altiplano*, and a plan to develop local skills.

1.5.4.3 Weda Bay Nickel project in Indonesia

The year 2018 marked the start of work following the signing of partnership agreements between Eramet and the Chinese steel group Tsingshan, the world's leading producer of stainless steels, to develop the Weda Bay Nickel deposit on Halmahera Island.

This partnership, in which Eramet is now a minority shareholder, consists of using a pyrometallurgical process to produce nickel ferroalloy, with an annual volume of about 30,000 tonnes of nickel content, from the ore mined from the Weda Bay deposit.

The desire to implement strong environmental and societal commitments for this project is an integral part of the objectives set out in the agreements signed between Eramet and Tsingshan.

1.5.4.4 Moanda Mine Extension project

As part of the development of its activities, Comilog is considering a scenario to increase production capacity at its Moanda site in Gabon.

The project includes the launch of the exploitation of a new Okouma-Bafoula plateau and the construction of a new washing plant in the Moulili valley.

The project is being developed in accordance with the performance criteria and guidelines of the International Finance Corporation, one of the most stringent sustainable development standards in the world.

These commitments were applied from the early stages of design, by carrying out studies to characterise the human, physical and biological environments. In 2018, these studies were completed and consultations were conducted with local communities and public authorities. The environmental and societal impact study, carried out with the participation of internationally recognised specialists in their field, is currently being finalised. It will be the subject of new consultations with the local communities and authorities. It will then be submitted to the governmental authorities and financial institutions as part of operating licence and financing applications.

Biodiversity issues are important for the project. The main focus is the chimpanzee — an emblematic species which is classified as endangered by the international organisation IUCN⁽¹⁾. Their presence on the site means that special measures must be implemented. Avoiding their habitats is a central concern of the project's biodiversity conservation strategy. The mapping of future quarries is the result of collaborative work between environment, biodiversity, mining and engineering representatives of the project and Eramet, and the international specialists and experts of consultants Golder and Biotope. As a result, for the preservation of biodiversity it was decided to leave untouched a significant proportion of the mining reserves initially identified (more than 15%).

(1) IUCN: International Union for Conservation of Nature.

1.6

Methodological note

1.6.1 Framework of indicators

The purpose of this document is to inform stakeholders about actions undertaken by Eramet in relation to Sustainable Development and CSR. The indicator framework used for this purpose has been designed to provide the most accurate picture of the significant issues facing the Group given its activities. It firstly includes the list of information required by Article R. 225-101-1 of the French Commercial Code. In addition, and in order to report on monitoring of implementation of the Group's policies and its performance, other indicators were chosen based on those proposed by the Global Reporting Initiative's framework and its variant specific to the Mines and Metallurgy sector.

1.6.2 Scope of reporting

The non-financial reporting scope has changed little compared to 2017. The changes mainly relate to mergers, restructuring or site closures:

- Germany: Aubert & Duval Special Steels GmbH and AD Deutschland merged into Erasteel GmbH, which became Eramet Alloys GmbH;
- China: removal/closure of Eramet China Guilin Comilog Ferro Alloys Ltd;
- China: Erasteel Trading merged into EIML;
- USA: removal/closure of Aubert & Duval USA;
- France: removal/closure of:
 - Comilog International,
 - Aubert & Duval Gennevilliers,
 - Valdi;
- Gabon: removal/closure of Maboumine;
- Italy: ADES and Eramet Italia merged into a new company: Eramet Alloys Italia;
- UK: removal/closure of TiZir Ltd.

The SQUAD (India) and EIML (China) sites were added to the reporting scope in 2018.

The Eramet Group's non-financial reporting covers:

- for the Social and Societal part (information provided in Section 1.4): all companies consolidated from an accounting point of view (full consolidation), and also those accounted for by the equity method, as well as the following additional companies: Sodepal, Eramet Alloys UK, Eramet Alloys GmbH and Erasteel India. The corporate scope does not include the commercial or administrative offices or distribution sites in Bolingbrook (USA) or Erasteel India;

- for the Safety part: all companies consolidated for accounting purposes (full consolidation) and also those accounted for by the equity method, as well as EcoTitanium and Sodepal, and finally the Eramet International sales offices, which have been added to the reporting this year. Recent Group entities (acquisitions, new projects) may be excluded from the scope of consolidation if their reporting is not reliable or if the project does not yet represent a significant Group activity;

- for the Environment and Energy part: all of the Group's sites as long as these sites meet the following criteria:
 - Eramet holds a controlling interest in the financial sense of at least 50%;
 - the sites are subject to environmental regulations (permit, code, national regulations).

Within this scope, it does not apply to sites:

- whose activity is solely administrative (e.g. sales offices),
- in the project or closure phase, as long as no commercial production is carried out (with the exception of Eramet Research, to which this reporting does apply),
- since 2016, to sites whose activity is limited to distribution, it being understood that their cumulative impact is less than 0.1% of the Group total in relation to the main indicators concerned (six sites whose characteristic of non-significant impact is monitored).

The Aubert & Duval Irun (Spain) and EIML (China) sites, which were already reporting their social, societal and safety data, are included in this year's environmental reporting.

The following table summarises the entities covered by the various reporting scopes.

COUNTRY	LEGAL ENTITY	SITE	SOCIAL DATA SCOPE	SAFETY SCOPE	ENVIRONMENT AND ENERGY SCOPE	SOCIETAL
Germany	Eramet Alloys GmbH	Mönchengladbach	x	x		x
	Eramet International	Frankfurt	x	x		
Argentina	ERAMINE Sudamerica	Salta	x	x		x
Brazil	Eramet Latin America	Sao Paulo	x	x		
China	Aubert & Duval Moulds & Die Technology (ADMEDT)	Wuxi	x	x		x
	Erasteel Innovative Materials Ltd (EIML)	Tianjin	x	x	x	x
	Comilog Far East Development (CFED)	Hong Kong	x			
	Eramet Comilog Shanghai Trading (ECST)	Shanghai	x			
Korea	Eramet International	Seoul	x	x		
Spain	Aubert & Duval	Irun	x	x	x	x
United States	Erasteel Inc.	Boonton	x	x	x	x
		Bolingbrook	x	x		
	Eramet North America	Pittsburgh	x	x		
	Eramet Marietta	Marietta	x	x	x	x
France	EcoTitanium		x	x	x	x
	Aubert & Duval	Les Ancizes	x	x	x	x
		Clermont-Ferrand La Pardieu	x	x		x
		Issoire	x	x	x	x
		Heyrieux	x	x		x
		Imphy	x	x	x	x
		Pamiers	x	x	x	x
		Firminy	x	x	x	x
	Aubert & Duval TAF	Gennevilliers	x	x	x	x
	Brown Europe	Laval-de-Cère	x	x	x	x
	Construction de Moules Métalliques (CMM)	Landévant	x	x		
	Aubert & Duval TMM	Paris	x	x		
	Erasteel	Commentry	x	x	x	x
		Champagnole	x	x	x	x
		Paris and Chalon	x	x		
	Forges de Monplaisir	Saint-Priest	x	x	x	x
	Interforge	Issoire	x	x	x	x
	UKAD	Les Ancizes	x	x	x	x
	Eramet Holding	Paris and Trappes	x	x		
	Eramet Engineering	Trappes	x	x		
	Eramet Research	Trappes	x	x	x	x
	Comilog Dunkerque	Dunkirk	x	x	x	x
	Eramet Comilog Manganese	Paris and Trappes	x	x		
	Eramet Sandouville	Sandouville	x	x	x	x
	Eramet Nickel	Paris and Trappes	x	x		
	Eramet Services	Clermont-Ferrand	x			

COUNTRY	LEGAL ENTITY	SITE	SOCIAL DATA SCOPE	SAFETY SCOPE	ENVIRONMENT AND ENERGY SCOPE	SOCIETAL
Gabon	Comilog SA	Moanda Complexe C2M	x	x	x	x
		Moanda Complexe CIM	x	x	x	x
		Owendo Mineral Port	x	x	x	x
		Moanda Mine	x	x	x	x
	Setrag	Owendo	x	x	x	x
	Sodepal	Bakoumba	x	x		x
India	Eramet India Private Limited	Mumbai	x	x		
	Erasteel India	Mumbai	x			
	SQUAD	Belgaum	x	x	x	
	ADEI	India	x	x		
Indonesia	Pt Weda Bay Nickel	Jakarta, Halmahera	x	x		x
Italy	Eramet Alloys Italia	Ferrara	x	x		x
	Eramet International	Trezzano	x	x		
Japan	Eramet International	Tokyo	x	x		
Norway	Eramet Norway	Kvinesdal	x	x	x	x
		Sauda	x	x	x	x
		Porsgrunn	x	x	x	x
		Tyssedal	x	x	x	x
		Eralloys Holding	x			
New Caledonia	SLN	Nouméa (Doniambo)	x	x	x	x
		Kouaoua	x	x	x	x
		Népoui	x	x	x	x
		Poum	x	x	x	x
		Tiébaghi	x	x	x	x
		Thio	x	x	x	x
United Kingdom	Eramet Alloys UK	Sheffield	x			
	Erasteel Stubs	Warrington	x	x	x	x
Senegal	Grande Côte Opérations – TiZir	Diogo	x	x	x	x
Sweden	Erasteel Kloster	Söderfors	x	x	x	x
		Långshyttan	x	x	x	x
		Vikmanshyttan	x	x	x	x
Taiwan	Eramet International	Taipei	x	x		

1.6.3 Collection, consolidation and control of data

Social reporting (including safety reporting) is based on the dedicated Era-Link acquisition and consolidation tool and on a qualitative questionnaire, sent in parallel, to the entities concerned (which also enables feedback on the societal commitment of the sites). Comparing the figures from these two tools for some common indicators allows for data verification.

The procedure “Safety and Information Reporting in case of personal accident” is the reference in terms of safety reporting. The applicable version was revised in 2018.

Data relating to occupational accidents are cross-checked with the monthly declarations made by the sites to the Safety and Prevention Department via the Group’s HSSE SharePoint.

The process of environmental and energy reporting is subject to a procedure that was updated in 2016, which clearly defines the responsibilities and operating procedures.

Environmental and energy reporting is based on a dedicated information system, called EraGreen, deployed at all relevant sites since 2011. All the quantitative information provided in this report (environmental indicators) is extracted from EraGreen and comes exclusively from the data entered by each of the Group’s sites and validated by each site manager.

EraGreen contains systems for checking data automatically through comparison with previous years. In addition, the annual reports of EraGreen sites are systematically checked for consistency by experts from Division or Group departments.

1.6.4 Specific points and methodological limitations

- From 2015 onwards, the frequency rates⁽¹⁾ and severity rates⁽²⁾ of occupational accidents are calculated by including temporary workers in the workforce.
- Due to planning constraints, some monthly environmental data may not be available for the last month of the year. In this case, the missing data is estimated as accurately as possible, based on the historical site data and correlated, where appropriate, to production, in accordance with the Group’s standards.

- When an environmental measurement is deemed to be faulty or is unavailable, an estimate based on historical ratios is used, adjusted according to the level of production of the site. This situation may arise in particular for nitrogen oxides (NOx) and channelled dust parameters, for which the quantities reported are based on a limited number of measurements during the year.

- Waste: waste is reported in the environmental reporting by the sites in accordance with the national regulations applicable to them. The reported quantities correspond to the quantities of waste discharged into the treatment systems during the year. The criteria that lead to the identification of hazardous or non-hazardous waste are variable according to the regulations of the different countries, so the reporting cannot be completely homogeneous in this respect.

The measurement of non-hazardous waste does not include tonnages of deliberately rich slag that is generated as part of the ferromanganese pyrometallurgical process to feed the silico-manganese production furnaces as a secondary raw material, thus contributing to the concept of circular economy.

- Water consumption: the quantities of seawater used for the cooling of the thermal power plant and for the granulation of SLN slag (New Caledonia), and water used for the cooling of the facilities at the Marietta site (USA) are not accounted for as the water is directly returned to the natural environment without undergoing transformation.

- Greenhouse gas emissions: reporting is done in accordance with the rules of the GHG Protocol (WRI). The emission factors used are those most recently published by ADEME (in its Carbon Database), and by the International Energy Agency for electricity.

- Biodiversity: from 2018 onwards, the figures given for the cleared and revegetated area indicators have been made more comprehensive in scope by including contracted sites. The values for 2017 and 2016 are given with this same definition. This explains the discrepancy with the data published in previous Registration Documents.

- Enrolled workforce: employees with a contract of employment with the Company (fixed-term contract “CDD”, permanent contract “CDI”) and entered in the personnel records on the last day of the period concerned. This information corresponds to the number of people regardless of their working time (full or part time). Each employee is counted as one.

(1) The **frequency rate** of workplace accidents is the number of accidents that take place at work, occurring in a given period, in relation to one million hours worked. $FR = (number\ of\ occupational\ accidents \times 1,000,000) / number\ of\ hours\ worked$.

(2) The **severity rate** of workplace accidents is the number of calendar days not worked after an occupational accident, occurring during a given period, based on one thousand hours worked. $SR = (number\ of\ days\ not\ worked\ due\ to\ occupational\ accident \times 1,000) / number\ of\ hours\ worked$.

1.7 Report by one of the Statutory Auditors, appointed as an independent third party, on the consolidated non-financial performance statement in the Management Report

This is a translation into English and it is provided solely for the convenience of English speaking users.

For the year ended 31 December 2018

To the shareholders,

In our capacity as Statutory Auditors of your Company (hereinafter the "entity") appointed as the independent third party, certified by the French Accreditation Committee (*Comité français d'accréditation* or COFRAC) under number 3-1049,⁽¹⁾ we hereby report to you on the consolidated non-financial performance statement for the year ended 31 December 2018 (hereinafter the "Statement"), included in the Group Management Report, in accordance with the legal and regulatory provisions of Articles L. 225-102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (*Code de commerce*).

Responsibility of the entity

It is the Board of Directors' responsibility to prepare a Statement in accordance with legal and regulatory provisions, including a presentation of the business model, a description of the main non-financial risks, a presentation of policies applied to mitigate these risks and the outcomes of those policies, including key performance indicators.

The Statement has been prepared applying the procedures of the entity (hereinafter the "Guidelines"), the most significant aspects of which are presented in the Statement and available upon request at the entity's headquarters.

Independence and quality control

Our independence is defined by the provisions of Article L. 822-11-3 of the French Commercial Code and the French Code of Ethics for Statutory Auditors (*Code de déontologie*). Moreover, we have implemented a quality control system that includes documented policies and procedures to ensure compliance with applicable ethical rules, professional standards, laws and regulations.

Responsibility of the Statutory Auditor appointed as independent third party

On the basis of our work, it is our responsibility to express a limited assurance opinion about whether:

- the Statement complies with the provisions of Article R. 225-105 of the French Commercial Code;
- the information provided (hereinafter the "Information") is fairly presented in accordance with Article R.225-105-I-(3) and II of the French Commercial Code concerning policy outcomes, including key performance indicators and actions relating to the main risks.

However, it is not our responsibility to express an opinion on:

- the entity's compliance with other applicable legal and regulatory provisions, particularly relating to Duty of Care and the fight against corruption and tax evasion;
- the compliance of products and services with applicable regulatory provisions.

(1) Accreditation scope available at www.cofrac.fr.

Nature and scope of our work

We performed our work described below in compliance with Article A. 225-1 *et seq.* of the French Commercial Code (*Code de commerce*), defining the conditions under which the independent third party performs its engagement, and with the professional guidance issued by the French Institute of Statutory Auditors (*Compagnie nationale des commissaires aux comptes* or CNCC) relating to this engagement and with ISAE 3000 (International standard on assurance engagements other than audits or reviews of historical financial information).

We conducted work to form an opinion on the Statement's compliance with legal and regulatory provisions and the fair presentation of the Information therein:

- we gained an understanding of the activity of all companies in the consolidation scope, of the entity's exposure to the main social and environmental risks relating to the business activity and, if applicable, of its effects on respect for human rights and the fight against corruption and tax evasion, including any related policies and their outcomes;
- we assessed the appropriateness of the Guidelines in terms of their relevance, completeness, reliability, neutrality and clarity, by taking into consideration, where relevant, the sector's best practices;
- we verified that the Statement covers every category of information required under Article L. 225-102-1, paragraph III concerning social and environmental matters as well as respect for human rights and the fight against corruption and tax evasion;
- we verified that the Statement includes a clear, substantiated explanation in the event that the information required by sub-paragraph two of Article L. 225-102-1, paragraph III of the French Commercial Code is missing;
- we verified that the Statement presents the business model and the main risks relating to the activity of all companies in the consolidation scope, including – if relevant and proportionate – risks due to its business relationships, products or services, as well as policies, actions and outcomes, including key performance indicators;
- we verified that the Statement presents the disclosures required under Article R. 225-105, paragraph II, of the French Commercial Code if they are relevant given the main risks or policies presented;
- we obtained an understanding of the process for selecting and validating the main risks;
- we enquired about the existence of internal control and risk management procedures implemented by the entity;
- we assessed the consistency of the outcomes and key performance indicators with the main risks and policies presented;
- we verified that the Statement covers all companies in the consolidation scope in accordance with Article L. 233-16 within the limits specified in the Statement;
- we assessed the data collection process implemented by the entity to ensure the completeness and fair presentation of the Information;
- for key performance indicators and the other quantitative outcomes⁽²⁾ that we considered the most important, we set up:
 - analytical procedures to verify that collected data is correctly consolidated and that any changes to the data are consistent,
 - tests of details based on sampling to verify that definitions and procedures are correctly applied and to reconcile data with supporting documents. The work was carried out with a selection of entities contributing⁽³⁾ to the reported data and represents between 20% and 66% of consolidated data of key performance indicators and outcomes selected for these tests;
- we referred to documentary sources and conducted interviews to corroborate the qualitative disclosures (actions and outcomes) that we deemed the most important⁽⁴⁾;
- we assessed the overall consistency of the Statement based on our understanding of all companies within the consolidation scope.

(2) *Quantitative social information*: Workforce on 31 December 2018; Workforce by type of employment contract; Workforce by socio professional category; New recruits; Departures; Number of resignations; Number of dismissals; Percentage of women in managerial positions; Number of training hours held during the exercise; Lost time injury frequency rate (TF2); Accident severity rate.

Quantitative environmental information: Energy consumption; CO₂ emission related to energy; Total canalised dust; Chemical oxygen demand (COD); Quantity of hazardous waste; Total water consumption.

(3) Complexe Métallurgique de Moanda (C2M) de la Comilog (Gabon); Complexe Industriel de Moanda (CIM) de la Comilog (Gabon); Société d'Exploitation du Transgabonais – Setrag (Gabon); Eramet Norway Sauda (Norway); Eramet Norway Kvinesdal (Norway); Aubert & Duval – Les Ancizes (France).

(4) The policies implemented on safety matters, the measures taken on social cohesion, the projects on reorganization, the policies and actions for the evaluation, the certification and the investment in terms of environment, the reduction of canalized dust emissions, the monitoring of chemical discharges in water and soil which affect the environment, the adaptation to the consequences of climate change, the reduction of CO₂ emissions, the action plan for circular economy, the management of the risk of corruption and influence peddling, the audits in terms of human rights, the implementation of the commitments on Human Rights, the relations with local communities, the partnerships and sponsorships, the processes for CSR and ethical evaluation of suppliers.

We believe that the work carried out, based on our professional judgment, is sufficient to provide a basis for our limited assurance opinion. A higher level of assurance would have required us to carry out more extensive procedures.

Means and resources

Our work drew on the skills of five individuals and was conducted between October 2018 and February 2019 for a total working time of approximately five weeks.

To assist us in conducting our work, we called on our firm’s sustainable development and corporate social responsibility (CSR) specialists. We conducted a dozen interviews with the individuals responsible for preparing the Statement.

Opinion

Based on our work, we have no material misstatements to report that would call into question the compliance of the non-financial performance statement with the applicable regulatory provisions, or the fair presentation of the Information, taken as a whole, in accordance with the Guidelines.

Paris-La Défense, on 29 March 2019

KPMG S.A.

Anne Garans

Partner Sustainability Services

Denis Marangé

Partner

II. VIGILANCE PLAN

2.1 Scope and objectives

The aim of this vigilance plan is to meet the requirements of Law No. 2017-399 of 27 March 2017 on the duty of care of parent companies and contracting companies.

The scope of this plan primarily covers all Group entities: the parent company, Eramet SA, and the companies it directly or indirectly controls. This scope is also described in the chapter on Corporate Social Responsibility (CSR) in the Group's Registration Document. The measures concerning the in-scope entities are set out in Sections 2, 3, 4 and 6 of this plan.

The scope of the plan also covers suppliers and sub-contractors of Group entities (parent company or controlled subsidiaries). Risks related to entities are discussed in Section 5 of this plan, as the assessment and management of risks in the supply chain is subject to specific measures.

The Eramet Group

(See also www.eramet.com.)

Eramet is one of the world's leading producers of:

- manganese and nickel, used to improve the properties of steels, mineral sands (titanium dioxide and zircon);
- parts and semi-finished products in alloys and high-performance special steels used by industries such as aerospace, power generation, and tooling.

Eramet is also developing activities with strong growth potential, such as lithium mining and recycling, which will play a key role in the energy transition and mobility of the future.

The Group employs around 12,700 people in 20 countries.

A more detailed description of the Eramet Group is provided in Chapters 1 and 2 of the management report in which this vigilance plan is published.

2.2 Risk mapping and assessment of subsidiaries

As part of its risk identification and control process, the Group compiles every three years and annually updates its major risk map, the implementation of which is managed by the Risk Management Department. The risk map is presented to the Executive Committee and to the Audit, Risks and Ethics Committee of the Group's Board of Directors. The map identifies major strategic, operational, financial and compliance risks. It is complemented by more detailed risk mappings focusing on specific cross-functional themes, such as human rights, the environment and health and safety of people.

2.2.1 Risk mapping

a. Risks of violations of human rights and fundamental freedoms

In 2017, the Group formalised its mapping of the risks of violations of human rights and fundamental freedoms, with the support of external expertise.

A risk universe was established by matching the impacts of the Group's activities with the list of rights contained in the UN Universal Declaration of Human Rights of 1948, the two UN International Covenants of 1966 (International Covenant on Civil and Political Rights; International Covenant on Economic, Social and Cultural Rights), as well as the European Convention on Human Rights of 1950. Sector benchmarks on the identification and management of risks of human rights abuses were also taken into account. The criteria for assessing these risks, in terms of severity of harm and probability of occurrence, were also defined. They involve an assessment of the severity of the impact, not directly for the Group, but for the potentially affected third party(ies) (employees, local residents or other people).

The assessment of the level of severity and probability of occurrence of these risks was carried out by a representative panel of the different corporate functions and Group entities across all geographical areas.

The risk universe of human rights violations defined during this exercise for the Eramet Group can be broken down into the following three broad categories, and the main risks were assessed for each of them:

- risks for Group employees, mainly those related to health and safety at work, and to a lesser extent those related to discrimination and harassment. The risks to the health and safety of employees are described in more detail in the following section (II.1.b);
- risks to communities bordering the Group's sites, whether related to potential environmental impacts, or resulting from other activities (acquisition of land or, to a lesser extent, safety measures implemented for the protection of certain installations);
- the risks generated by contributors to the Group's supply chain, such as, for example, non-compliance with the fundamental conventions of the International Labour Organisation. These risks are addressed in the section of the Vigilance Plan that focuses on the supply chain (Section V).

The risk mapping will be updated regularly, based in particular on continuous assessments of the situation of the Group's sites and entities with regard to these risks.

b. Risks of harm to the health and safety of people

This section focuses on the risks of harm to the health and safety of employees. Risks to the health and safety of other people, such as residents close to the sites, are discussed in the sections on human rights and environmental risks and the associated control measures.

Risks of undermining the safety of employees

The prevention of risks of work-related accidents is based primarily on the analysis of risks in the workplace, conducted within the plants. This highly operational analysis makes it possible to secure a specific operation by identifying all the risks to which the operators are exposed and the means of control implemented to manage them. These local analyses are compiled in the risk register of each site (known as the "single risk assessment document" for French sites). These risks are assessed according to a scale based on the frequency x gravity pair, taking into account the protection measures in place. This methodology makes it possible to identify the most critical risks and thus feed into the site's Safety Improvement Plan. Risk registers make it possible to group the risks by standard activities specific to each site. For example, they include mechanical handling, machine driving, walking, etc.

At Group level, the risk analysis is based on this segmentation by type of activity. Risk assessment is based on actual accident statistics taken from the reporting of accidents over a period of several years, according to the frequencies actually observed and the average potential severity estimated on a case by case basis.

The Group's risk analysis of workplace accidents allowed the risks identified to be grouped into three distinct categories:

- **technological risks** associated with processes and installations present the most serious potential hazards. An explosion, a toxic gas leak, or equipment failure can impact several people in a single incident. The frequency of occurrence of these events is the lowest in our history;
- **critical activities** are dangerous tasks that are carried out on a daily basis as part of the operation of our facilities. They include machine work, work at height, vehicle traffic, working in confined spaces and working with liquid metal. Failure to control these risks can lead to serious accidents. In 60% of cases, the consequence of lack of control of these critical activities is work stoppage and, in a little over 10% of cases, serious injury;
- finally, the Group's operations involve many routine activities, such as walking, lifting and moving objects and using hand tools. About two-thirds of the Group's accidents involve these activities, but the severity of the accidents associated with them is statistically less serious than for critical activities. For these routine activities, the accident rate that triggers a work stoppage is only 40%, while the rate of serious accidents is less than 1%. Eramet Groups these activities which are difficult to categorise under the heading "**non-standardised activities**".

Risks of undermining the health of employees

Based on the analysis of risks in the workplace recorded in the risk registers of each site, occupational health professionals identify the risks that may have a lasting or deferred impact on the health of employees. These risks may relate to physical health (noise, vibrations, awkward postures, repetitive movements, night or alternating work, electromagnetic fields, extreme temperatures, exposure to dangerous chemical agents, including asbestos) or psychological health (workload, organisation of work, autonomy).

Deferred risks are risks of occupational diseases, which are reported separately based on reports sent to the employer or which result in investigations by internal or regulatory prevention services. In France, a Table of Occupational Diseases is regularly updated and specific regulations are implemented in the other countries where the Group operates.

These risk maps and analyses of the risks to the health and safety of employees are regularly updated.

c. Risks of damage to the environment

As part of its environmental protection commitments and objectives, the Group maps the environmental damage risks for each of its sites. Environmental impact and risk assessment studies are carried out as part of the sites' exploration licences, ISO 14001 management systems and the Group's HSE audits. They are supplemented by industrial risk assessments carried out with insurers.

In 2017, the assessments resulting from these various activities were aggregated and harmonised in order to formalise a Group-wide risk map of damage to the environment. This mapping of environmental risks will be updated on a regular basis.

The main risks and challenges for the Group's sites are related to the following potential impacts:

- water consumption/pressure on water resources (for industrial and mining sites);
- emissions into water (for industrial sites);
- atmospheric emissions (for industrial sites);
- energy consumption and greenhouse gas emissions (for industrial sites);
- production of hazardous waste (for industrial sites);
- risks of historical soil pollution (for industrial sites);
- impact on biodiversity (for mining sites);
- erosion (for mining sites);
- production of waste rock and tailings (for mining sites).

The details of the nature of the risks associated with these impacts are described along with the corresponding control measures in Section III.2 of this plan.

Furthermore, industrial risks (the occurrence of an industrial accident) can also lead to environmental damage. The main industrial risks to which the Group's sites may be exposed are fire, explosion (including, for certain sites, related to the risk of contact between water and molten metal), machine breakdown on critical equipment, and natural events (floods, storms/cyclones, etc.).

2.2.2 Procedures for the regular risk assessment of subsidiaries

In terms of environmental and health/safety risks, the risk situation of the subsidiaries is regularly assessed through two main mechanisms: internal environmental and safety information systems, and the HSE (Health, Safety and Environment) audit system.

A dedicated environmental information system (Era-Green) has been fully deployed in all industrial and mining sites, allowing for the collection and consolidation of environmental performance indicators. These indicators are mostly derived from the sampling and analysis plans developed by the sites as part of their operating permits. Information and reporting systems dedicated to the management of human resources and Health/Safety, including the reporting of accidents resulting in work stoppage, are also deployed at all sites.

The Group also relies on a demanding internal audit system for the performance of its entities in the areas of Environment, Health, Safety and Energy. The common audit guidelines are structured as three pillars: human involvement, operational control and prevention. They fully take into account the requirements of ISO 14001, OHSAS 18001 and ISO 50001. Mixed teams of the Group's internal auditors (corporate departments, Division coordination, and site representatives) trained according to an internal guidelines system, conduct these audits which last several days and make it possible to situate in detail the performance of the sites. This involvement strengthens the cross-functional level of expertise of HSE managers and promotes experience sharing between operational teams.

Corrective action plans are defined at the end of each audit, and for all risks considered significant, a quarterly report on the implementation of corrective actions is consolidated at Group level.

In particular, with regard to the risk assessment of subsidiaries in terms of industrial risk, the control system is based primarily on the programme of biennial insurance engineering visits (insurance prevention audits) to its industrial sites in close collaboration with insurers, brokers and the Group Insurance Department. Any significant risk detected during these audits results in a corrective action plan by the site concerned.

In terms of risks of human rights violations, the risk situation of sites will be assessed each year in light of the risks identified by the risk mapping exercise performed in 2017. This assessment must be based on data from the annual site CSR reports, covering specific Human Resources management indicators, and indicators related to the management of potential impacts on communities bordering our sites. This assessment will also take into account data from the monitoring of the social and environmental management of Group projects, carried out as part of the provision of project support.

2.3 Risk management

2.3.1 Risk management policies and organisation

a. Policies and commitments

The management of risks related to human rights, health, safety and the environment is first and foremost the focus of a clear commitment by the Group in all of these areas. Eramet has adopted an Ethics Charter and a Sustainable Development Policy, both of which set the standard for its social responsibility. These two fundamental documents have been translated into the languages of the countries where the Group operates and are implemented across all Divisions and sites.

- **The Group's Ethics Charter** sets out the Group's commitments and the rules and principles of action and behaviour of employees in many areas, including respect for human rights (with reference to the UN Universal Declaration of Human Rights and all the fundamental conventions of the International Labour Organisation), the protection of the health and safety of persons, and the respect for and protection of the environment.
- **The Eramet Group's Sustainable Development Policy** sets out a number of these commitments. It is structured around four priorities:
 - *the protection and development of the Group's employees*, with commitments relating in particular to employee health and safety and social dialogue;
 - *the management of risks and impacts on health and the environment*, with commitments relating to the control of the impacts of industrial processes at the Group's sites, the reduction of energy consumption, the fight against climate change, better use of natural resources, and the development of recycling;
 - *the use of sustainable development opportunities for the benefit of customers*, with commitments related to the integration of sustainable development in the Company's business innovation and diversification policy, product responsibility (development of their environmental benefits and risk reduction) and a responsible purchasing approach;
 - *and finally, maintaining a relationship of trust with stakeholders*, by meeting their expectations through dialogue and cooperation actions, by contributing to the development of the areas where we operate, and by sharing the Group's non-financial performance in a transparent manner.

These thematic commitments are set out in more specific policies, such as the **Safety Charter**, the **Health Policy**, the **Environment Charter**, the **Biodiversity Policy**, the **Energy Policy** and the **Climate Change Policy**. The complete texts of these charters and policies are available on the Eramet Group's website.

b. Organisation

The Group's commitment translates into involvement at the highest level of the Company. The Communication and Sustainable Development Director and the Human Resources, Health, Safety and Security Director, both members of the Group's Executive Committee propose, support and monitor the multi-year objectives and associated action plans. They report to the Executive Committee.

The effective integration of CSR topics into the Group's activities is also closely monitored by Eramet's Board of Directors, in particular through two of its Committees, the Strategy and CSR Committee, and the Audit, Risks and Ethics Committee.

The Communication and Sustainable Development Department (DC2D) has an Environment, Industrial Risks and Product Department (DERIP) and a Public Affairs Department (DAP), while the Human Resources Department (DRH) includes a Social Relations Department, a Safety and Prevention Department, a Security Department and a Medical Advisor, responsible for promoting the Group's Health Policy. The Group Ethics Officer and the Divisions' Purchasing Departments complete this system.

These corporate functions are organised and structured around practices and processes aimed at continuously strengthening their commitment and efficiency, highlighting a strong culture of risk identification and control.

The objectives and action plans are available in all of the Divisions and operational entities of the Group. Their effective execution and the good coordination between the Corporate functions and the Divisions have been strengthened by the establishment of working groups and cross-functional committees focusing on various themes (biodiversity, mining environment, responsible purchasing).

Furthermore, the Group pays particular attention to the integration of social, environmental, health and safety, cultural and societal criteria at the earliest stages of their projects. Sustainable development experts and specialists are integrated into the industrial, technical, legal and financial teams, and participate in the various steering committees, from pre-project phases to feasibility studies and pre-construction. Likewise, they participate in acquisition audits in the case of merger or acquisition projects, as well as in due diligence related to the transfer of assets.

2.3.2 Risk management actions

a. Management of risks of human rights violations

Human rights in the workplace

Health and safety is an integral part of fundamental human rights, and as such has been integrated into the Group's risk mapping exercise on human rights violations. Due to the nature of their industrial and mining activities and their countries of operation, the Group's sites may incur risks related to the health and safety of employees, the management of which is one of the Group's priorities. These measures are described in Section III.2.b of this plan.

In order to strengthen the control of local workplace discrimination and harassment risks identified during the Group mapping exercise, an e-learning course is gradually being rolled out to all Group employees to raise awareness about the Ethics Charter, including a section dedicated to these issues. More generally, information is sent to all employees, through infographics displayed at all the Group's sites concerning the organisation of ethical compliance and in particular the existence of the professional whistleblowing system, presented in Section VI of this plan. In addition, as part of a trade union agreement related to the prevention of psychosocial risks, monitoring units have been set up at the various sites in mainland France to anticipate risk situations and give warning if an employee with psychological difficulty is identified. Training on the prevention of psychosocial risks has also been deployed for all Group managers. Actions to reinforce these mechanisms are planned, with the appointment of a Group Diversity Officer, whose role is to promote and coordinate all actions in favour of diversity and the fight against discrimination.

Measures to manage risks to the rights of workers in the supply chain, which were also identified during the mapping exercise, are presented in Section V of this plan.

Rights of communities bordering Group sites

Most of the Eramet Group's sites have a permanent presence in the areas in which they operate, which with they develop highly interdependent relationships. The local integration of sites, particularly with regard to neighbouring communities, is therefore a key element in the sustainability of the Group's activities. As a result, the Group has built long-term relationships of trust with neighbouring communities, and works to prevent any risk of violation of their fundamental rights.

The prevention of such risks is primarily achieved through the implementation of dialogue mechanisms with the relevant stakeholders or their representatives. Information and consultation activities with local

residents are set up according to the level of impact and risk of each site. The scope of these actions is most often adequately defined by national or local regulations. In France, for example, because of their Seveso "High Threshold" status or their ICPE (Installation Classified for the Protection of the Environment) status, several sites participate in "Site Monitoring Commissions", composed of representatives of the State, local authorities, local residents, farmers and employees. As part of authorisation processes and studies of societal and environmental impacts, the projects establish mechanisms for consulting with local residents and other stakeholders in order to take into account their expectations in controlling these impacts at all stages of the project. In consultation with the Communication and Sustainable Development Department, some sites may go beyond the regulatory requirements for dialogue with local residents. In particular, the sites exercise greater vigilance with regard to the indigenous or vulnerable populations that may reside in the surrounding area. In addition, and depending on their potential impacts, some sites also set up dedicated systems to receive and respond to concerns, questions or complaints from local populations, as presented in Section VI of this plan.

As part of a process of continuous improvement, actions to reinforce these dialogue mechanisms with the affected people are included in a multi-year action plan drawn up by the Group.

More targeted control measures are also put in place to manage specific risks related to the acquisition of land, environmental impacts and systems to ensure the safety of certain facilities.

The activities of certain Group sites require the acquisition of land from communities that reside or carry out economic activities (agricultural or commercial) in the area. These operations may present risks of human rights violations (property rights or the right to an adequate standard of living of these communities). In terms of preventing these violations, the Group refers to the principles set out in the Performance Standards of the International Finance Corporation (World Bank Group) relating to these relocation activities, with particular focus on the implementation of resettlement action plans.

Some sites also present environmental impact risks that may affect local residents. These may be pollution risks or risks of reducing communities' access to the natural resources they use. All of these risks are subject to the control measures set out in Section III. 2. c. of this plan, relating to the management of risks of damage to the environment. Depending on the nature of these impacts or risks, local residents may be involved in the definition or execution of these control measures. In particular, local communities are associated with baseline characterisation studies that include their knowledge of biodiversity, its uses and ecosystem services.

In addition, some of the countries or regions in which the Eramet Group operates may experience unstable political, security or climate situations (terrorism, information theft, crime, earthquakes, cyclones, etc.). In this context, the Group Security Department implements measures to ensure the protection of employees (whether travelling for business reasons, or foreign or local residents), intellectual property and Eramet facilities. Eramet is aware that these measures must be established in respect of the rights of communities bordering the Group sites, therefore it has established a Group Security Policy that respects international law, French law and the laws of the countries in which the Group operates. As part of this policy, in accordance with the principles of the Eramet Group Ethics Charter, the prevention of safety risks first requires dialogue and a relationship of mutual respect with local communities. Similarly, training and rules governing the use of force and the equipment of the security personnel are decided, designed and controlled by a Site Security Officer, who acts within the framework defined by the Group Security Director.

b. Management of risks of harm to the health and safety of people

Actions to prevent risks to the health and safety of employees are coordinated by the Safety and Prevention Director and the Group Medical Advisor, who report directly to the Director of Human Resources, Health, Safety and Security. Together, they establish and propose to the Executive Committee the Group's health and safety policies and guidelines. Once validated, these guidelines are defined in the Divisions by the Division Managers, assisted by Health and Safety coordinators, and then by the Site Managers, who are themselves assisted by a site Health and Safety coordinator.

Prevention of damage to health and accidents is at the heart of the system, and concerns Eramet employees and temporary workers and subcontractors who work on the sites. It is based on the analysis of risks in the workplace, which determines the actions and preventive measures to be implemented.

Management of risks related to employee safety

In relation to Safety, actions at Group level are coordinated within the framework of the "Group Safety Committee" which includes the Human Resources, Health, Safety and Security Director, the Division Directors, the Safety and Prevention Director, and the Health and Safety coordinators of the Divisions.

Prevention tools are adjusted to the three major risk groups identified:

- the prevention of technological risks is based on the implementation of barriers (technical, organisational and human) as a result of hazard studies. Prevention depends greatly on the technical expertise of the

teams that has been acquired over years of operations and their ability to identify and respond to weak signals;

- the risks associated with critical activities are too important to leave the choice of method of operation to the stakeholders; these activities are also strongly governed by rules. Eramet has compiled a set of minimum essential rules — "Essential Safety Requirements" — that are required by all sites, in compliance with local legal requirements. Limited in number, they are communicated as part of a Group communication campaign. They are auditable and audited as part of corporate audits;
- finally, non-standardised activities cannot reasonably be governed by simple rules. For the work situations concerned, Eramet develops the situational intelligence of its teams so that the stakeholders learn to make safety-related decisions. Team awareness, feedback, and especially interactions with the chain of command in the field are all systematically used to guide decisions towards safer behaviour.

Management of risks related to employee health

In terms of prevention of health risks, the Group's strategy is based on the Group's Health policy, which covers four main areas, broken down into specific priority actions. The strategic areas are:

- reducing and managing the effects and impacts of the Group's activities on the health of employees and local residents;
- continued employment for all employees during their professional career, including when affected by poor health;
- participation in general public health and chronic disease prevention campaigns;
- the prevention of risks to psychological health and the implementation of actions for the Quality of Working Life.

For the management of risks related to products, a centralised structure, the Group Products Committee defines the rules and standards for the management of chemical products and provides support and services to the Divisions and sites in order to help them comply with the many regulations. The action of this structure has three main objectives:

- improve the technical and scientific knowledge of Group products;
- provide support and information to internal and external clients;
- harmonise the chemical risk management methods on the sites.

Harmonising the chemical risk management on the sites is a major challenge. Eramet Group production sites are found on five continents, and they must, there-

fore, follow and respect various regulations concerning hygiene and controls of chemical exposures in the workplace. In this area of regulation, there may be significant differences from country to country for the same substance. Harmonisation and communication between sites on these subjects is therefore important for exchanging, explaining and implementing practices and references, ensuring a corresponding protection that is higher than the regulations in force in the relevant country. In concrete terms, a steering committee brings together the Group Prevention and Safety Department, the Group Medical Advisor, the Group Environment, Industrial Risks and Products Department and the Hygiene, Health and Safety Coordinators of the Divisions. It defines and monitors the priority actions for the year. One of these actions is the production and circulation of practical toxicological sheets that identify the references and good practices, accompanied by a methodological guide for the measurement of exposure. A consolidated chemical risk assessment method is also available and is being deployed across the sites.

In particular, the asbestos-related risk for the Group is divided into environmental asbestos at nickel mines and also the management of asbestos products at industrial sites.

In New Caledonia, specific operating procedures exist to control veins of asbestos-containing ores in the event that the mining activity uncovers them. The operators are trained in the precautions to be taken, and special medical monitoring has been set up, in consultation with the authorities, social partners, and other mining operators.

No industrial site of the Group has ever produced or processed asbestos, nor marketed composite materials made up entirely or partially of asbestos. This material has never been used as a raw material by Eramet but rather only as a component of certain materials of thermal protection equipment. In accordance with applicable regulations, particularly in France, the Group has carried out asbestos technical diagnostics (DTA) on its industrial sites, by authorized firms, the conclusions and recommendations of which are then translated into detailed action plans.

c. Management of risks of damage to the environment

To manage its environmental risks, the Group relies on a network of internal experts and on a structured organisation: The Environment, Industrial Risks and Products Department defines the Group's benchmarks, coordinates the general dynamics of continuous improvement, implements the control mechanisms of the internal standards and provides expert technical support to the sites and projects. The monitoring and anticipation of regulatory changes are performed jointly with the Public Affairs Department. In addition, more than 80 people make up the network of HSE functions

at the sites with a reporting line to their senior management for the vast majority of them. Training and awareness activities on the essentials of environmental responsibility management are also developed at the sites, within the Divisions and at Corporate level.

The management of environmental risks begins with the implementation of environmental management systems. This is why the Group pursues the objective of ISO 14001 certification for all its sites, except those that have no significant impact on the environment. The latter category includes sites with purely administrative activities, such as offices, distribution centres or sites in project or closure phase.

In terms of controlling risks specific to mining sites, teams dedicated to taking into account environmental requirements in mining are present on the sites and in the subsidiaries concerned, and implement formalised tools for the environmental management of mines. All mining subsidiaries have formalised a Mining Environment plan of action and the progress of these action plans is reviewed regularly with the Group Environment, Industrial Risks and Products Department. In addition, a community of experts on the mining environment has been set up and meets regularly. Its role is to formalize good practices guidelines applicable throughout the Group and to encourage the exchange of expertise between sites. Finally, Environmental Management Systems compatible with the requirements of ISO 14001 have been deployed by the mining subsidiaries.

The more targeted measures and actions to control each of the environmental risks are described below.

Water consumption/pressure on water resources (industrial and mining sites)

Mining, metallurgy and hydrometallurgy activities consume water in several ways: for the cooling of furnaces and other metallurgical plants, for the washing of ores, raw materials and by-products, and finally for hydrometallurgical processes (solubilisation and reactive environments).

None of the Group's industrial sites is located in a country confronted with "water stress" according to the definition adopted by the UN, that is to say, whose water resource per inhabitant, for all uses combined, is generally less than 1,700 m³ per person per year. Although this water resource is often substantial or abundant on its sites, the Group attaches real importance to its preservation. Multiple actions are taken to use only the required amount.

Whenever technically possible, the sites encourage internal recycling of the water consumed. The cooling of furnaces and other metallurgical facilities, as well as other high-consumption uses, are mainly done in a closed circuit. The water consumption is then essentially supplemented in order to compensate for evaporation or losses in the system. Where possible, the sites also source water from a nearby industrial site.

With regard to mining sites, the issue of water consumption mainly concerns the Grande Côte Opérations (GCO) site in Senegal. The subject of water management is sensitive there, as the operation of the mine uses two aquifers, one of which is very important for the people and the country in general. Given this situation, every precaution is taken to ensure that the impact of the mine is as low as possible. GCO has an expert team in hydrogeology, and the water management system was designed and authorised by the competent department of the Senegalese government to avoid additional pressure on the surface water table used to supply agricultural crops for local residents. All mining installations are controlled to ensure minimal variations in the level of this water table.

Emissions into water (industrial sites)

Hydrometallurgical sites are the sites that present relatively the most significant risks of water pollution, due to the use of chemicals and an aqueous process. Eramet is committed to reducing its aqueous emissions, and all industrial water is managed in accordance with applicable regulations.

In addition to preventive systems, such as basins and double-walled storage tanks, curative mechanisms, such as effluent treatment plants using physico-chemical processes or hydrocarbon separators (separation by decantation) are used to allow discharges that are in accordance with the statutory limit values.

The Group's sites also closely monitor the quality of groundwater and the impact of the activity on soils and subsoils. Several hundred piezometers are distributed throughout the Group's various sites, both within and outside of the Company, to support the initial phases of any new project (characterisation of the initial state) and also to monitor any impacts on ground and surface water.

Atmospheric emissions (industrial sites)

Pyrometallurgical activities with their fusion plants and heat treatment furnaces contribute the most to channelled air emissions, including power plants. The CO₂ emissions are discussed below.

Air emissions are a function of the nature of raw materials and ores used, the transfer and loading technologies in place, the installed capacity of the equipment and especially the level of activity of the sites.

In pyrometallurgy, channelled emissions are generated in the handling of materials, furnaces, grinding and milling operations, as well as operations involving molten liquid metal and slag. In hydrometallurgy, channelled dust emissions most often occur during the handling, grinding, drying or transfer of materials.

The effluent purification systems generally used in the Group's factories are electrostatic precipitators, baghouses and washing towers. Specific treatment systems for certain pollutants can also be used, such as activated carbon filters. The different items of equipment are installed according to the characteristics of the industrial processes, the targeted purification performances and regulatory constraints.

Energy consumption and greenhouse gas emissions (industrial sites)

Sites that have metallurgical furnaces and/or electricity generation facilities are the sites that represent the bulk of energy consumption and greenhouse gas emissions. Thus, around four-fifths of the energy requirements are consumed by 14 Group pyrometallurgical plants.

Through its Climate Change policy, the Group is committed to reducing its greenhouse gas emissions, in particular by reinforcing its approach to improving energy efficiency, by promoting and developing the recycling of raw materials in a circular economy approach, and prioritising low-carbon energy sources and processes under economically acceptable conditions.

The Group Energy Policy, which incorporates the principles of the ISO 50001 standard, is deployed by the Group Energy Centre across all sites, where ISO 50001 certification is being progressively extended. The Group Coordinator, an ISO 50001 auditor certified by AFNOR, leads the process, providing the sites with expertise in several business areas and ensuring regulatory and technological monitoring. The site energy contacts, representatives of site management in relation to the ISO 50001 standard, locally implement the continuous improvement process in relation to energy. Finally, the site management is committed to an energy management system based on the principles of the ISO 50001 standard and to allocating resources that are adapted to the challenges of each site. Division management is called upon to support site management.

As part of the energy efficiency initiative, energy performance indicators are set up at the sites and are integrated into the management of industrial performance. The values and developments of these indicators are analysed in relation to each local process. Because of the variety of jobs and processes, consolidation of these indicators at the Group level would have no purpose. Consequently, and for reasons of confidentiality and protection of our processes, the Group decided not to communicate more precisely on these indicators.

Production of hazardous waste (industrial sites)

The activities that generate hazardous waste are mainly derived from the pyrometallurgical processes of the Group's mining Divisions. The High Performance Alloys division sites that are significant in terms of their size also generate significant quantities of hazardous waste.

These activities produce dust recovered by filtration systems, sludge and sodium-calcium slag which, depending on their intrinsic properties and the location of the operation, can be considered hazardous waste. The hazardous waste is treated through specific, authorised channels. Controls are put in place to ensure the proper management of this waste throughout the process (transport of waste, delivery to approved centre and final treatment).

Impact on biodiversity (mining sites)

In terms of controlling biodiversity risks, Eramet has formalised its commitments through a dedicated policy, which is structured around three main areas:

- 1. better awareness and understanding of biodiversity and its features;
- 2. acting to preserve biodiversity;
- 3. raising awareness, exchanging and sharing.

These principles are to be adapted at sites in a manner proportionate to local issues.

In New Caledonia, Société Le Nickel (SLN) operates nickel deposits on various sites in the heart of a region renowned for its rich biodiversity and the high rate of endemism among its flora and fauna species. It has developed reliable and environmentally friendly rehabilitation methods including revegetation by hydraulic seeding and plantations. The naturally low fertility of the soils, rich in metals and poor in organic elements, as well as the extreme rainfall conditions, make it difficult to see the results of this work in the short term because of the very slow growth.

SLN has implemented a global biodiversity management plan derived from a Biodiversity Strategy that incorporates international preservation standards in this area. Through this strategy, SLN implements its global biodiversity management plan.

In this context, SLN is working on the reintroduction of rare and threatened plant species through inventories of mining centres, as well as phenological monitoring to better control the reproduction of these species. SLN also monitors the wildlife (reptiles, birds, bats), the marine environment and the water quality of its mining creeks on all of its active sites.

In Gabon, the mining procedure includes a remodelling step and the progressive upgrading of the topsoil. The gradual reshaping of historically disturbed surfaces has also been completed.

In Senegal, the exploitation of mineral sands involves the clearing of vegetation as a floating dredge moves along the deposit. Biodiversity is of medium sensitivity in the areas currently being exploited. The issues are mainly related to the rehabilitation and revegetation of large areas when the exploited sites are made available. Revegetation (sowing/planting of local species) occurs after the reshaping of slag heaps to maximally reflect the original landscape (dunes). An additional irrigation system is also in place to allow the continuity of revegetation operations during the nine months of the dry season.

Erosion and water runoff (mining sites)

At mining sites in New Caledonia, and to a lesser extent in Gabon, the major issue of water management is to prevent the entry of suspended solids (SS) into the receiving environment through run-off caused by erosion due to surface stripping.

To avoid this, the sites are equipped with sedimentation ponds that trap suspended matter to prevent their transport into the natural environment. Upstream from these works, many precautions are taken to minimise erosion: roofing of sites to prevent water entry, minimisation of open areas, conservation of natural embankments at the edges of stripping sites, organisation of run-offs to reduce speed, implementation of hydraulic locks, etc. These measures are documented in the Water Management Plan.

In Gabon, the subject of erosion is less significant given the topography of the plateau deposit and the draining characteristics of the upper geological layers of the plateau. This topic still attracts attention due to the ongoing extension of the deposit into the sloping part. A specific water management plan associated with the extension of the deposit has been developed. As part of this plan, a specific environmental monitoring system is in place, which confirms the effectiveness of the measures taken and makes it possible to verify that the very limited and localised phenomenon of acid mine drainage does not have a significant impact on the natural environment.

In Senegal, protecting the dunes reconstituted after dredging against wind and water erosion is an issue. This risk of erosion is controlled by means of regeneration of the reconstituted dunes, as the revegetation stabilises the sands.

Production of waste rock and tailings

Given the considerable volume of tailings being handled at SLN operations, the storage of tailings in appropriate structures and their revegetation is a vital environmental task in order to minimise erosion and the impacts on the ecosystem and landscape.

SLN has implemented effective techniques that have been validated by the authorities, one of which is to create tailings stockpiles. The stability of these structures is guaranteed in the long term, even during exceptionally heavy rains. These tailings stockpiles are subject to continuous monitoring and regular audits by an external third party. Moreover, in order to minimise land clearing and promote site rehabilitation, SLN privileges flat-top piles in old mining pits, when the environmental conditions are favourable.

In Gabon, the problem is less sensitive since, on the one hand, the volumes of tailings being handled are much less, and on the other hand because the technique of exploitation by the successive opening/closing of extraction compartments allows the majority of tailings to be placed directly into the compartments after extraction.

The Senegal mine is not at all affected by this problem, since the sand dune is reconstituted after passing the dredge and extracting the recoverable part.

Mine tailings, which are produced in ore concentration plants at the mines in Gabon and in New Caledonia, are chemically stable and therefore are not hazardous waste within the definition of the regulations. In New Caledonia, all processing residues from enrichment plants are also commercially exploited as by-products of the mine. In Gabon, mine tailings are stored in eight basins, consisting of closed dykes. The residues of the metallurgical enrichment plant are stored in a retaining dyke. These structures are continuously monitored for their stability.

The GCO plant in Senegal produces a very small amount of residues. The residual products have characteristics which allow their return to the natural environment when the dune is reconstituted.

Risks of historical soil pollution (industrial sites)

The Group exercises the utmost vigilance against potential impacts on soils and subsoils resulting from its past, current or future activities, both in the area of its industrial and mining activities.

Over several years, the Group has developed expertise to support the cessation of activity of certain industrial sites. This expertise concerns the investigation, identification, monitoring and management of potentially impacted sites through various projects, such as the rehabilitation of industrial sites and the end-of-life of landfills or old mines. This expertise is also consulted in the context of internal audits or in advance of acquisitions and disposals. It is important to mention the implementation of a policy of systematic characterisation of soil conditions before any new project, in accordance with the Group's Sustainable Development policy.

2.4 Systems to monitor the measures implemented and assess their effectiveness

Several of the Group's systems make it possible to monitor the implementation of the measures presented in this plan and to evaluate their effectiveness.

The Group's HSE and CSR reporting system, described in Section II.2 of this plan, measures the resources deployed and their results on each site. The data is collected and controlled by the Communication and Sustainable Development Department and the Human Resources Department. In the case of risk management related to the use of products across several Group departments, the Group Product Committee (described in Section III.2.b) is the body responsible for monitoring the implementation of actions.

The HSE audit system, also described in Section II.2 of this plan, is a monitoring tool for each of the Group's sites, resulting in the development of recommendations. The implementation of the recommendations resulting from audits and defined as high priority is monitored on a quarterly basis by the Environment, Risk and Products Department. To supplement this HSE audit system, the Group plans to integrate human rights-related elements and develop a multi-year programme of dedicated audits, prioritising the most sensitive sites identified as part of the human rights risk mapping exercise. For this type of risk, as well as for those related to suppliers and subcontractors, the multi-year programme also provides for the intervention and recommendations of the Group Risk Management Department and the Internal Audit Department.

In the specific case of Group projects, the implementation of environmental and societal impact management action plans is monitored on a continuous basis as part of project support provided by the Environment, Industrial Risks and Products Department.

Finally, all the reinforcement measures described in this Vigilance Plan are included in multi-year action plans validated by the Group's Executive Committee, and their implementation is subject to a mid-year review. The Group's Board of Directors, through the Strategy and CSR Committee and the Audit, Risk and Ethics Committee, also monitors the implementation of these measures on an annual basis.

In accordance with the requirements of French law, the report on the effective implementation of the Vigilance Plan will be published annually in the Group's Management Report.

2.5 Identification and management of risks related to suppliers and subcontractors

The Eramet Group's activities involve the significant use of external purchasing and, to a lesser extent, outsourcing. The entire Eramet Group spends about 60% of its turnover on the purchase of goods and services. As a result, the Group pays particular attention to CSR issues related to its upstream value chain.

2.5.1 Risk mapping and supplier and subcontractor assessment procedures

Risk mapping

As part of its responsible purchasing approach, in 2017, the Group conducted a risk mapping exercise to identify the risks generated by the activities of its suppliers and subcontractors in relation to human rights and fundamental freedoms, health and safety of people, and the environment ("CSR risks").

In order to develop this risk map, an approach based on the business categories of the various suppliers and subcontractors was chosen. The ISIC (International Standard Industrial Classification of All Economic Activities) nomenclature developed by the UN was used. This nomenclature contains several hundred categories. The Group's suppliers fall into 66 of them, each of which was assessed according to two criteria:

the CSR risk of the category and the importance of the category for the Eramet Group.

For the assessment of the CSR risk of the business categories, Eramet availed of the expertise of an external company, proposing a CSR risk rating for each business sector. This rating is the result of data analysis and sectoral studies on the impacts and practices specific to each business category. These risks are analysed in the four areas: working conditions and respect for human rights, the environment, ethics and fair practices, and issues related to the supply chain of the sector itself.

The assessment of the importance of the purchase categories for Eramet is based on several Group-specific criteria. These criteria include the purchase volume, the number of potential suppliers or subcontractors in the purchase category, or the impact of the purchased product on the quality of the products marketed by the Group.

The combination of these two assessments made it possible to position the 66 categories into four risk areas, and in particular to identify seven purchase categories that are both important for the Group and pose CSR risks:

- Manufacture of non-metallic mineral products;
- Manufacture of coke and refined petroleum products;
- Metallurgy and processing of basic precious and non-ferrous metals;
- Recovery of materials (waste treatment consisting of secondary raw materials, recovery by sorting material from non-toxic waste);
- Wholesale trade of solid, liquid and gaseous fuels and related products;
- Wholesale trade of metals and ores;
- Mining of coal and lignite.

This mapping exercise, whose methodology will evolve as part of a continuous improvement approach, will be renewed every year.

Procedure for assessing the situation of suppliers and subcontractors with regard to CSR risks

The Eramet Group also has a procedure defining the methods for assessing suppliers according to the risk level of the business category to which they belong.

Eramet has chosen to focus its assessment efforts on the Group's 180 or so suppliers in the seven highest-risk business categories. These assessments will be gradually extended to suppliers belonging to lower-risk but potentially sensitive categories as part of a multi-year action plan. In the event that a new supplier or subcontractor belonging to one of these categories applies to be listed with Eramet, the same rules apply.

For all suppliers in these seven categories and for which purchases exceed a certain amount, the assessment is in the form of a questionnaire whose answers are analysed by an external third party. This questionnaire, adapted according to the sector of activity and the size of the Company, covers the four areas: working conditions and respect for human rights, the environment, ethics and fair practices, and the supply chain of the sector. The companies questioned are required to provide documents to support their declarations (certifications for example). For the other suppliers in these seven high-risk categories, the CSR assessment is being progressively incorporated into the global supplier assessment standards (quality, financial rating, HSE management, etc.) already used by the Group's entities.

In parallel with this process involving all Group purchases, specific assessments are made for tungsten purchases. Some of the Group's activities require the use of tungsten in metallic form, in limited quantities, in their manufacturing processes. This metal comes from ores that can be called "conflict" ores if their exploitation is used to finance armed groups and fuel civil wars in some parts of the world. Eramet is therefore very attentive to the conditions of supply of these materials and in particular to compliance with the specific provisions of the "US Dodd Frank Act", as well as the guidelines set by the OECD for multinational companies.

The Eramet buyers in charge of these supplies thus systematically require their suppliers to provide information concerning the origin of the ores used for the manufacture of tungsten metal sold to Eramet. They are also asked what due diligence measures they have put in place to verify this origin. To this end, the Group's buyers use the "Conflict Minerals Reporting Template" (CMRT), supplied and updated regularly by the Responsible Minerals Initiative (RMI), previously known as the Conflict Free Smelter Initiative.

2.5.2 Risk management

Risk management policy and organisation

Eramet has adopted a Responsible Purchasing Charter, which formalises the Group's desire to strengthen the integration of sustainable development issues related to procurement, and promotes a dynamic of continuous improvement. Eramet's expectations with regard to its suppliers, subcontractors and service providers primarily target three main areas: Human Rights and working conditions, environment and products, and good business practices. The Charter is also available on the Eramet website.

In order to oversee the Group's responsible purchasing approach, Eramet has established a Responsible Pur-

chasing Committee, bringing together the Division's Purchasing Managers and representatives of the Communication and Sustainable Development Department and the Group Legal Department. This Committee is an integral part of the Group's ethics compliance organisation, led by the Ethics Officer.

Risk management actions

Compliance with the principles set out in the Eramet Group's Responsible Purchasing Charter forms part of Eramet's contractual requirements for all its suppliers and subcontractors. The charter specifies that audits may be carried out by Eramet at suppliers' premises to verify compliance with the principles stated therein.

All subcontractors operating on Eramet's sites must also comply with the rules in force at these sites in relation to environmental, health and safety risk management.

Moreover, at the end of CSR assessments, more targeted risk management actions must be implemented for suppliers whose rating is below a certain threshold. The Group first of all engages in discussions with the supplier with a view to defining corrective measures to be implemented by the supplier according to a defined schedule. In case of refusal or the impossibility of the supplier to implement corrective actions, Eramet reserves the right to terminate the contractual relationship, this case being also provided for in the Responsible Purchasing Charter.

2.5.3 System to monitor the measures implemented and assess their effectiveness

For actions related to responsible purchasing, the monitoring of the implementation of measures and the assessment of their effectiveness is carried out both on the supplier side (risk management measures) and internally (implementation of the approach).

In the first place, compliance by suppliers with the requirements of the Responsible Purchasing Charter or the corrective measures requested as a result of CSR assessments is monitored by means of supplier audits. The procedure and the audit reference framework for suppliers and subcontractors of the Alloys division include components relating to environmental management, and employee health and safety. These audits are carried out with a sample of suppliers in accordance with an annual audit plan. In order to supplement this existing system, supplier audit procedures and an audit reference framework must also be developed for the sites of the Nickel and Manganese divisions, by integrating feedback from the audits conducted by the Alloys division sites.

Internally, performance indicators relating to the up-dating of risk maps, the roll-out of assessments, and audits of suppliers are monitored by the Responsible Purchasing Committee. Some of these indicators are associated with objectives that are part of the Group's multi-year CSR plan, the implementation of which is the subject of a mid-year report to the Group's Executive Committee and the Strategy and CSR Committee of the Board of Directors.

2.6 Whistleblowing and reporting mechanism

The Ethics Charter and the Group's ethics programme have formulated a set of rules and principles for actions and behaviours that apply to everyone and include a professional whistleblowing system. This system allows each employee to notify the Group Ethics Officer or the Ethics Compliance Officer (ECO) of his/her entity of any events that may violate the principles and commitments of the Ethics Charter and the laws or rules relating to ethics. In particular, the Group encourages employees to disclose acts of discrimination and harassment at work, any conduct contrary to the Group's policies and standards in relation to health, hygiene, safety at work and the protection of the environment, and any violation or risk of violation of human rights of Group employees or external persons affected by the Company's business activity.

The whistleblowing procedures are made available to employees in the Ethics Charter available on the Group's intranet and are displayed on the premises of each entity. These alerts can be submitted anonymously.

The alert is managed according to a procedure that can be viewed on the Group intranet. This procedure guarantees that the employee initiating the alert has complete confidentiality, and insofar as the employee acts selflessly and in good faith, it also guarantees that no action can be taken against him or her as a result of the use of this mechanism.

In addition to the Group's whistleblowing mechanism, and depending on their potential impacts on the environment and local residents, some sites have also set up dedicated systems to receive and respond to concerns, questions or complaints from local residents. These site-level mechanisms ensure the local management of complaints, whose receipt, processing and resolution procedures are adapted to the cultural context of the entity and the nature of the impacts that may affect local residents. To complement existing systems and harmonise practices across the Group, the Group Standard for Responsible Project Management, currently under development, includes criteria for setting up these local complaint management mechanisms.

2.7 Report on the effective implementation of the Vigilance Plan

The purpose of this publication is to comply with the obligations of Law No. 2017-399 of 27 March 2017 on the duty of vigilance of parent companies and contracting companies relating to the publication of the report on the effective implementation of the plan published in 2017 and reproduced above.

The risk assessment work used by Eramet to formalize its Non-Financial Performance Statement has provided the Group with a very precise view of the challenges it faces. The material risks for which the Group must annually present risk control policies and measures and their results include violations relating to the environment, human health and safety, human rights and fundamental freedoms, for the Group and its supply chain (see 1.2.2 CSR risk assessment).

The table below presents for each category of risks expected in the vigilance plan and the risks identified, the elements of the Non-Financial Performance Statement, published in the management report, making it possible to report on risk control actions and their results, supplementing or amending the information presented in the compliance plan above.

CROSS-REFERENCE TABLE VIGILANCE PLAN – NON-FINANCIAL PERFORMANCE STATEMENT

ITEMS VIGILANCE PLAN	RISKS IDENTIFIED	INTEGRATION WITH THE NON-FINANCIAL PERFORMANCE STATEMENT
Environment	Water consumption (industrial and mining sites)	1.3.4.3 Optimisation of water consumption 1.3.6.3 Water management
Environment	Emissions into water (industrial sites)	1.3.3.2 Aqueous waste 1.3.6.3 Water management
Environment	Atmospheric emissions (industrial sites)	1.3.3.1 Airborne emissions
Environment	Energy consumption/ greenhouse gas emissions (industrial sites)	1.3.5 Fight against climate change
Environment	Production of hazardous waste (industrial sites)	1.3.4.1 Optimisation of the consumption of primary raw materials 1.3.4.2 Waste prevention and recovery
Environment	Risks of historical soil pollution (industrial sites)	1.3.3.3 Rehabilitation/restoration of sites
Environment	Production of waste rock and tailings (mining sites)	1.3.6.2 Responsible resource recovery 1.3.6.4 Tailings and mine waste management
Environment	Impact on biodiversity (mining sites)	1.3.7 Preservation of biodiversity
Environment	Erosion (mining sites)	1.3.6.3 Water management 1.3.6.4 Tailings and mine waste management 1.3.6.5 Rehabilitation of mining sites
Health and Safety	Safety	1.4.2.1 Employee safety 1.4.2.1.1 Main safety issues and risks 1.4.2.1.2 Safety Governance 1.4.2.1.3 Risk prevention strategy 1.4.2.1.4 Safety Performance
Health and Safety	Health	1.4.2.2 Employee health 1.4.2.2.1 Main health issues and risks 1.4.2.2.2 Health Governance 1.4.2.2.3 Risk prevention strategy 1.4.2.2.4 Health Performance
Human rights and fundamental freedoms	Human rights in the workplace: Discrimination and harassment	1.4.2.4.4 Equal opportunities – measures to foster non-discrimination and diversity
Human rights and fundamental freedoms	Rights of communities bordering Group sites	1.4.3.1 Management of impacts on local communities 1.4.3.1.1 Organisation 1.4.3.1.2 Forms of dialogue with local communities 1.4.3.1.4 Management of specific risks
Risks for suppliers and subcontractors	Non-compliance with ILO conventions in the supply chain	1.5.2 Responsible value chain
Whistleblowing and reporting mechanism	N/A	1.5.1.4 Performance 1.4.3.1.2 Forms of dialogue with local communities

III. COMMUNICATION ON PROGRESS – UN GLOBAL COMPACT



As part of the commitments made by Eramet as a signatory to the UN Global Compact, the Group submits this year its first Communication on Progress. Eramet communicates its contribution to the four priorities of the Global Compact: Human Rights, Labour, Environment and Anti-Corruption, through its non-financial performance statement and its Vigilance Plan. These two annual publications are intended to report Eramet policies, actions and results that the Group is implementing as part of its CSR approach.

3.1 COP – Reconciliation table

PRINCIPLES	ERAMET - NON-FINANCIAL PERFORMANCE STATEMENT	ERAMET - VIGILANCE PLAN
Human Rights	1.4.1 Commitment to Human Rights	2.2.1.a. Risks of violations of human rights and fundamental freedoms
	1.4.2 Social commitments to employees	2.3.2.a. Management of risks of human rights violations
	1.4.3 Commitments to communities	2.5. Identification and management of risks related to suppliers and subcontractors
Labour	1.4.2 Social commitments to employees	2.2.1.b. Risks of harm to the health and safety of people
		2.3.2.b. Management of risks of harm to the health and safety of people
		2.5. Identification and management of risks related to suppliers and subcontractors
Environment	1.3 Preservation of the environment	2.2.1.c. Risks of damage to the environment 2.3.2.c. Management of risks of damage to the environment 2.5. Identification and management of risks related to suppliers and subcontractors
Anti-corruption	1.5.1 Ethics, Compliance and Anti-Corruption	—

3.2 Support by the General Direction



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Cover: Biodiversity rehabilitation at Grande Côte Opérations (Senegal) – Back: Dorita, resident of La Puna plateau,
is harvesting the quinoa produced by an Eramet-supported project in Argentina.

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