Our metal production

Our value chain begins in exploration and through our mines, concentrators and smelters, we create the metals that enable the climate transition. To a large extent, our success depends on the surroundings of our operations, with local stakeholders such as indigenous people and neighboring communities, as well as other factors like energy supply having an impact.



Respect for indigenous peoples community aimed at finding ways to operate

In a cooperation project with the Mausjaur Sami side-by-side, we, for example, partially financed a new rarking facility. Read more about our co-existence with indigenous people on pages

Electrifying underground mining

During the year, we conducted trials with electric loaders and trucks in the Boliden Area's Rävliden deposit - a major milestone on the road to making it the world's first fossil fuel-free underground mining operation by 2025. Read more about our climate targets on pages 30-31.



Self-driving trucks

During the year, Aitik conducted a pilot project for self-driving mining trucks. The Autonomous Haulage System is planned for integration in regular operations in 2025. Read more on page 23

Exploration

We need mineral deposits in order to run our mining operations. Exploration is about finding, prioritizing, investigating and analyzing these in order to examine the conditions for potential mining operations. Aerial surveying, outcroppings, geophysical and seismic methods are used initially, while diamond core drilling is the final stage of the process. It can take 5–20 years from the initial explorations to the start of mining, but by primarily exploring in the vicinity of our mines, we can shorten lead times. At the same time, we invest in field exploration in entirely new areas and also acquire projects from other companies. All in all, this creates a long-term perspective in our exploration work, which helps safeguard metal supply for a long time to come.

Open pits and underground mines

Boliden extracts metals both in tunnel systems as deep as 1,600 meters below the surface and in open pit mines with surface areas greater than 50 football pitches. Using innovative processes such as automation and geopositioning, we can boast world-class productivity. Solutions such as energy conserving heat exchangers in underground mines, an ambitious electrification strategy, good access to water and fossil fuel-free electricity enable us to extract ore with comparatively low climate and environmental impact. And when the ore eventually runs out, we make sure the land we use is restored in the best way possible through continuous reclamation activities, currently covering about 30 active and closed mining sites.

A broad and climate-friendly product portfolio Through copper zinc pickel lead gold silver and

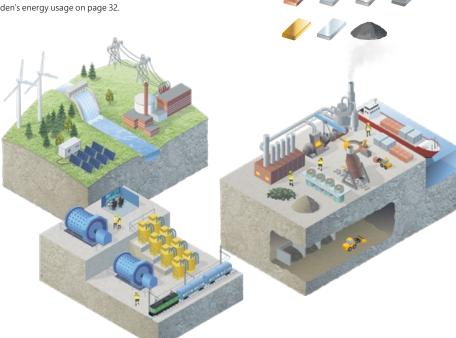
Through copper, zinc, nickel, lead, gold, silver and marketable by-products we meet a great number of societal needs. Read more about our Low-Carbon and Recycled products on pages 24–25.

Reclamation

Because our operations make use of land, we take long-term responsibility for the environment in which we operate. Read more about the reclamation at end-of-life mines on page 37.

Energy supply

With a good supply of fossil fuel-free energy, we can offer some of the most climate-friendly metals on the market. Read more about Boliden's energy usage on page 32.





Being a good neighbor

We collaborate in matters large and small with different stakeholders in the communities where we operate. During the year we opened our first Sustainability Park. Learn more about it on page 7.

Concentrator

The mills at our concentrators grind crushed ore into a porous state before it is passed on for flotation, where the desired metal is separated from unwanted tailings. For example, zinc ore initially has a metal content of 3–7 percent, but after the final stage of the concentration process, dewatering and filtration, it has a 55 percent zinc content. The residue left over is deposited in a tailings pond with surrounding dam structures. We systematically use mineralogical studies to optimize concentration and have a dedicated pilot facility where we evaluate methods and techniques for both existing and new minerals.

Smelters

The last part of our internal value chain consists of our smelters. Using raw materials, of which roughly a third comes from Boliden's mines, our smelters create finished products such as zinc with a metal content of 99.995 percent. Our smelters also recycle metals from secondary materials such as electronic scrap and used car batteries. The development of technology and skills, together with significant investments, allow us to continuously improve the environmental performance of our smelters, while the number of metal products and by-products, such as sulphuric acid, have increased over time. Diversification helps Boliden reduce cyclical sensitivity, and we store the waste from a number of smelters in underground repositories with the ambition of finding technologies in the future to help us extract even more products from the waste.

Mines and smelters with high productivity

Our mines and smelters are located in northern Europe and are characterized by high productivity and sustainability performance.

Boliden's mines

AITIK

- the world's most productive open-pit copper mine

In Aitik, ore haulage has been automated to a high degree, which enables for large-scale production while also ensuring a safe workplace with good climate performance. The open pit's reserves and planned production will provide a further 27 years of mining.

Metals: Copper, gold, silver Milled volume: 40.7 Mtonnes Employees: 814

THE BOLIDEN AREA - high grade mines with high production stability

The Boliden Area, today including the underground mines in Renström, Kristineberg and Kankberg, is where the first gold deposit was discovered in 1924, laying the foundation for Boliden's operations. With the exception of Kankberg, complex ores are mined and with planned production, the mineral reserves will provide a further 12 years of mining.

Metals: Gold, zinc, silver, copper, lead and tellurium Milled volume: 1.8 Mtonnes Employees: 691

GARPENBERG

- the world's most productive underground zinc mine

In 2011, thanks to successful exploration efforts, Boliden decided to invest in the expansion of Garpenberg. The investment project, which was Boliden's second largest of its kind, improved mining productivity through, among other things, the use of automation technology. With planned production the mineral reserve will provide a further 37 years of mining.

Metals: Zinc, silver, lead, gold and copper Milled volume: 3.2 Mtonnes Employees: 478

KEVITSA

one of Finland's largest open-pit mines

Kevitsa is one of Finland's biggest-ever mineral discoveries. Boliden acquired the mine in June 2016 and its mineral reserves and planned production will provide a further 10 years of mining.

Metals: Copper, nickel, palladium, platinum, gold, cobalt Milled volume: 9.8 Mtonnes Employees: 550

TARA

– Europe's biggest zinc mine, placed under care and maintenance

Producion at Ireland's Tara mine has over the years provided as much as half of Boliden's zinc concentrate supply. In 2023, the mine was placed under care and maintenance due to a combination of a declining zinc price, high energy prices, operational challenges and general cost inflation. Exploration underground towards Tara Deep is also suspended.

Metals: Zinc, lead

Milled volume: 1.1 Mtonnes (until the mine was placed under care and maintenance in July)

Employees: 75 (average FTE figure affected by temporary furlough of employees as the mine was placed under care and maintenance from July onwards)

Boliden's smelters

BERGSÖE

Europe's biggest recycler of lead acid batteries

Bergsöe in Sweden is the Nordic region's only smelter for secondary lead. Every year, about four million scrapped car batteries are recycled and the lead produced is primarily used in the production of new batteries – a true case of metal circularity.

Metals and by-products: Recycled lead Production: Lead alloys 53 ktonnes Employees: 83

HARJAVALTA

-increased nickel operations

Harjavalta mainly produces copper, but the plant is also Europe's biggest nickel smelter. Nickel has several important areas of use including the production of stainless steel and batteries for electric vehicles.

Metals and by-products: Copper, nickel in matte, gold, silver, platinum-group metals and sulphuric acid

Production: Copper 129 ktonnes, nickel in matte 34 ktonnes, gold 9 tonnes, silver 22 tonnes, sulphuric acid 646 ktonnes, palladium concentrate 2 tonnes Employees: 559

KOKKOLA

– Europe's second biggest zinc producer

Continuous improvements in the production processes enable Kokkola to produce high-quality zinc products with good climate performance for customers in for example the construction and automotive industries.

Metals and by-products: Zinc, sulphuric acid, silver

Production: Zinc 294 ktonnes, sulphuric acid 316 ktonnes, silver in concentrate 22 tonnes

Employees: 544

ODDA

expansion for more climatefriendly zinc

The rate of production in the world's most sustainable zinc smelter has increased over the years. A major expansion project will be finalized in 2024 and put Odda's annual production capacity at 350,000 tonnes. almost double the level to date.

Metals and by-products: Zinc,

sulphuric acid

Production: Zinc 164 ktonnes, sulphuric acid 114 ktonnes **Employees:** 377

RÖNNSKÄR

one of the world's most efficient copper smelting plants

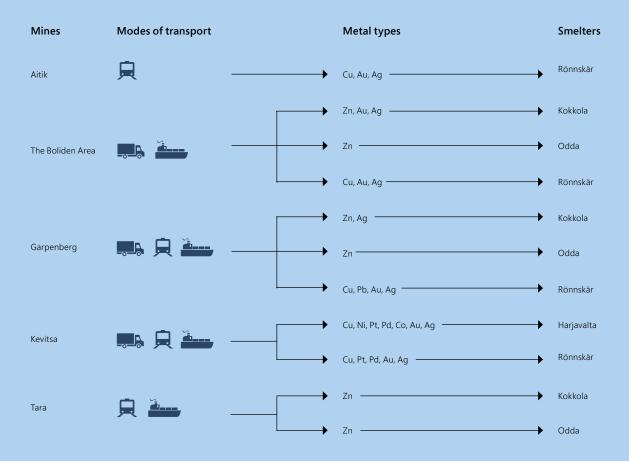
Beyond metal production from primary sources, Rönnskär is also one of world's biggest recyclers of metal from electronic scrap. In 2023, a fire destroyed Rönnskär's tank house, which is the last part of the copper refinement process. This transformed the smelter's copper offering from cathodes to anodes.

Metals and by-products: Copper, gold, silver, lead, zinc clinker, platinum-group metals and sulphuric acid

Production: Copper 96 ktonnes, gold 11 tonnes, silver 382 tonnes, sulphuric acid 566 ktonnes, palladium concentrate 0,8 tonnes.

Employees: 875

Boliden's internal supply





External sourcing of raw materials

The concentrates coming from Boliden's own mines account for about one third of the raw materials feed to our smelters. External sourcing of the right raw material qualities, at the best commercial terms from business partners with high ESG performance, is therefore essential to Boliden.

External supply of raw materials crucial to smelter performance

Raw materials are selected to maximize the financial result within the technical constraints and minimize the CO₂ footprint of raw material supply. We enter into long-term contracts with suppliers to ensure the reliability and quality of the raw material feed mix for the smelters. Since our Tara zinc mine was placed under care and maintenance in 2023, external mines supply about 60 percent of our smelters' raw material needs and this is sourced from a large selection of partners globally.

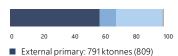
Another 10 percent of the smelter feed consists of recycled materials like electronic scrap and spent car batteries. These are mainly sourced from European scrap collectors.

Sustainable partnerships with raw material suppliers

The ESG performance of all suppliers is evaluated to ensure adherence to internal standards. The risk-based evaluation includes a sanction screening and increasing levels of due dilligence through data gathering, interviews and on-site audits depending on the risk level. We work actively to help our raw material partners improve in areas such as emissions to the environment, anti-bribery and corruption measures and human rights. Finally, we also build partnerships with key suppliers focused on increased production of our low-carbon metals.

Copper

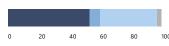
Raw material feed, 2023



- External recycled: 155 ktonnes (180)Internal primary: 401 ktonnes (490)
- Internal recycled: 9 ktonnes (9)

Zinc

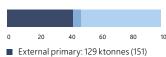
Raw material feed, 2023



- External primary: 490 ktonnes (435)External recycled: 64 ktonnes (58)
- Internal primary: 341 ktonnes (419)
- Internal primary: 34 i ktonnes (419
 Internal recycled: 32 ktonnes (26)

Nickel

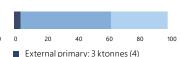
Raw material feed, 2023



- External recycled: 14 ktonnes (0)
 Internal primary: 152 ktonnes (121)
- Internal recycled: 0 ktonnes (0)

Lead

Raw material feed, 2023



- External recycled: 55 ktonnes (47)
 Internal primary: 35 ktonnes (37)
- Internal recycled: 0 ktonnes (1)

Recycling metals

With all of Boliden's metals being fully recyclable, we have made circular metal production from end-of-life electronics and car batteries an integral part of our core business.

A world class recycler of electronics

Boliden's smelter Rönnskär is one of the world's largest recyclers of electronics with a capacity of recycling 120,000 tonnes of electronic scrap annually. This amount equals 2 million mobile phones every day. Boliden buys electronic scrap consisting of material such as printed circuit boards. The materials that are delivered to Boliden have been pre-processed by the suppliers. At Rönnskär, the material is crushed, smelted and refined in a Kaldo furnace Boliden's unique Kaldo technology utilizes the energy in the plastics from the material, making the process energy efficient and enabling a multi-metal production from a number of different secondary materials.

Apart from electronic scrap recycling, the Rönnskär plant also takes care of the residual materials from steel mills, brass foundries and power and heating plants. What gets disposed in society becomes new raw material at Rönnskär.

Enabling circularity in lead-acid battery technology

At our Bergsöe plant in Landskrona we recycle 50,000 tonnes of lead annually – equal to four million car batteries every year. Production of lead at Bergsöe is a story of a true circular economy as almost 100 percent of all lead produced at Bergsöe comes from secondary sources and most of it also goes back to where it came from – as the main material in lead-acid car batteries.



Recycled material in relation to total feed	2023	2022
Total secondary feed, tonnes	330,200	321,500
Total feed (primary and secondary), tonnes	2,645,000	2,787,000
Recycling input rate	12%	12%

Recycled smelting material, ktonnes	2023	2022
BERGSÖE, lead		
Battery raw material	55	47
RÖNNSKÄR, copper		
Secondary raw material	140	160
Of which electronics	69	83

Business area highlights

Following a year of record-breaking highs, 2023 proved more varying with challenging external developments and internal events affecting production in several units.

Business Area Mines

- Implementation of Global Industry Standard on Tailings Management continued, with progress including the implementation of a new governance system and reinforcement of Kevitsa and Garpenberg's dam structures, as well as the ongoing SEK 5 billion project – one of Boliden's biggest-ever investments – to reshape Aitik's tailings facilities.
- On track to becoming the world's first fossil fuel-free mine, production at the Rävliden deposit in the Boliden Area started and the operation will be fully electric during the first half of 2025.
- The start-up of production at Aitik's Liikavaara deposit drew closer with the relocation of the E10 public road and the building of a road between the new open pit and the crusher.
- A pilot for our Autonomous Hauling System the first of its kind in Europe – was conducted in Aitik with seven trucks.
 When implemented in 2024, 17 self-driving trucks will form part of our regular operations, with optimized driving performance and less idleness contributing to higher production capacity.
- Due to a combination of a declining zinc price, high energy prices, operational challenges and general cost inflation, the Tara mine was placed under care and maintenance in July. Most of the workforce are on temporary furlough until the mine reopens. Planning for a restart during 2024 is ongoing, exploring how to create a more cost-efficient operation model with higher productivity.
- Production challenges during the year affected Aitik,
 Garpenberg and Kevitsa which led to overall lower throughput and lower production of metal in concentrate than expected.

Business Area Smelters

- All our smelters improved safety performance, which partly is considered a result of several activities aimed at strengthening our culture and employee engagement.
- The major investment made into Harjavalta's nickel line during the preceding year started to pay off with production successfully ramping up to design capacity.
- In Harjavalta's harbor, the Poseidon project a state-ofthe art facility for fully automatic sampling of inbound raw materials – was delivered, shortening the lead time and increasing the capacity and accuracy of determining the value of purchased concentrates.
- At Odda, the creation of the world's most advanced zinc smelter reached peak intensity towards the end of the year with more than 1,000 employees and contractors working on the project.
- A long-term process improvement program in Kokkola has improved productivity in operations. Kokkola also showed exceptional capability to adapt to volatility in electricity price.
- Our Green Transition Metals product portfolio was expanded with the launch of Low-Carbon and Recycled Lead, as well as Low-Carbon Sulphuric Acid.
- At Rönnskär, a fire in June destroyed the tank house, which is the last stage of the copper refinement process.
 While no physical injuries were recorded, this had significant impact on financial results as the business model was transformed to selling copper anodes instead of cathodes. The prestudy for a potential new tank house was ongoing towards the end of the year.





Green Transition Metals

Green Transition Metals is our portfolio of low-carbon and recycled products. It contains some of the most sustainable offerings on the global market – helping our customers improve their climate performance.

We are proud to be able to offer our customers a number of metals with a low carbon footprint. Our Low-Carbon Copper and Low-Carbon Zinc emit 1.5 and 1.0 kilograms of carbon dioxide equivalents respectively per kilogram of metal produced, compared with global averages of 4.0 for copper and 3.6 for zinc. During 2023, this lineup was complemented with Low-Carbon Lead and Low-Carbon Sulphuric Acid, with emission levels of 1.0 and 0.025 kilograms of carbon dioxide equivalents respectively per kilogram produced. Corresponding global average emissions amount to 1.87 kilograms for lead and 0.157 kilograms for sulphuric acid.

Through the processing of secondary materials including end-of-life electronics and car batteries, we also offer Recycled Copper, Recycled Zinc and Recycled Lead – all contributing to circularity in metal usage.

In the production of our Green Transition Metals, we constantly challenge ourselves to find new ways of reducing our emissions, which in turn supports our customers' efforts to reduce total emissions for the products containing our metals. By sharing our know-how in this respect, we contribute to the green transition in the entire mining and metals industry.















At the end of the year, our Green Transition Metals portfolio included seven products.

Production of Recycled Lead at Boliden Bergsöe.





Through a partnership with Tata Steel, Boliden's Low-Carbon Zinc will be used in car manufacturing.

>> The lower emissions level of our zinc contributes to our common commitment to environmental accountability and lower CO₂ emissions across the entire value chain.

Low-Carbon Zinc bound for the automotive industry

Boliden provides Tata Steel, one of the world's major steel producers, with Low-Carbon Zinc, to be used in, for example, car manufacturing. Daniel Asplund, Boliden Sales Manager Zinc, shares his perspective on the deal, which was completed during the year.

How does the cooperation between Boliden and Tata Steel strengthen our role as a driver of sustainability within the metals industry?

"The agreement with Tata Steel Nederland is further proof of our ambition to spearhead the industry. The partnership focuses on the provision of zinc with the lowest carbon footprint globally, reducing the CO₂ emissions in Tata Steel's production, which in turn creates a more sustainable steel offering, which is demanded especially by the automotive sector. We support our customers' sustainability targets by helping them reduce scope 3 emissions and thus contribute to improving climate performance in their respective industries, in this case the steel sector."

How does this deal impact the end customer?

"Choosing Boliden's Low-Carbon Zinc leads to a significantly reduced carbon footprint. With emissions of 1 tonne CO_2 per tonne zinc, compared to the average zinc product globally with emissions of 3.6 tonnes, the reduction equals the annual car usage of more than 25,000 households. The lower emissions level of our zinc contributes to our common commitment to environmental accountability and lower CO_2 emissions across the entire value chain. This not only reflects the strive for sustainability but also a strategic move to push the entire industry towards more climate-friendly production methods."

What lies ahead for our Low-Carbon Zinc?

"While we will continue our efforts to produce zinc with minimal environmental impact, we are already today leading the industry in this respect. Demand is increasing and we see that our customers actively pursue alternatives with limited emissions levels, often as a response to scope 3 targets set by their customers. And Boliden – not least through the added capacity generated by the ongoing expansion of Odda smelter and the continuous innovation taking place at Kokkola – will be part of providing more climate-friendly zinc both today and tomorrow."



Daniel AsplundBoliden Sales Manager Zinc

Employees

With care, courage and responsibility, Boliden strives to develop managers, employees and operations in a safe, healthy and inclusive work environment.

Safety first

Occupational health and safety is our most important focus area as it involves the well-being and, ultimately, the lives of our employees and contractors. We have a zero-harm philosophy with regard to accidents and harm at work. A strong safety culture is characterized by a values-driven leadership that trusts employees' ability to act in relation to risk, health, safety and well-being. We promote initiatives designed to engage employees on a more informal basis by encouraging them to submit suggestions for health and safety improvements. Risk assessment is a requirement of ISO 45001:2018, which all Boliden units are certified to, and involves internal and external audits on their risk assessment processes and performance. In 2023, employees and contractors submitted 20,083 (19,555) risk reports.

The frequency of accidents with absence (LTI) has decreased since last year. The number of accidents resulting in absence from work, including contractors, was 77 (75). The number of work days of absence due to accidents among Boliden employees was 709 (723). The most common types of accidents included slip, trip and falls, and finger/hand injuries while working with hand tools. The number of serious accidents has also decreased in recent years as a result of proactive safety work. Work-related fatalities are very rare within Boliden. No work-related fatalities have occurred on sites or areas controlled by Boliden since 2008, which is an exceptional result in the potential high-risk industry the company works in.

In 2023, 4,923 employees (84 percent of workforce) participated in the annual employee survey "My Opinion", which covers health, safety and well-being topics. The results were discussed in local working groups and a joint action plan with local measures will be implemented during 2024 to drive safety performance at all units. Additional support is provided to units with the greatest improvement potential.

Culture and leadership

Strengthening the values-driven corporate culture increases Boliden's performance in all areas and the value creation for all stakeholders, and is also a prerequisite for Boliden to continue to be a leader within sustainability. The work to further establish the values, principles and related focus areas in the organization continued during 2023 through workshops and via the line management.

In 2023, Boliden's annual General Management Meeting for our most senior managers explored how to further engage people, with the aim of unleashing the potential of our individuals, teams, and organizations. The key to engagement, performance and safety lies in a fearless organization characterized by strong psychological safety, and the meeting participants were tasked with strengthening the focus on this in their respective teams.

Diversity, equality and inclusion

Boliden needs a diversity of experiences, perspectives, and ideas to ensure strong business results and to build innovative and successful teams. Diversity perspectives are considered in selection and group composition in Boliden's development programs as well as in recruitment processes.

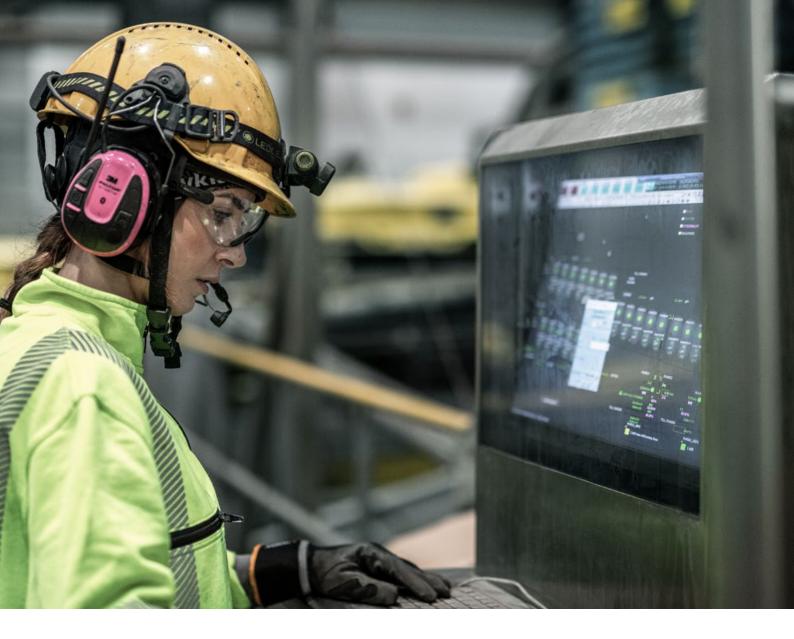
Boliden has the target to increase the share of women in its total workforce. In 2023, 30 percent of all new permanent employees were women. We also launched a new development program, Female Professionals in Boliden, open to all employees who identify as female. The program aimed at strengthening the work in the field of gender equality and brings together women within the company to meet,

Key safety indices

	2023	2022
Proactivity rate ¹⁾	6.7	6.4
Loss Time Injury frequency ²⁾	4.4	4.7
Sick leave rate, %	5.5	5.6

1) The number of proactive reports (risks, disorders) per reactive deviations (Loss Time Injury, Injury Without Absence, Near miss).
2) The number of accidents with absence per million hours worked, including both Boliden employees and contractors.





Co-worker at Aitik's concentrator.

exchange experiences, collaborate and network. In May 2023, Boliden also launched the research-based digital lecture "Diversity, equality and inclusion (DEI) - Unlock Business Potential", available to all employees. The purpose of the activity was to further strengthen our DEI work, provide knowledge about diversity, equality, and inclusion, and to increase awareness of unconscious biases.

Recruitment and retention

Attracting and retaining relevant competence is an important part of Boliden's strategy and requires long-term planning and persistent work. The competition on the labor market is still increasing in many of the places where we operate, as a result of the industrial sector growth in those regions.

Many activities were conducted locally during the year, where Boliden interacts with selected schools and universities. In addition to meeting students, other important stakeholders such as study counsellors, education coordinators and employment services are involved. Collaboration with local communities and other local companies, with the aim of jointly increasing the attractiveness of the regions where Boliden has its operations, have also intensified during the year.

Retaining and developing existing employees is also a top priority. Boliden's groupwide leadership and talent programs, together with local development programs were further developed during 2023. The first class of Boliden's Trainee Program graduated during the year and the second group started the program in the fall of 2023.

Total number and rate of new permanent employee hires by age group and gender

	2023		202	22
	Number	%	Number	%
Group Total	326	5	396	6
<30 years	135	42	157	40
30-50 years	164	50	205	52
>50 years	27	8	34	8
Men	227	70	296	72
Women	99	30	110	29

Total number and rate of employee turnover by age group and gender

	2023		2022	
	Number	%	Number	%
Group Total	428	7	429	7
<30 years	65	15	82	19
30-50 years	189	44	170	40
>50 years	174	41	177	41
Men	331	77	330	77
Women	99	23	99	23

My Opinion employee survey results

	2023	2022
Safety	75	74
Leadership	77	76
Engagement	76	76
Inclusion & Diversity	83	82
Ethics & Compliance	78	74

Employee interviews

Logos Guiang

Member of Boliden's 2023/2024 trainee program and a Metallurgist/Process Engineer in Boliden Kevitsa.

What evoked your interest in the mining and metals sector?

"I chose to pursue my studies in metallurgical engineering at the bachelor level because the discipline covers a huge role in the supply chain of materials that is used in modern society and this makes the field worth practicing. Already there I realized there were great possibilities in optimizing minerals and metals extraction. Small improvements could have a huge impact on operations and contribute to the goal of improving sustainability in the mining and smelting industries. From there, I decided to do an International Master's program in Sustainable and Innovative Natural Resource Management, during which I encountered many companies focused on raw materials processing. Boliden stood out in its ambitious sustainability targets and had a strong track record of taking action to achieve its targets. I wanted to become a part of that."

Coming from tropical Sarangani in the Philippines on the other side of the world, how was settling into the northernmost part of Finland?

"The weather and seasons obviously constitute a major difference and then there's the culture and language, but I really enjoy being here. I'm taking Finnish classes, have joined the local badminton club and do weekly ice swimming. People can seem a bit quiet at first but once inside the



sauna they are very talkative and entertaining. Around here there are also a lot of retired elderlies who are very warm in spirit and welcoming."

Why should people apply to Boliden's trainee program?

"We are a very diverse group of trainees which ignites dynamic discussions and interesting exchanges of ideas – learning becomes more fun together in this group. While we all have individual roles at different business sites around Sweden and Finland, we do meet up regularly as part of the program and become exposed to all parts of Boliden's operations. This program is the chance of a lifetime and a great way to get experience, where you will surely gain both personal and professional growth."

Caroline Lejonklo

Product and Process Engineering, Process development within the sampling department at Boliden Rönnskär.

What is appealing about working with product and process engineering, especially in the context of Boliden?

"Having the opportunity to work with research and development on a daily basis. I've always been interested in metals and the product side of this work as well as technology and development, and this job really checks both boxes. My job is very flexible, and I am involved in everything from solving daily quality problems to investing in projects and research."

What is most challenging about your work?

"Since my work includes generating ideas and perspectives on new research and development, it is necessary to have a network for collaboration, which can take time to build. In many cases, expert knowledge is required in a certain area and, when working with development, it helps a lot to get relevant advice and support on the issue. There are routines for this and contexts for exchanging experiences, which is very valuable in my job. At the same time, the personal network is important to be able to find experience of similar situations that can be applied to my specific challenges."



You joined Boliden less than a year ago, what was your first impression when you joined?

"I got to know Boliden a bit already before I joined, thanks to a lecture at the university where I studied. I immediately realized that it is quite a large company with many separate plants that are run in completely different ways. When you include the mines as well, it becomes very complex. My first impression was that, despite the complexity, there was a lot of collaboration going on within the organization. During my first few months here at Boliden Rönnskär I have had the privilege of meeting many colleagues from different parts of the business."

Emelie Kemi

Contractor at Boliden Aitik's major investment project aimed to ensure dam facility compliance with the Global Industry Standard on Tailings Management.

How did you end up working with Aitik 2050?

"This very large project started during the summer of 2022, and given its size, it had a very short time plan of only two years. As the planning proceeded, it became clear that Boliden was short on internal resources to handle all aspects of the project coordination and thus approached my employer Licab for support. Having worked at Boliden 2012–2015 as a truck driver I knew the company well and saw a great opportunity in taking on this slightly chaotic project start and getting things in order and since February 2023, as a consultant for Boliden, I have been coordinating the work of subcontractors in the many different disciplines we have in this massive project. To be able to reinforce the dam structures, a wide range of sub-projects needs to be carried out, such as building new pump stations, building new truck haul roads and large electricity and automations projects since the dam reinforcements impact the infrastructure in Aitik."

How is Boliden's focus on health and safety reflected for you as a consultant?

"Boliden Aitik is very well known here in Gällivare for its safety culture and zero-target for injuries and this is also reflected in my experience as a consultant. The first week we had an extensive training in Health, Environment and Safety and this is a recurring topic in all our project meetings, as is the reporting system for any deviations from normal safety routines. In my role I am also responsible for ensuring that all coordination meetings with subcontractors also follow this pattern. Furthermore, we have one full-time Health,



Environment and Safety consultant working on the project every day of the week, ensuring that there is always a person on site with overhead responsibility to handle any issues related to these particularly important topics."

What are the pros and cons of being a consultant compared to being an employee?

"As I have experience of being employed and am now working as a consultant here and know a lot of people working in different parts of Aitik, I can say that Boliden is generally a great company to work for. On the plus side, as a contractor I have easy access to further resources and competencies from my employer Licab if I need help on specific topics. On the other hand, as a consultant I lack the instant access to all the internal systems you have as an employee, and there are always areas both big and small where consultants naturally don't have the mandate to take decisions. Being a Gällivare local with a large personal network of people employed at Aitik has helped me a lot in this respect!"



Timo Kumlander

Metallurgy Operations Generalist, Purification Supervisory, Boliden Harjavalta

What made you apply for a job at Boliden 21 years ago?

"Just like it is today, Boliden was a large employer at the time and I had heard only good things about the company. This made me apply for an apprenticeship and after that I got a permanent job. Now I work as an operator in the liquid purification plant, taking samples, loading the acid trucks and much more."

What is most important to you in your work life?

"There is a lot of variation in my daily work. I also think it's important that the industry operates safely and responsibly. Besides my job as an operator, I am also the deputy occupational health and safety representative and the department's deputy union steward. As occupational health and safety representative, I need to ensure that everyone returns home safe and healthy after a day at work."

Why do you think someone should consider working in the mining and metals industry?

"There are a great many interesting jobs in the field and I highly recommend working in it. Working at Boliden you will soon notice that we operate responsibly and with respect for the environment."

Science-based targets for climate performance

Boliden's ambitious climate targets for 2030 covering scope 1 and 2 have been approved by the Science Based Targets initiative, confirming that our ambition is in line with the 1.5°C target of the Paris Agreement.



Boliden is committed to reducing absolute scope 1 and 2 green house gas emissions, measured in carbon dioxide equivalents (CO_2 e), by 42 percent from base year 2021 until 2030 (the target boundary includes biogenic land-related emissions and removals from bioenergy feedstock). We also commit to reducing absolute scope 3 CO_2 e emissions by 30 percent within the same time frame, as well as achieving copper and zinc production with CO_2 e emissions per kilogram metal averaging 1.5 and 1.0 kilograms, respectively.

In December 2023, our scope 1 and 2 targets were validated and approved by The Science Based Targets initiative (SBTi), a global body enabling businesses to set ambitious emissions reductions targets in line with the latest climate science. The SBTi is a collaboration between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) and one of the We Mean Business Coalition commitments. It defines and promotes best practice in science-based target setting, offers resources and guidance to reduce barriers to adoption, and independently assesses and approves companies' targets. Boliden has also committed its scope 3 target to SBTi.

Scope 3 – our value chain emissions

We have established the baseline for our scope 3 emissions amounting to CO_2 e 2,814 ktonnes. Throughout the year, efforts have been prioritized to enhance the precision in accounting for our scope 3 emissions. We have developed an emissions accounting methodology based on in-house data, including actual spending, material usage, and information from direct suppliers , and third-party emission factors when actual emissions are not available from supplier. From 2024, we will report annually on scope 3 progress. Read more about our work with supplier data on page 33.

Improving our methodology

We have also reassessed the accounting methodology for calculating our scope 1 emissions, leading to a restatement of our 2021 and 2022 emissions. For example, we are now accounting for carbon dioxide equivalents, which is a standardized and comprehensive metric that includes emissions from all greenhouse gases. Accordingly, the green house gases are weighted by their global warming potential to show their warming impact using $\rm CO_2$ as a reference. In addition, we are now disclosing our actual full year data (instead of estimated December data as previously used), as well as including land use change emissions.

CO ₂ e emissions, tonnes	Scope 1	Scope 2
2021, Before restatement	579,000	373,000
2021, After restatement	625,000	375,000
2022, Before restatement	535,000	312,000
2022, After restatement	629,000	286,000

Development during the year

During 2023, our scope 1 and 2 emissions fell by 8 percent compared to the previous year. The decrease was reinforced by Tara being put into care and maintenance and to some extent also by the production interruption caused by the fire in Rönnskär. However, the Rönnskär fire also had a negative impact on our production of Low-Carbon Copper while production of Low-Carbon Zinc was affected by a prolonged maintenance shutdown in Odda.

Our roadmap for emissions reduction is progressing as planned and contributing activities during the year were, for example, replacing carbon-intensive cement with waste slag in Garpenberg, further electrification and full-scale use of nitrate free low-emission explosives in the Boliden Area and increasing the share of rail transportation between Kevitsa and Harjavalta.

Share of total emissions per category



Our targets

Scopes 1 and 2

42%

lower absolute emissions in 2030 with 2021 as base year

Scope 3

30%

lower absolute emissions in 2030 with 2021 as base year

Product target for Copper

Copper production in 2030 with an average of

1.5 kg

CO₂ equivalents per produced kg

Product target for Zinc

Zinc production in 2030 with an average of

1.0kg

per produced kg

Decarbonization levers

Main activities to achieve our 2030 targets

- Grid decarbonization: reduction of emissions from local electricity production in countries where we operate.
- Electrification: switching from fossil fuel use of for example diesel, coke, natural gas and heavy fuel oil, to electricity.
- Energy efficiency: reduction of energy use per amount produced, for example through more efficient heat use in smelting or optimized mine layouts.
- Fuel switching: where electrification is not a viable option, heavy fuels will be replaced by less carbon-intensive energy sources such as gas.
- Use of renewable energy sources: for example replacing coal-based reduction agents with biomaterial and diesel with Hydrotreated Vegetable Oil.
- Heat and steam decarbonization: reduction of emissions in the production of steam and heat of local power companies. This includes guarantees of origin for Finnish operations.

Carbon dioxide emissions per Scope

Absolute emissions

CO ₂ e emissions, tonnes	2023	2022
Scope 1	628,000	629,000
Scope 2	215,000	286,000
Scope 3 ¹⁾	-	-
Total	842,000	915,000

 Scope 3 emissions figures will be reported as from 2024 onwards. CO₂e emissions for our Scope 3 target base year, 2021, amounted to CO₂e 2.814 ktonnes.

Carbon dioxide emissions per source

Scopes 1 + 2, 2023



Production of low-carbon metals

As a share of total production

Production	2023	2022
Low-Carbon Copper (incl. recycled Copper)	34%	37%
Low-Carbon Zinc	12%	12%

Energy

Boliden's operations are in many cases energy intensive, both in mining and smelting. Our electricity consumption totals almost 5 TWh per year and is expected to increase, not least with the Odda expansion being finalized in 2024.



Electrification drives energy demand in Mines

Within Business Area Mines there are several ongoing projects to increase the degree of electrification. The main objective of these projects is to increase productivity while reducing the amount of fossil fuel in the operation. Another important objective is to improve the work environment at the mines. Today, the main electricity consumption within the mines is related to the mills and crushers as well as conveyour belts. As the development progresses, transport vehicles, drill rigs and such will increase their share of electricity consumption.

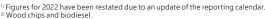
Expansion of zinc production with fossil fuel-free energy

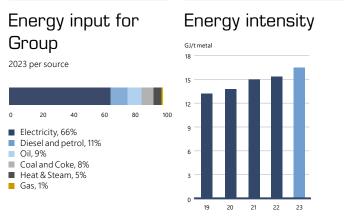
In Business Area Smelters, most electricity consumption is related to our zinc smelting in Kokkola and Odda. The latter has also secured a long term and fossil fuel-free energy contract which covers the increased energy consumption due to expanded operations during 2024. Rönnskär and Harjavalta are, however, also large energy consumers. Thus, the fire in Rönnskär meant that the energy consumption was somewhat reduced during the second half of the year. Also within our smelting operations several projects related to electrification, including electrified vehicles, are being implemented.

Long-term energy supply

Our operations are largely located in areas with a good supply of fossil fuel-free energy and, to secure long-term low Scope 2 emissions, Boliden is actively working to improve conditions for fossil fuel-free energy production in national grids. The short-term aim is to have around 80 percent of our electricity consumption secured through fixed contracts. Today, around 60 percent of our electricity consumption is hedged up to 2035 at competitve price levels and we are constantly monitoring the energy market for opportunities with the aim to balance the risk while supporting development programs at our units. During the year, Boliden also had revenues from the sale of electricity, partly because the operation optimizes production when the price of electricity peaks, and partly because of less than full production for other reasons such as unplanned maintenance stops.

Energy consumption, within the organization (GJ)	2023	20221)
Direct energy		
Coal & coke	1,946,000	1,729,000
Gas	227,000	235,000
Oil	2,013,000	1,905,000
Diesel & petrol	2,710,000	2,495,000
Wood chips	129,000	135,000
Total direct energy	7,024,000	6,503,000
of which fossil fuel-free ²⁾	903,000	570,000
Indirect energy		
Electricity, purchased	15,778,000	16,726,000
Heat & steam, purchased	1,114,000	1,190,000
Total indirect energy	16,892,000	17,916,000
Total energy input	23,916,000	24,419,000
Produced energy, for internal use	2,684,000	2,844,000
Produced energy, sold	2,831,000	2,905,000
Total energy consumption	21,085,000	21,514,000





The increase in energy intensity is primarily due to lower production at mines with lower or

Procurement

To maximize Boliden's procurement opportunities and secure uninterrupted sustainable operations, we work closely with suppliers to ensure they fulfill our requirements in areas such as quality, occupational health and safety, and sustainability performance.



Constructive relationships with suppliers

Responsible sourcing and contributing to a sustainable supply chain are key responsibilities of the procurement function. Through established processes we ensure adherence to our requirements and take action to reduce risk and contribute to the development of our suppliers. We apply continuous learning and improvement to ensure efficiency and effectiveness in our supply chain activities.

Before signing contracts with suppliers, we perform sanctions controls and check that the supplier complies with Boliden's black lists, Boliden Business Partner Code of Conduct and Boliden's requirements regarding quality and occupational health and safety.

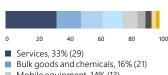
We strive to make sure that suppliers maintain a high level of compliance and fully understand Boliden's strategy, and want to enable their development in line with our evolving requirements. Therefore, we continuously follow up on our suppliers' performance, maintain dialogues and continuously inform them about our own development.

Climate and Scope 3

Procurement plays an important role in the path towards reaching Boliden's ambitious climate targets for 2030. Strategic activities, under development during 2023, will aid Scope 3 reduction activities within both our business areas through supplier engagement and by ensuring a transparent and comparable climate performance assessment in the sourcing process. Primary data collection from suppliers and reporting will be key activities in refining and measuring the carbon footprint of Boliden's supply chain.

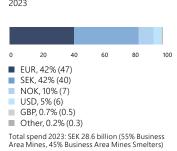
During 2024 through 2025, focus will be on establishing a reliable reduction roadmap together with our internal stakeholders as well as suppliers. The direction will be set through targets for selected suppliers, categories and products, which will enable us to track our progress and direct our resources effectively on our path to Boliden's climate target of Scope 3 emissions reduced by 30 percent from 2021 until

Purchase category



- Mobile equipment, 14% (13) Logistics, 13% (14)
- Fixed equipment, 10% (8)
- Indirect materials and services, 5% (6)
- Tools and consumables, 4% (4)
- Electrical installations and
- equipment, 3% (2) IT and Telco, 2% (3)

Purchase currency



Ongoing activities aimed at reducing Scope 3 emissions

- Supplier engagement
- Communicate, support, educate and follow-up on supplier climate performance.
- Partnership for innovation
- Engage with selected suppliers to ensure a long-term partnership where innovative solutions are the key to CO₂ reduction
- Reduction insights and informed decision making
- Incorporation of climate requirements in sourcing activities to ensure informed decisions are made and that our spending is directed towards more sustainable solutions. Enabling selection of suppliers with low carbon emissions and promoting sustainable practices in our supply chain. Securing supply of critical products
- Engaging with suppliers long term to secure the supply of climate-friendly solutions and products for Boliden
- Data collection and reporting
- Enhance data quality by collecting supplier data and ensure correct and

Environment

Our operations have, by their nature, a signficant impact on the environment. Minimizing this and compensating where possible is a prerequisite for achieving our vision to be the most climate-friendly and respected metal provider in the world.



Environmental sampling at Kevitsa.

Environmental impact

We have an impact on the local environment due to emissions, acidification, contribtion to eutrophication, noise and changes in the landscape. We also have a global footprint due to carbon dioxide emissions. Because our metals are needed for the climate transition, we also have a far-reaching responsibility to limit our environmental impact and we constantly measure our performance in this respect. Our ultimate ambition is to ensure zero harm to people and the environment.

Collaboration with stakeholders

We cannot define what our impact on people and the environment is on our own, therefore it is essential that we have a close dialogue with the people that are impacted by our operations and that have a stake in what we do. We initiate partnerships and relationships with for example indigenous peoples, environmental organizations and local communities to ensure our environmental impact is managed in the best possible way.

Water management

All our operations are located in areas deemed as low water stress areas. Our challenges related to water, in particular at our mines, lie whithin the management of water that is released during operations. All operations, at both mines

Water consumption (million m³)	2023	2022
Total water withdrawal	140	147
Discharged water volume	146	146
Water consumption	-6	1

Water discharge	2023	2022
Metal discharges to water, tonnes (me-eq)	82	67
Metal discharges to water, tonnes (mass)	15	13
Nitrogen / N-tot / to water, tonnes (mass)	235	237

Emissions to air (metric tons)	2023	2022
NOx	403	460
SO ₂	5,749	6,100
Particulate matter	157	158
Metal emissions to air (me-eq) ¹⁾	37	32
Metal emissions to air (mass)	14	16
Where of lead (Pb)	1.4	1.1
Where of mercury (Hg)	0.03	0.03
СО	378	404

 $^{^{\}eta} \mbox{The model for the calculation of metal equivalents is based on the framework for the Natural Capita Protocol.$

and smelters, measure the impact on water bodies in comprehensive water management programs to ensure we minimize any risk to life in water and on land. During 2023, the discharges of metals to water increased. The underlying reasons for this were challenges with the water treatment systems at our Odda and Rönnskär smelters. This is being addressed by, for example, the construction of a new water treatment plant at Odda.

Resource usage and turning waste into value

Our most important target for waste regards safe waste management, which we have formalized in the target to implement Global Industry Standard for Tailings Management (GISTM) at all our tailings facilities, located at both active and closed operations, by 2025. We are also committed to minimizing the current waste streams at our operations. We are driving projects that aim to produce products from current residue and recover more valuable metals, an area where we see vast opportunities. For instance, we have developed a carbon dioxide free Supplementary Cementitious Material – a product possible to produce from all iron containing residues that come as a waste stream from the metal production at our smelters. For other hazardous waste streams containing elements such as mercury, arsenic or cadmium, we store the waste in safe repositories underground or in mountain caverns, while performing research and development targeted at finding use cases for it. These solutions help to eliminate the hazardous elements from being used in society and protect the environment from harm.

Waste diverted from disposal by method (metric tons)	2023	2022
Non-hazardous waste, total	81,785	106,923
Recycled (external)	8,152	9,873
Used for construction (external)	352	747
Used for backfilling (internal)	1,500	1,500
Other recovery operations (external)	71,782	94,803
Hazardous waste, total	37,593	43,089
Recycling (internal)	10,559	11,633
Recycling (external)	1,832	3,143
Slag to further enrichment (external)	2,289	1,773
Other recovery operations (internal)	22,879	26,482
Other recovery operations (external)	33	58
Total waste diverted from disposal	119,378	150,012

Biodiversity

The degradation of ecosystems and biodiversity is a growing concern and highlights the strong relationship between nature and human activities. Our operations have a negative impact on ecosystems and biodiversity when using land for mining and smelting, and we have a number of activities aimed at compensating for this.



Information sign at Boliden's first Sustainability Park, located close to our Aitik mine

Contributing to biodiversity by 2030

To compensate for our impact we have set the target to contribute positively to biodiversity by 2030 in all regions where we operate. Our operations shall be sustainable throughout the entire value chain - from prospecting and production, through closure planning and closure in the long-term. One core principle for achieving increased biodiversity is to operate in accordance with a mitigation hierarchy: avoid any impact if possible, minimize impact that cannot be avoided, restore impacts through rehabilitation and ecological restoration and compensate for any residual impacts.

Biodiversity Management Plans have been developed for our Kevitsa and Garpenberg sites, and plans for the remaining business units are in progress. The plans reinforce how we work with biodiversity and ultimately strive toward creating a net gain for biodiversity at our sites in collaboration with local communities and other key stakeholders. Boliden assesses biodiversity performance at our operating sites and demonstrates responsible management by mitigating and reversing biodiversity impacts while sustaining the facilities' dependencies.

A selection of compensation activities during 2023

- At Kylylahti the work with the extensive plan for ecological rehabilitation at the closed mine site was completed. This involved the creation of wildflower meadows and wetlands, and biodiversity enhancements in existing woodlands with the creation of dead wood habitats and controlled burning.
- Rehabilitation of the closed mine site in Långdal continued with an extensive program for ecological rehabilitation, both on land and in water. The plan includes re-establishment of different forms of ecosystem services and to bring people back to the site by developing a sustainability park.
- Partnerships were established to harvest meadow cuttings from a local conservation area, as well as tree planting for each visiting artist at the Skellefteå concert hall to recreate a deciduous woodland.
- Extensive ecological rehabilitation was initiated at the closed mine Rävlidmyren, where earth works are completed and habitats will be created in 2024.
- At the zinc smelter in Kokkola the sea was stocked with around 52,000 whitefish and 26,000 trout to compensate for the impact of effluents on fish stocks. In addition, in co-operation with local fishermen and fishing communities we aim to stock 3.5 million juvenile whitefish every
- Boliden's first Sustainability Park, called Sarkanenä, was opened near Aitik. Read more about it on page 7.

The table shows the size of Boliden's operations and whether they include any protected areas

Sites	Operation	Country	Size, ha	Protected areas
Aitik	Mine	Sweden	9,197	Yes ^{1) 2)}
Bergsöe	Smelter	Sweden	13	Yes ²⁾
Boliden Area	Mine	Sweden	6,904	Yes ²⁾
Garpenberg	Mine	Sweden	1,748	Yes
Harjavalta	Smelter	Finland	527	Yes ²⁾
Kevitsa	Mine	Finland	1,420	Yes ^{1) 2)}
Kokkola	Smelter	Finland	340	Yes ²⁾
Odda	Smelter	Norway	40	No
Rönnskär	Smelter	Sweden	153	Yes ²⁾
Tara	Mine	Ireland	1,003	Yes ²⁾
Old mining areas and forests	_	Sweden	6,225	Yes ^{1) 2) 3)}

⁹ Protected area within the Boliden operating area. ⁹ Protected area adjacent to Boliden's operations (closer than 5 km). ⁹ Protected area partly within the Boliden operating area.

Tailings and dam safety management

Potential incidents at our tailings storage facilities constitute one of the most severe environmental risks for Boliden and adhering to the highest international standards for dam safety is therefore necessary for our success as a company.

Boliden's tailings storage facilities

Safe and responsible management of tailings storage facilities is of high importance to Boliden. These consist of tailings and clarification ponds with dam structures and associated critical infrastructure such as those for handling and treating water and conveying tailings. Tailings from the concentrator are deposited in the tailings pond, along with process water created as a result of our operations. In order to reduce the amount of water stored in the tailings pond, excess water is led from the pond to the clarification pond. This water is recycled as process water or is purified before being returned to the surrounding watercourses.

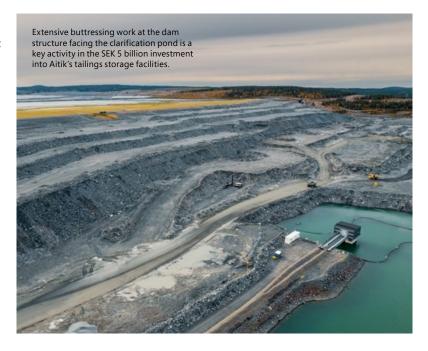
Procedures and organization

Boliden has set up a tailings and dam safety management system that administers the facilities for which we are responsible. We manage the risks continuously in a systematic way to ensure that the function and abilities of the structure meet international standards, meaning that risk levels are kept as low as virtually possible. Every tailings storage facility has its own dam safety organization to ensure compliance with laws, requirements, standards and obligations. Monitoring takes place in the form of regular inspections, sometimes drone assisted, and readings collected from instrumentation by means of innovative solutions are evaluated against set limits. In the event of a deviation from a limit value, there are established emergency procedures and action plans. Boliden also uses independent auditors at regular intervals to continuously improve and ensure compliance with best international standards.

Development during 2023

- No significant incidents occurred at our tailings storage facilities.
- Execution of Aitik's SEK 5 billion dam safety project started in April 2023 and will run for two years. The dam safety measures consist of stabilization through extensive foundation preparation and buttressing work to improve the stability of some of the dam embankments. The project also includes relocation and reconstruction of impacted infrastructure such as pump stations and haulage roads.
- Garpenberg was permitted to continue the initiated change to centerline dam construction.
- Implementation of the Global Industry Standard on Tailings Management continued.

Waste from extractive industries (tonnes)	2023	2022
Reuse – backfilling of mine		
Tailings	1,870,000	2,128,000
Reuse – construction material		
Tailings	1,141,000	1,014,000
Tailings management facility	52,814,000	56,172,000



Reclamation

Our presence has a significant impact on the landscape where we operate and it is both out of legal and moral obligation to reclaim the land once operations have ceased to ensure its accessibility to future generations.



Reclamation work at the closed Rävlidmyr mine.

Reclamation of active and closed sites

An important part of Boliden's work after mining has ceased is the reclamation of the land we used to ensure the land can be used again in the future. In addition to the successive reclamation measures carried out at active facilities, we manage around 30 closed sites. These historical sites are monitored systematically and reclamation activities are carried out where needed.

Area-specific methods

Conditions such as topography, water flows, groundwater levels, and the nature of waste determine the methods used in reclamation, and according to global guidelines, every active mine should draw up a site-specific mine closure plan. To minimize our environmental impact in closed mining areas, we carry out collaborative projects with a large number of organizations, universities and companies, and also conduct research to develop new technologies with the aim to, for example, promote biodiversity. Depending on the wishes of the local community, reclamation can, in addition to the restoration of nature, also be directed toward creating added value in the form of recreational areas or favorable conditions for other industries.

Development during 2023

- We increased our provisions for reclamation by SEK 3.8 billion. The reason for this was mainly to ensure effective reclamation after the closure of Aitik as its expected life of mine, subject to permit, has been extended by approximately 20 years.
- The remediation project at the Åkerberg mine continued during 2023. Crushed waste rock was transported to Kankberg, to be used as backfill in the mine. Road material to all mines in the Boliden area has also been produced and delivered from Åkerberg. Electric crushing at the site started and will continue over the coming years.

- The second year of the reclamation project in Rävlidmyr mine focused on covering the mine waste that was excavated from the site in 2022 with a layer of compacted till. Extracted from a local burrow at the site, due to its natural clay content the till is suitable for creating a compacted low permeable layer on top of the mine waste to prohibit further oxidation and infiltration. The technical part of the remediations was completed and finalization of the project ecological reclamation, in accordance with Bolidens Biodiversity commitment, is planned for 2024.
- The feasibility project for land remediation and restoration of part of the southern industrial area in Garpenberg, the site of the former processing plant, was finalized. Remediation works have begun and, with consecutive covering of mine waste, will continue during 2024 and 2025.
- Closure planning of the open pit in Boliden has continued with numerical ground water modelling as a tool to support the decision between closure options. The open pit is situated amidst several legacy and operational assets. Thus, improving the understanding of the complex situation has been a key to finding a suitable closure option.
- Closure planning in Maurliden has entered the feasibility stage. The project evaluates aspects such as ground and surface water management, closure of the waste rock facility including relocation, remediation and reclamation, as well as pit backfill with low permeability filling material. The preparation of a permit application for the improvements in the planned closure is also underway.

 $Some\ of\ our\ most\ significant\ restoration\ projects\ in\ recent\ years$

Habitats restored	Type of activity	Size, ha	Start	End
Långsele	Reclamation work	5.5	2018	2022
Gillervattnet	Reclamation work	300	2014	2024
Näsliden	Reclamation work	7	2015	2020
Old Forests aitik	Ecological compensation	837	2017	2022
Långdal	Reclamation of work	25	2019	2024
Lavar	Reclamation work	14	2016	2022

Responsible business

Good ethics are essential for sustainable, successful business. This is reflected both in the way we conduct our own operations and in our relationships with business partners.



Ethics and compliance

The Group function for Ethics and Compliance supports the company to operate in accordance with the relevant regulatory frameworks, international law and regulations, the EU's legal regulations and national law. Furthermore, the function makes sure Boliden's operations are conducted in accordance with Boliden's internal policies and instructions. The department is responsible for the strategic development and coordination of the Group's work in the areas of anti-corruption, competition law, personal data protection, sanctions, human rights, anti-money laundering and terrorist financing.

Additional responsibilities include compliance with Boliden's Code of Conduct and Business Partner Code of Conduct, as well as handling and investigating matters reported through Boliden's whistleblower system. The function also supports the commercial departments, including procurement and sales, in the evaluation of business partners from an ethical and compliance perspective.

Since 2022, the function conducts an annual assessment of ethical risks together with participants from all parts of the organization.

The Code of Conduct

The Code of Conduct provides a framework for corporate responsibility based on the company's values and ethical principles. All employees and members of the Board are subject to the Code of Conduct, which is based on international standards and relevant legislation, and which expresses the Group's values. As a complement to the Code, there are internal policies related to a large number of areas that all employees are expected to comply with.

In 2023, Boliden launched and rolled out a Code of Conduct handbook to the whole organization. The handbook elaborates on our Code of Conduct policy and other Group policies, and serves as a practical guideline for ethical behavior within our organization. In addition there is mandatory training for all employees, as an e-learning or classroom training. All employees must conduct the training in one year, between the fourth quarter 2023 and the third quarter 2024. For all new employees it is a part of the onboarding process and it must be completed within the first month of employment. From its launch on October 1 until year end, 2,722 employees completed Boliden's Code of Conduct training.

Anti-corruption and anti-money laundering

Boliden has policies, processes and procedures to make sure the necessary measures are in place and has trained employees in order to increase awareness of how to behave to combat bribery, corruption and money laundering. These are priority measures to minimize business risks and avoid fines, sanctions and reputational risks related to this area. During 2023, 1,340 (993) employees completed Boliden's anti-corruption training. The company had 0 (0) confirmed cases of corruption during 2023.

Competition law

In 2023, we continued to strengthen employee awareness of, and compliance with, applicable competition law. Based on the risk assessment carried out during the previous year, updated steering documents were published and training was conducted for the relevant business units and employees. During the year, there were 0 (0) initiated or ongoing legal actions with respect to anti-competitive behavior.

Sanctions

Boliden keeps up to date with the latest international sanctions and has good knowledge of its business partners and their potential connections with sanctioned parties. Since several years back, Boliden has had a sanctions policy with accompanying guidelines that all employees must comply with. This is especially important for the procurement and sales departments, and other departments dealing with external business partners, who must conduct sanctions control on all existing and potential business partners before entering a new agreement. Continuous screenings are conducted for the existing supplier and customer base. All contractual agreements include specific sanctions clauses.

In 2023, sanctions training was conducted for several departments and 99 employees completed the training.

Evaluation of business partners

Boliden acquires raw materials, energy, services and equipment from suppliers around the world. Operating in a global market, with different legislation, ethical approaches, working conditions and environmental standards, requires an overarching strategy for managing risks in the supply chain to ensure operating permits.

Our Business Partner Code of Conduct applies to all business partners, including customers and suppliers, and reflects the minimum requirements we place on them. Business partners must approve our Business Partner Code of Conduct as well as ESG and sanctions clauses as part of the agreement. The Code specifically addresses requirements within human rights, labor rights, health and safety, environment, responsible value chain, business ethics and



anti-corruption, and it prohibits the use of conflict minerals. It requires that the same principles be applied throughout the business partner's own supply chain. We also include the option of terminating the agreement in the event of a material breach of our Business Partner Code of Conduct.

Boliden's Business Partner Code of Conduct was updated during 2023 to better align with the latest Organisation for Economic Co-operation and Development (OECD) guidelines. The Business Partner Code of Conduct is further aligned with the United Nations Guiding Principles on Business and Human Rights standards, and our internal commitments to comply with various international standards, such as the International Council on Mining and Metals (ICMM).

Boliden monitors compliance with the Business Partner Code of Conduct by conducting, for example, regular risk assessments, business partner audits, interviews and follow-up meetings.

Transparency

Boliden publishes an annual report on payments to authorities. The report covers payments to government authorities in Sweden, Finland and Ireland related to extractive industry operations. Boliden also supports the Extractive Industries Transparency Initiative, which demands good corporate governance in those countries where the regulations are implemented.

Human rights

Since 2022, Boliden has a human rights commitment and has for a longer time had several other human rights-related policies and commitments as regarding, for example, indigenous peoples and diversity. Boliden has also embedded human rights due diligence into the management systems by integrating it into several different business processes, including global and local human rights impact assessments, business partner evaluations and audits, business partner contracting and the annual risk process.

Being subject to the Norwegian Transparency Act, Boliden is obliged to conduct due diligence on an ongoing basis. During 2023, Boliden conducted several activities to strengthen its approach to human rights and human rights due diligence. Comprehensive training was offered to key personnel across the organization, a human rights working group was established, a human rights due diligence gap analysis was conducted and local human rights impact assessments were conducted on two of the mine sites. The human rights impact assessment reports showed a total of 7

heightened human rights impacts, and 5 that were deemed salient. The salient impacts cover workplace health and safety (for example severe physical injuries and exposure to toxic materials), contractors and supply chain (for example discrimination and forced labor), indigenous peoples (Sámi, for example negative effects on their cultural heritage), tailings and water (for example dam breach or environmental impacts negatively affecting peoples' life). A roadmap for continued work with human rights and human rights due diligence is under development and will be finalized by the beginning of 2024. The roadmap will build on the gap analysis together with the salient impacts.

Our Diversity Policy states that if a discrimination incident should occur, the affected employee shall initially raise the matter with their manager and then with the company's HR function, or through the whistleblower reporting system (accessible via the intranet and Boliden's external website). During 2023, 3 incidents of discrimination were reported through formal grievance mechanisms. These were reviewed and remediation plans were implemented for all with the results reviewed through a routine of practice.

Reporting grievances and wrongdoings

The Group has operated a whistleblower channel for several years that allows internal and external stakeholders to safely and anonymously report suspected or actual serious irregularities and wrongdoings. 22 (16) cases were reported via the whistleblower channel throughout 2023. Both the whistleblower channel and stakeholder portal for grievances are accessible from Boliden's external website. From 2023, all labor law consequences are regularly reported and followed up centrally. If any irregularities are discovered from investigations, disciplinary actions must be taken. Reprisals against anyone submitting reports in good faith will not be tolerated. Group management and the Board receive regular reports on risks, deviations, action plans and compliance.

Whistleblower reports	2023	2022
Health & Safety	9	4
Environment	0	3
HR	4	1
Harassment	2	4
Conflicts of interest	1	1
Fraud	5	3
Corruption	0	0
Other	1	_
Total	22	16

Minimizing impact and respecting special rights

Much of Boliden's mining and exploration activities are in areas where indigenous peoples also have interests. Boliden is working actively to minimize the effects our operations have on these interests and is committed to safeguarding the rights of indigenous peoples.



Securing special rights of indigenous people

In vast parts of Sweden and Finland, the Sami population, which is recognized as indigenous peoples, have specific rights which affects Boliden's way of working when it comes to both operations and developing projects. To highlight and ensure these special rights, Boliden has together with industry peers developed and implemented a commitment within the Swedish Association of Mines, Mineral and Metal Producers (Svemin). Boliden has also implemented a commitment regarding indigenous peoples in line with the International Council on Mining and Metals (ICMM) position statement.

In relation to the commitments above, Boliden seeks to engage with potentially impacted indigenous peoples to ensure that the development of mining and metals projects fosters respect for the rights, interests, aspirations, culture and natural resource-based livelihoods of indigenous peoples. When applicable, we also seek to design projects to avoid adverse impacts and to minimize, manage or compensate unavoidable impacts in line with the mitigation hiearchy. Lastly, we also seek to ensure sustainable benefits and opportunities for indigenous peoples when developing mining and metals projects. Many of Boliden's operations have been in production for several decades, and dialogues as well as collaborations have been developed accordingly.

Dialogues and knowledge development

Apart from exploration activities, the mining units affected by the special rights of indigenous peoples are Aitik, the Boliden Area, Garpenberg and Kevitsa. In recent years, much emphasis has also been put on ensuring these rights and the mitigation hierarchy in the development projects Liikavara and Nautanen around Aitik as well as the expansion of the Kankberg mine in the Boliden Area.

In order to find ways for the mining industry and indigenous peoples to co-exist in the long run, Boliden pursues knowledge development and continual dialogues to provide the right framework and conditions for such co-existence. The possibility to remediate former mining areas so they may once more serve as, for example, functional reindeer husbandry areas is also a crucial matter within this context.

Within Business Area Smelters, Boliden purchases concentrates from other mining companies. To ensure that the special rights of indigenous peoples are not endangered in our supply chain we conduct a due diligence process, where risks and activities are outlined, before any contracts are signed. When applicable, we also follow up the results through on site audits to ensure that indigenous peoples are respected.



Financial development during the year¹⁰

Boliden's earnings for 2023 decreased compared to the previous year. Lower volumes primarily due to lower grades in mines, the fire in Rönnskär and cost inflation caused the deterioration in earnings. Prices and terms also contributed negatively.

Group

Sales revenues and operating profit

Boliden's sales revenues in 2023 totaled SEK 78,554 m (86,437) and operating income totaled SEK 8,287 m (15,895). Lower volumes primarily due to lower grades in mines, the fire in Rönnskär and cost inflation caused the deterioration in earnings. In addition, prices and terms contributed negatively. Excluding process inventory revaluation, the consolidated operating profit was SEK 7,810 m (15,672). The operating profit for Business Area Mines was SEK 3,111 m (9,318), and the operating profit for Business Area Smelters excluding revaluation of process inventory was SEK 4,485 m (5,916). The absence of a tank house had a major negative impact on Rönnskär's profitability. This was due to lower metal premiums and refining charges, as well as a decreased volume of free metals. Scheduled maintenance shutdowns for Smelters burdened profits with SEK -670 m (-500) in the forms of lower production and higher costs. Consolidated operating costs before depreciation increased to SEK 21,551 m (20,059), primarily due to inflation. Earnings for 2023 included an item affecting comparability in the amount of SEK -53 m for early retirements in Tara, and SEK -163 m related to the Rönnskör fire. In addition, earnings were affected negatively by SEK 200 m linked to Rönnskär's lost production and cancelled deliveries. Earnings for 2023 also included an insurance payment of 176 SEK m. This payment relates to the flooding in Tara in the fourth quarter of 2021. Finally, earnings for 2023 included restructuring costs in Smelters amounting to SEK -55 m, consisting of early retirement costs in Rönnskär and asset write-downs in Odda. Earnings for 2022 included an item affecting comparability in the amount of SEK -259 m attributable to an impairment of exploration rights in Finland.

Capital expenditure

Boliden's capital expenditure in 2023 totaled SEK 15,515 m (10,022). In Mines, the capital expenditure in a new dam structure in Aitik was one of the year's major projects, as was the expansion of the Rävliden deposit in the Boliden Area. The largest investment in Smelters was the Odda expansion.

Cash flow

Cash flow from operating activities before changes in working capital was SEK 11,461 m (19,148). Including a change in working capital, the total was SEK 12,183 m (16,398). The transformation of Rönnskär's business model, from selling copper cathodes to selling copper anodes, increased the running working capital level by about SEK 1 billion. However, this was partly compensated by less tied-up working capital as a result of lower metal prices. The decrease in working capital tied-up contributed positively to cash flow in the amount of SEK 722 m (-2,750). Free cash flow totaled SEK -3,354 m (6,329) and tax paid for the year was SEK 1,763 m (2,815).

Financial position

On December 31, 2023, Boliden's net debt was SEK 10,728 m (-15), which corresponds to a net debt/equity ratio of 19 percent (0). Equity was SEK 56,420 m (58,325), including the mark-to-market of currency and interest rate derivatives in the amount of SEK 290 m (262) net after tax effect. The average term of Boliden's total approved loan facilities at year-end was 3.3 years (3.4). As of December 31, 2023 the average interest rate in the debt portfolio was 4.3 percent (2.5), and the fixed interest term was 1.1 years (1.7). At year-end, Boliden's current liquidity, in the form of cash and cash equivalents and unutilized committed credit facilities with a term of more than one year, totaled SEK 14,843 m (23,005). For further information, see note 29.

The Parent Company

The Parent Company Boliden AB conducts limited operations and is in a tax agreement with Boliden Mineral AB. For further information, see page 83.

Guidelines for remuneration to the CEO and other senior executives

Boliden's remunerations to senior executives consist of fixed salary, variable remuneration, pension benefits and other benefits. Remunerations to senior executives are described in note 5.

¹⁾ Boliden presents certain financial metrics on pages 42-47 that are not defined according to IFRS.
For definitions, explanations and calculations of the financial metrics used by Boliden, see www.boliden.com. Page 136 shows the financial metrics referred to.

Performance analysis

SEK m	2023	2022
Operating profit	8,287	15,895
Revaluation of process inventory	477	223
Operating profit excl.		
revaluation of process inventory	7,810	15,672
Change		-7,862
Analysis of change		
Volumes		-6,456
Prices and terms		-871
Metal prices		-3,142
By-product prices		-618
Treatment and refining charges		438
Metal premiums		1,239
Exchange rate effects		1,212
Costs		-611
Depreciation		-12
Items affecting comparability		164
Other		-76
Change		-7,862

Result

SEK m	2023	2022
Revenues	78,554	86,437
Operating costs before depreciation	21,551	20,059
Depreciation	6,244	6,162
Operating profit excl. revaluation of process inventory Operating profit	7,810 8,287	15,672 15,895

Investments

SEK m	2023	2022
Mines	8,742	6,159
Smelters	6,773	3,862
Other	0	1
Total investments	15,515	10,022

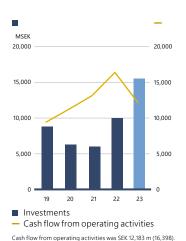
Capital structure and returns

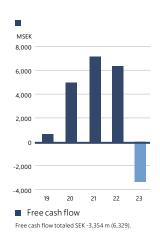
	2023	2022
Balance sheet total, SEK m	101,957	96,376
Capital employed, SEK m	70,837	62,249
Equity, SEK m	56,420	58,325
Net debt, SEK m	10,728	-15
Return on capital employed, %	12	27
Return on equity, %	11	23
Equity/assets ratio, %	55	61
Net debt/equity ratio, %	19	0

Cash flow

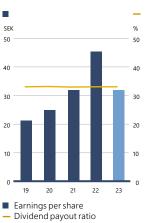
2023	2022
11,461	19,148
722	-2,750
12,183	16,398
-15,537	-10,069
-3,354	6,329
	11,461 722 12,183 -15,537

Investments and cash flow Free cash flow from operating activities



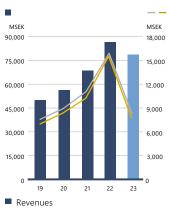


Earnings per share and dividend payout ratio



Earnings per share were SEK 22.21 (45.37) The proposed ordinary dividend is SEK 7.50 (15.00), which is a dividend payout ratio of 33.8 percent (33.1).

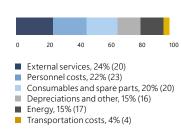
Revenues and operating profit



Operating profit

Operating profit excl. revaluation of process inventory

Breakdown of operating costs



Development Mines

Financial information Mines

The majority of Business Area Mines sales are to Business Area Smelters, and take place on market terms. Revenues decreased to SEK 18,683 m (24,755), of which external sales totaled SEK 1,331 m (1,611). The operating profit for Mines decreased from last year's record level to SEK 3,111 m (9,318) mainly due to a combination of lower metal prices, grades and milled volumes. Total operating costs for Mines before depreciations were SEK 11,444 m (11,119). This corresponds to an increase of 3 percent (19) in local currency. External services contributed negatively while lower personnel expenses contributed positively. Capital expenditure totaled SEK 8,742 m (6,159). Major projects included investments in a new dam construction and a new water treatment system in Aitik, the initial face of the Liikavaara project, also in Aitik, and the expansion of the Rävliden deposit in the Boliden Area. Depreciations decreased to SEK 4,488 m (4,661), mainly as a result of decreased production of metal in concentrate. Depreciations in 2022 included an impairment

of exploration rights which was not the case in 2023. Aitik's operating profit was significantly lower than in 2022. The decrease was due to a negative combination of lower metal prices, grades and milled volumes, along with higher costs. The Boliden Area's operating profit was below the record profit of 2022, primarily due to lower metal prices. Garpenberg's operating profit decreased, year on year, due to less favorable market terms but also some disturbances in production. As such, Garpenberg failed to deliver record earnings for the third consecutive year. Kevitsa's operating profit decreased substantially. Lower metal prices, lower grades and operational issues contributed negatively. Tara's minor positive operating profit in 2022 turned into a large operating loss in 2023. In June 2023, it was resolved to place the Tara mine under care and maintenance. The mine was cash flow negative due to a combination of factors including a decline in the zinc price, high energy prices and treatment charges, general cost inflation and operational challenges. The business area's earnings for 2023 included an item

Key data

	2023	2022
Revenues, SEK m	18,683	24,755
Operating costs excl. depreciations, SEK m	11,444	11,119
Depreciations, SEK m	4,488	4,661
Operating profit, SEK m	3,111	9,318
Investments, SEK m	8,742	6,159
Capital employed, SEK m	34,751	31,470
Return on capital employed, % Number of employees (FTE)	9 2,914	31 3.553
	-,	0,000

Performance analysis

SEK m	2023	2022
Operating profit	3,111	9,318
Change		-6,207
Analysis of change		
Volumes		-4,761
Prices and terms		-2,034
Exchange rate effects		564
Costs		55
Depreciation		81
Items affecting comparability		381
Other		71
Change		-6,207

Operating profit

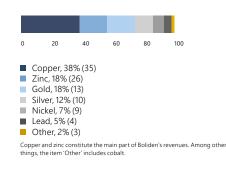
SEK m	2023	2022
Aitik	1,419	3,076
The Boliden Area	1,054	1,640
Garpenberg	2,473	3,359
Kevitsa	89	2,298
Kylylahti	-9	-269
Tara	-571	441

Revenues and operating profit

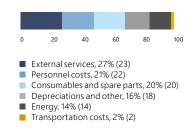


The decrease in operating profit compared to 2022 is due mainly to lower volumes.

Breakdown of sales per metal



Breakdown of operating costs



Operating costs, excluding depreciation, increased by 1 percent in local currencies

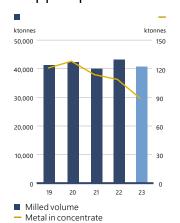
affecting comparability in the amount of SEK –53 m related to the early retirements in Tara. Its earnings in 2023 also included an insurance payment of SEK 176 m. This insurance payment related to the flooding in Tara in the fourth quarter of 2021. The business area's earnings for 2022 included an item affecting comparability in the amount of SEK –259 m attributable to an impairment of exploration rights in Finland.

Production Mines

The Business Area's milled volume was lower in 2023 compared to 2022. In addition, lower grades contributed negatively, which resulted in a lower production of metal in concentrate for all metals. However, production was positively affected by more normal rates of sick leave post Covid-19 pandemic, which increased the loading and haulage capacity in the open pits. Nevertheless, milled volumes in both Aitik and Kevitsa were below the record levels from 2022. Aitik only achieved its designed annual production rate of 45 Mtonnes of milled volume in the

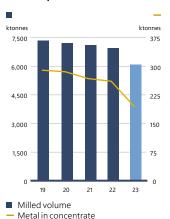
second quarter of 2023. Several production issues contributed negatively. An unplanned maintenance stop and unusually unfavorable weather conditions lowered Aitik's fourth quarter milled production by 2 Mtonnes. Because of an unplanned adjustment to the mining plan in Kevitsa, a larger proportion of mined production took place in areas with lower grades. Kevitsa's nickel grade fell 11 percent year on year. Garpenberg's milled volume reached a new annual record, despite some operational shortfalls. However, this was counteracted by lower grades leading to a lower production of zinc in concentrate compared to 2022. The Boliden Area's production of metal in concentrates fell short of 2022 mainly due to lower grades. Tara's milled volumes decreased by 47 percent relative to 2022 as the mine was placed under care and maintenance from July until the end of the year and its mill stopped on July 5. This contributed to a 25 percent decrease in Boliden's total production of zinc in concentrate compared to 2022.

Copper production



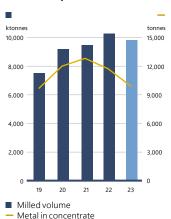
The production of copper in concentrate decreased mainly as a result

Zinc production



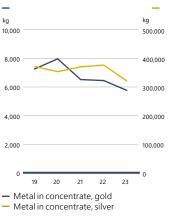
The production of zinc in concentrate decreased mainly due to

Nickel production



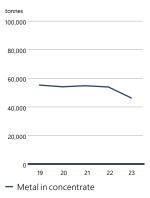
The production of nickel in concentrate decreased as a result

Gold and silver production



The decrease in the production of gold in concentrate is primarily explained by lower grades in Aitik and Kevitsa.

Lead production



The production of lead in concentrate decreased due to Tara in care and

naintenance.

Development Smelters

Financial information Smelters

Revenues for Business Area Smelters totaled SEK 77,197 m (84,787), and gross profit excluding revaluation of process inventory was SEK 15,577 m (15,703). Operating profit, excluding revaluation of process inventory, decreased from the 2022 business area record to SEK 4,485 m (5,916). This was mainly as a result of lower volumes. Including a revaluation of process inventory in the amount of SEK 477 m (223), operating profit totaled SEK 4,962 m (6,139). Total operating costs for Smelters before depreciations were SEK 9,635 m (8,652). This corresponds to an increase of 12 percent (19) in local currency. Costs increased largely driven by inflation and higher planned maintenance work. However, lower energy prices had a positive effect. Operating profit was affected in the amount of SEK -670 m (-500) by planned maintenance shutdowns. Capital expenditure totaled SEK

6,773 m (3,862). The largest investment in Smelters was the expansion in Odda. Depreciations increased to SEK 1,729 m (1,472), as a result of increased capital expenditure.

The fire that broke out in Rönnskär in June led to items affecting comparability totaling SEK -163 m. In addition, earnings in the second quarter were affected negatively by SEK 200 m linked to Rönnskär's lost production and cancelled deliveries. The absence of a tank house had a major negative impact on Rönnskär's profitability also for the remainder of the year. This was due to lower metal premiums and refining charges, as well as a decreased volume of free metals. Harjavalta noted lower earnings compared to the 2022 all time high. Harjavalta's earnings decrease should mainly be seen in the light of lower nickel prices. However, improved productivity in the nickel line contributed

Key data

	2023	2022
Revenues, SEK m	77,197	84,787
Gross profit excl. revaluation of process inventory, SEK m	15,577	15,703
Operating costs excl. depreciations, SEK m	9,635	8,652
Depreciations, SEK m	1,729	1,472
Operating profit excl. revaluation of process inventory, SEK m	4,485	5,916
Operating profit, SEK m	4,962	6,139
Investments, SEK m	6,773	3,862
Capital employed, SEK m	36,155	31,241
Return on capital employed, %	14	20
Number of employees (FTE)	2,478	2,447

Performance analysis

2023	2022
4,962	6,139
477	223
4,485	5,916
	-1,43
	-919
	567
	256
	-617
	-95
	-217
	-150
	-1,43°
	477

Operating profit

SEK m	2023	2022
Rönnskär	276	1,257
Harjavalta	1,093	1,926
Kokkola	1,927	1,307
Odda	645	613
Bergsöe	158	33
Other Smelters	386	780

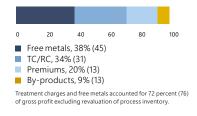
Revenues and operating profit



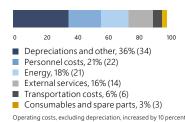
Operating profit excl. revaluation of process inventory

Operating profit excluding revaluation of process inventory was lower compared ous year, mainly due to lower volume

Breakdown of gross profit



Breakdown of operating costs



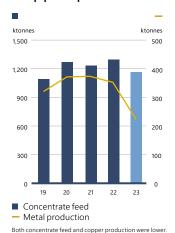
Operating costs, excluding depreciation, increased by 10 percent in local currencies compared to the previous year.

positively. Kokkola reported its highest operating earnings since 2006 and Odda set a new record. Both zinc smelters benefited from improved zinc treatment charges and higher metal premiums. Bergsöe's earnings increased compared to 2022 thanks to improved process efficiency. Its operating earnings were the strongest since 2007. The operating profit item "Other Smelters", which includes earnings from the Group's joint purchasing and sales companies, worsened in 2023 compared to 2022. This was due to deteriorating prices and terms.

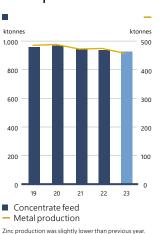
Production Smelters

The production of nickel in matte in Harjavalta reached a new record. Less planned maintenance, higher nickel content in raw materials and a more stable production process contributed positively. However, Smelters' production of gold did not reach the record from 2022. The fire in Rönnskär had a negative effect. The silver production fell sharply due to an equipment failure in Harjavalta. After the fire, Rönnskär, only produced anode copper, which led to a 55 percent year-on-year drop in its finished copper production. Zinc production decreased by 4 percent in 2023 compared to 2022. Low availablity of zinc concentrates, in the third quarter, and process disturbances had a negative effect. In addition, due to commercial reasons, part of Odda's production capacity was permanently closed on December 1st pending its new expansion. Lead production increased 7 percent relative to 2022. Production of lead alloys in Bergsöe reached a new record. The production of sulphuric acid was stable at a historically high level.

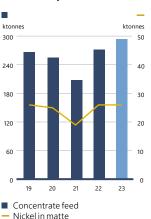
Copper production



Zinc production



Nickel production



Harjavalta's nickel concentrate feed was higher than the previous year.

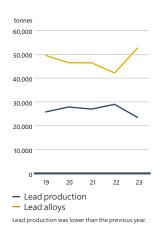
Gold and silver production



The absence of a tank house in Rönnskär had a negative

effect on precious metal production

Production of lead and lead alloys



Mineral Resources & Mineral Reserves

Mineral Resources and Mineral Reserves are the foundation for the future viability of a mining company's operations. As Mineral Reserves are reduced every year through mining activities, new additions through exploration and technical studies are vital to the viability of the operations.



Highlights

Development is ongoing to start production during 2024 in Rävliden (Kristineberg) and in Liikavaara (Aitik). Exploration continues to give good results in Nautanen north of Aitik. Due to a combination of factors causing unsustainable cash outflow, our Tara mine was placed under care and maintenance in July 2023.

Mineral Resources and Mineral Reserves

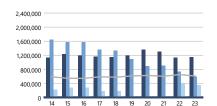
Boliden follows SveMin's recommendations for reporting exploration results, Mineral Reserves and Mineral Resources and strives to report according to the Pan-European Reserves and Resources Reporting Committee (PERC). The PERC standard is an internationally recognized reporting standard that has been recognized by SveMin in Sweden, FinnMin in Finland and Norsk Bergindustri in Norway for exploration and mining companies in the Nordic countries.

Aitik

In Aitik, Liikavaara is just about to come into production. Liikavaara is a part of Aitik Mineral Resource and Mineral Reserve and will be included in the production from 2024. Exploration and evaluation are also underway at the Nautanen deposit approximately 15 km north of Aitik, which is reported separately.

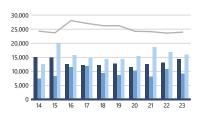
An improved and more specified cost model led to pit design changes and increased Mineral Reserves of 12 Mtonnes, despite mining of 41 Mtonnes in 2023. The Mineral Resource, which in the open pit involves tonnage that, with today's estimated prices and costs, lies outside the planned final open pit, decreased by 200 Mtonnes.

Aitik



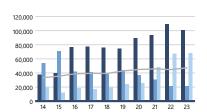
A small increase of Mineral Reserves and a reduction of Mineral Resources.

The Boliden Area



Increase of Mineral Reserves but a reduction of Mineral Resources.

Garpenberg



A reduction of Mineral Reserves and almost unchanged Mineral Resources.

- Proven and probable Mineral Reserves ■ Measured/indicated Mineral Resources ■ Inferred Mineral Resources — Production ×15 All values in ktonnes.



Electrified ore haulage at Boliden Kevitsa.

Boliden Area

In the Boliden Area, the total Mineral Reserves increased by 1.2 Mtonnes (10%) mainly by converting mineral resources in the Rävliden mineralisation in Kristineberg. New resources added by exploration have been limited and since larger quantities are converted to reserves the resources have decreased with 2.0 Mtonnes (7%). 1.6 Mtonnes were milled in the Boliden Area in 2023.

Garpenberg

In Garpenberg, successful exploration activities, infill drilling and technical studies have for many years given a significant increase in both Mineral Resources and Mineral Reserves. However, this year the reserve decreased by 8.4 Mtonnes (8%) due to higher cut-off, redesign and 3.1 Mtonnes milled in 2023. The resource increased marginally with 0.5 Mtonnes (0.6%).

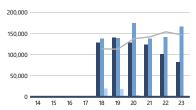
Kevitsa

The mining waste dilution in the upper parts of the new push-back is higher than in deeper central parts of the pit. That has affected plans and the Mineral Reserve grades. Grades are down by approximately 10 percent. The uncertain permit situation for the tailing dam expansion has caused 20 Mtonnes to be converted back from reserve to resource. The Mineral Reserve has decreased with 19 Mtonnes (19%) while the Mineral Resource increased with 25 Mtonnes (17%). 9.8 Mtonnes were milled in 2023.

Tara

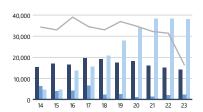
Tara was placed under care and maintenance in July 2023. That also stopped all exploration towards Tara Deep. The existing Life of Mine Plan remains economically feasible with long term assumptions and Mineral Reserves are still declared for Tara. No new resource estimations have been made, and the reserves and resources are last year's figures minus mining of 1.1 Mtonnes until operations stopped. Preparatory work, including a new production plan, is underway for a possible restart in 2024.

Kevitsa



A reduction of Mineral Reserves and an increase of Mineral Resources.

Tara



Last year's figures minus mining until operation stopped.

■ Proven and probable Mineral Reserves ■ Measured/indicated Mineral Resources ■ Inferred Mineral Resources — Production ×15 All values in ktonnes.

About the classification

Mineral Resources and Mineral Reserves are estimated separately and divided into different categories. Conditions in the form of costs and metal prices are established at the beginning of the year and used in all estimations made during the year. Boliden's Mineral Resources are exclusive of Mineral Reserves. When a Mineral Resource is converted to a Mineral Reserve, the quantity is removed from the Mineral Resource.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are subdivided in order of increasing geological confidence into Inferred, Indicated and Measured categories.

A Mineral Reserve is the economically mineable part of a Measured Mineral Resource and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at a Pre-Feasibility Study or Feasibility Study level, as appropriate, that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the mineral deposit. Geological evidence is derived from the adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Measured Mineral Resource

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the Mineral deposit. Geological evidence is derived from the detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between



points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. A Measured Mineral Resource may be converted to a Proved Mineral Reserve or to a Probable Mineral Reserve.

Probable Mineral Reserve

A Probable Mineral Reserve is the economically mineable part of an Indicated Mineral Resource, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.

Proven Mineral Reserve

A Proven Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

Supplementary information on Mineral Resources and Mineral Reserves

Supplementary information in the form of a summary report per mine and project is available on Boliden's website under Operations – Exploration – Mineral Resources and Mineral Reserves.

Regulations, codes and competent persons

Boliden follows the recommendations of the Swedish Mining Association (SveMin) for reporting exploration results, Mineral Resources and Mineral Reserves and strives to report according to the Pan-European Reserves and Resources Reporting Committee (PERC). The PERC standard has clear requirements for documentation and the Competent Persons, who must evaluate the information that companies report. All summarizing reports for Mineral Resources and Mineral Reserves per project and mine available on the Boliden website, are reviewed and approved by the competent persons presented in the respective report. This summary of Mineral Resources and Mineral Reserves has been reviewed and approved by Gunnar Agmalm, Competent Person and Head of Ore Reserves and Project Evaluation, Boliden, who is a member of The Australasian Institute of Mining and Metallurgy (AusIMM) and The Fennoscandian Association for Metals and Minerals Professionals (FAMMP), both of which are approved organizations for competent persons according to PERC.

February 2024 Gunnar Agmalm

Mineral Resources as of December 31, 2023

		Quantity, k	tonnes				2023							
		2023	2022	Au 9/t	Ag 9/t	Cu %	Zn %	Pb %	Ni¹) %	Co¹) %	Pt 9/t	Pd 9/t	Te ²⁾ 9/t	Mo 9/t
Aitik area														
Aitik	Measured	196,000	154,000	0.07	0.5	0.14								
	Indicated	393,000	581,000	0.15	0.9	0.19								
	Inferred	351,000	412,000	0.07	0.7	0.17						-		
Nautanen	Measured													
	Indicated	13,800	12,700	0.8	6	1.6								109
	Inferred	11,700	8,700	0.8	5	1.4								101
Boliden area														
Sulfide mineralizations														
Kristineberg	Measured	370	660	0.2	37	0.4	3.1	0.2						
	Indicated	6,300	6,700	0.4	66	0.6	2.8	0.4						
	Inferred	6,100	5,900	0.4	43	0.7	2.7	0.3						
Petiknäs N	Measured													
	Indicated	360	360	8.1	72	1.6	2.8	0.3						
	Inferred	1,700	1,700	4.4	54	0.9	2.1	0.3						
Renström	Measured	,												
	Indicated	800	1,000	1.5	82	0.6	3.5	0.7						
	Inferred	1,200	1,200	1.5	81	0.4	4.5	0.9						
Strömfors	Measured	1,	,			***								
	Indicated													
	Inferred	2,600	2,600	3.0	81	0.2	4.4	0.8						
Total ³⁾	Measured	370	660	0.2	37	0.4	3.1	0.3						
Sulfide mineralizations	Indicated	7,500	8,100	0.9	68	0.7	2.9	0.4						
	Inferred	11,600	11,400	1.7	57	0.6	3.2	0.4						
Gold mineralizations		.,,	.,,											
Kankberg	Measured	170	220	4.4	10								156	
	Indicated	190	710	5.4	8								204	
	Inferred	900	1,500	4.0	6								158	
Älgträsk	Measured	300	1,500	1.0									130	
riigirask	Indicated	1,100	1,100	2.8	5									
	Inferred	3,500	3,500	2.0	4									
Total ³⁾	Measured	170	220	4.4	10									
Gold mineralizations	Indicated	1,300	1,800	3.2	5									
	Inferred	4,400	5,000	2.4	4									
Garpenberg	Measured	70	70	0.24	108	0.03	2.8	1.0						
darpenberg	Indicated	21,600	21,600	0.41	70	0.05	2.7	1.3						
			67,400	0.41	57	0.05	2.7	1.1						
Vavitas	Inferred Measured	67,900			31		2.3	1.1	0.22	0.011	0.17	0.11		
Kevitsa	Indicated	60,700 105,700	52,700 88,900	0.09		0.34			0.23	0.011	0.17	0.11		
										0.012	0.12			
	Inferred	290	360	0.04		0.22	F 7	12	0.13	0.011	0.06	0.03		
Tara	Measured	30	30				5.7	1.3						
	Indicated	2,100	2,100				4.9	1.8						
Laver	Inferred	38,100	38,200				7.8	1.6						
Laver	Measured	724.000	734000	014		0.24								27
	Indicated	734,000	734,000	0.14	4	0.24								37
De aldido	Inferred	227,000	227,000	0.11	5	0.19								30
Rockliden	Measured	000	200	0.00	100	2.1		0.0						
	Indicated	800	800	0.08	102	2.1	4.4	0.9						
	Inferred	9,200	9,200	0.05	47	1.7	3.9	0.4						

Boliden reports Mineral Resources excluding Mineral Reserves to avoid double counting the same tonnage. This means quantities converted to Mineral Reserves are deducted from Mineral Resources.

Nevitsa reports Ni and Co in sulphide compounds.
 Te only in Kankberg
 Totals are calculated on precise values and sometimes apparent differences may occur in the totals.

Mineral Reserves as of December 31, 2023

		Quantity,	ktonnes					2023	}				
		2023	2022	Au 9/t	Ag 9/t	Cu %	Zn %	Pb %	Ni¹¹ %	Co¹) %	Pt 9/t	Pd 9/t	Te 9/t
Aitik	Proven	110,000	126,000	0.08	1.1	0.18							
	Probable	1,033,000	1,005,000	0.17	1.3	0.24							
Boliden Area													
Sulfide mineralizations													
Kristineberg	Proven	560	360	0.3	67	0.8	3.9	0.4					
	Probable	4,800	4,200	0.3	69	0.8	4.7	0.5					
Renström	Proven	260	440	1.8	89	0.6	5.2	0.8					
	Probable	4,800	4,200	1.8	101	0.3	5.7	1.1					
Total ²⁾	Proven	830	800	0.8	74	0.7	4.3	0.6					
Sulfide mineralizations	Probable	9,600	8,300	1.0	85	0.5	5.2	0.8					
Gold mineralizations											-		
Kankberg	Proven	1,900	2,200	3.7	12								204
	Probable	1,900	1,600	4.0	7								183
Garpenberg	Proven	17,200	18,700	0.25	98	0.04	3.0	1.3					
	Probable	83,700	90,600	0.31	88	0.05	2.5	1.2					
Kevitsa	Proven	47,900	73,200	0.10		0.31			0.20	0.009	0.20	0.13	
	Probable	34,200	28,000	0.08		0.32			0.21	0.010	0.17	0.11	
Tara	Proven	700	1,100				6.5	1.4					
	Probable	13,300	13,900				5.5	1.5					

Planning prices/long-term prices 20231)

Planning prices	Long-term prices 2023	Change compared to 2022
Zinc	USD 2,800 /tonne	+200
Copper	USD 7,800/tonne	+600
Nickel	USD 20,000/tonne	+3000
Lead	USD 2,000/tonne	
Gold	USD 1,400/oz	
Silver	USD 20/oz	
Palladium	USD 1,300/oz	
Platinum	USD 900/oz	
Cobalt	USD 20/lb	
Tellurium	USD 35/kg	
Molybdenum	USD 8/lb	
USD/SEK	9.00	
EUR/SEK	9.90	
EUR/USD	1.10	

 $^{^{\}eta} Boliden uses the planning prices as a basis for estimations of Mineral Resources and Mineral Reserves as well as, for example, for calculations on investments and operational development.$

Newitsa reports Ni and Co in sulphide compounds.
Totals are calculated on precise values and sometimes apparent differences may occur in the totals.

Risk management

Boliden is exposed to various types of risks that could have a substantial impact on the Group. Work is performed continuously to reduce and monitor risks through effective risk management where all business units have implemented processes to identify risks. As part of the risk work, a consolidated risk scenario is performed on an annual

basis to identify and evaluate all risks within the Group. In the model below, the closer the identified risks are located to the center, the higher we assess the likelihood of their occurrence with a negative impact as a result on Boliden. The tables on pages 54–57 describe the risks and how we manage them.



Operational risks

Description of risk

Risk Management

Comments for the year

Health and safety

We handle large material flows both under and above ground, and from time to time our employees and contractors are exposed to heavy machinery, lifting, high temperatures and hazardous substances. Furthermore, many people work in shifts, which increases psychosocial risks. Deviations from established procedures, inadequate planning and deficient resource assignment can create dangerous situations and increase the risk of injury.

In order to achieve our target of accident-free operations and healthy workplaces, we focus on pro-active risk reporting and learning from best practices both internally and externally, and we continue to work on strengthening our values-based behavior and culture.

Senior management and employees have participated in interactive training to better understand the importance of creating psychological safety at work. The aim of the training is to achieve a safe and healthy workplace as well as to improve production and financial results.

Environmental impact

Our operations impact both the global climate and the local environment. For both operational and decommissioned sites, considerable risks can be linked to emissions to air and water, the storage of waste, energy consumption and the significance of land use that has an impact on biodiversity. The risk is also linked to the increasing difficulty to get permits for waste storage.

Boliden owns large land areas, which gives us the opportunity to utilize the land areas to compensate for our impact on the use of land and related nature values. Hazardous waste streams are stored in safe repositories underground or in mountain caverns to minimize harm on the environment. For other waste streams we are looking at opportunities to produce products from current waste streams. Compliance with our emissions targets is closely monitored, and emissions generated by the operations are managed using the Best Available Technology and according to environmental permits. Emergencies are prevented through continuous monitoring and systematic maintenance.

A new practical tool Climb was launched, for assessing nature in Sweden and the Nordic countries in a transparent and comparable way. Climb has been developed together with Swedish industry and experts on biodiversity. It is now being tested at several sites and projects, for example for ecological compensation for recent land development in Aitik.

Tailings management and dam safety

Tailings facilities and their dam structures are a risk in the mining industry. In case of a dam failure there is potential for major consequences for humans and the environment. The integrity of our tailings facilities will be affected by extreme weather conditions and changes in precipitation.

The Global Industry Standard for Tailings Management is being implemented for all our tailings storage facilities. The system will ensure that we comply with our Tailings Governance Commitments in the following areas; roles, responsibilities and competences, planning and resources, risk management, change management, emergency preparedness and response, audit and review. As a member of ICMM (The International Council on Mining and Metals) we always implement the latest international guidelines regarding tailings management and dam safety.

Process and product development to turn waste into valuable cement products with a low carbon footprint is ongoing.

Climate change

Climate change leads to global warming and more frequent and severe extreme weather events such as heatwaves, droughts, floods, heavy rain or snowfall and wildfires. Related operational risks include damaged or destroyed facilities and infrastructure, and supply chain disruption. Boliden has ambitious targets to further reduce our overall carbon footprint. We aim to fully integrate climate considerations into decision-making processes and engage with stakeholders to communicate their commitment to climate resilience. The units evaluate their own weather-related operational risks and are responsible for conducting scenario analyses on the effects of the changing climate conditions in the relevant areas.

The new EU Corporate Sustainability Reporting Directive (CSRD) and its European Sustainability Reporting Standards (ESRS) were published and finalized during the year. One of the standards, E1 Climate change is guding companies within the EU on, for example, how to report on its climate risks and opportunities. Boliden will start reporting accordingly from 2024 onwards.

Unscheduled production stoppages

Our environmental performance and financial results can both suffer from unplanned production disruptions, for example due to technical problems, injuries, accidents or strikes. The pandemic years also demonstrated the risk of production disruptions due to societal restrictions and disturbances in our supply chains.

All Boliden units carry out preventive maintenance with the aim of minimizing the total cost for the Group. Major maintenance shutdowns are carried out every year in the smelting operations, while maintenance work forms an integral part of day-to-day operations in mines. The risk of unscheduled production stoppages is also managed through continuous evaluation of the Group's insurance solutions.

Skills supply

Competition for skilled labor is still increasing in many of the places where we operate, as a result of the industrial sector growth in those regions. Meanwhile, a major technology shift is taking place, with an increase in digitalization, process development and automation, which risks leading to skills shortages in many different occupational groups.

We work continuously to attract new employees with the right skills to join Boliden, for example by communicating Boliden's purpose, values and its role as an enabler of the climate transition. It is equally important to retain and develop current employees by systematically supporting career opportunities, providing development programs as well as working with people engagement. This is carried out both at the Group and unit levels within Boliden.

To be able to secure our future skills supply, we continue charting the need for skills linked to technological development during the year. We also further strengthened our collaborations within the industry, relevant universities, and other local stakeholders. Joint efforts in promoting job opportunities increases incentives for people to relocate to the areas where we operate. The development of our Groupwide and local management and talent programs also continued. Focus areas were diversity and inclusion as well as people engagement. Efforts within these areas are important to further develop and retain current employees.

Cvber risks

The risk of intrusion into the IT environment with ransomware or similar, which can bring IT systems to a halt, thus stopping production or other operations.

Since 2021, Boliden runs a program to systematically raise its security level. The program runs for three years and is based on the NIST framework, which includes identifying and protecting against intrusions, as well as detection, management and recovery in the event of an intrusion. The program addresses both administrative IT and production IT.

The general threat for cyber attacks remains high. The cybersecurity program that started in 2021 continues, and has improved Boliden's capability to deal with this threat and increased the level of maturity in cybersecurity.

Non-compliance risks

Description of risk

Risk Management

Comments for the year

Legal risks

Boliden's operations are to a great extent subject to licensing and comprehensive regulation. Permits are reviewed regularly. There is also a risk that we may be involved in commercial or other legal proceedings.

Usually, our permits are renewed on multiple occasions during the lifespan of a mine, and also in the event of changes or an expansion of operations. We monitor legal developments in relevant fields, and we implement, follow up and ensure compliance with applicable laws and regulations on an ongoing basis. Boliden is an active member of domestic and foreign trade organizations and works through these channels to spread knowledge about our industry and to ensure conditions appropriate for it. The Group is also a referral body for new rules, regulations and initiatives relating to the industry. Information on legal proceedings and disputes is provided in note 31.

During 2023 the long standing Apirsa litigation was subject to trial with respect to an EUR 89.9 m claim from the Junta de Andalucia for alleged cleanup costs. Boliden won in the first instance but the decision was appealed by the Junta de Andalucia.

Non-compliance risks

The Group may be exposed to legal or regulatory sanctions, material financial losses or damaged reputation as a result of any failure to follow applicable regulations.

The Group's Ethics & Compliance function supports operations to ensure their compliance with internal policies and relevant external laws and regulations. Specific focus areas include Boliden's Codes of Conduct for employees and business partners, as well as handling cases reported through Boliden's whistleblower system. Anti-corruption, trade sanctions, human rights, and combating money laundering and terrorist financing, the protection of personal data and compliance with competition law and regulations are other priority areas.

The focus on international sanctions has increased due to Russia's invasion of Ukraine. One identified risk is the sharing of common utilities with Norilsk Nickel, a Russian company, in the Harjavalta industrial area. The degree to which macroeconomic and political factors may affect Boliden is uncertain and presents a risk to its operations.

Risks harmful to confidence

Confidence in Boliden can be harmed by events such as serious incidents, or if employees or business partners fail to live up to business ethics and sustainability requirements.

Because we seek to be associated with ethical, sustainable business partners, we conduct systematic evaluations of and

monitor customers and suppliers, both potential and existing, on the basis of criteria linked to business ethics and sustainability. Before concluding agreements, we review new $business\ partners\ on\ a\ number\ of\ parameters.\ They\ are$ expected to adopt Boliden's Code of Conduct for Business Partners or undertake to comply with other relevant and generally accepted business standards before agreements are concluded, and where necessary audits are carried out on suppliers' premises to ensure compliance.

Political risks

Political decisions may have effects on our operations. Examples of such decisions include permit application processes for the mining industry.

 $Boliden \ and \ the \ trade \ associations \ in \ which \ we \ participate$ often act as referral bodies for upcoming political decisions that affect our operations, and this allows us to spread knowledge and information so that any decisions affecting us or our industry are appropriate and reasonable.



Working in the control room for Garpenberg's

Market and commercial risks

Description of risk	Risk Management	Comments for the year			
Metal prices Changes to metal prices are a significant risk for Boliden's profit and cash flow.	Group policy is not to hedge metal prices, but rather to allow changes to be reflected in profits. However, we hedge smelter metal price exposure of payable metals in the period between the purchase of raw material and the sale of the corresponding metal.	See note 28 for a sensitivity analysis.			
Treatment charges Treatment charges are determined by the supply and demand for metal concentrates, which represents a risk since they constitute a large part of the smelters' gross profit.	Treatment charges are negotiated annually by the major players in the mining and smelting industries. These terms are applied to our internal purchases, and in most contracts with external metal concentrate suppliers.	See note 28 for a sensitivity analysis.			
Customers We are dependent on a few large customers for part of our product portfolio, and reduced demand from industrial customers would increase the risk of sales via the London Metal Exchange, resulting in reduced margins.	We manage this risk through a diversified portfolio with long-term customer relationships and regard for exposure to different end-user segments. At the same time, there are plans in place to convert production to products suited to the London Metal Exchange, if necessary.	The risk is considered to have increased during the year as a result of the fire in Rönnskär and the adjustment in the business model from selling cathodes to selling anodes. The sale of anodes relies on relatively few customers due to the technical nature of the product. Anodes are not tradeable on the London Metal Exchange.			
Credit risks in trade receivables The risk that our customers fail to fulfill their obligations constitutes a credit risk.	Boliden manages credit risks in trade receivables through an established credit rating process, active credit monitoring, short credit periods and, in certain cases, credit insurance. We have daily procedures for monitoring payments and we also constantly monitor the necessary provisions for expected credit losses.	The quality of trade receivables is deemed to be good and write-downs on outstanding receivables during the year occurred only in limited amounts. Further information provided in note 20.			
Raw materials supply A stable, reliable raw materials supply is needed to enable the smelters to produce at high levels of capacity utilization and consistent quality. The implementation of barriers to international trade in metal concentrates is a related risk.	We manage risks with raw materials supply through long- term contracts and relationships with reliable external supp- liers of metal concentrate and secondary materials, who also demonstrate high performance in sustainability. We engage with suppliers and collect information on their greenhouse gas emissions to promote reduction measures and to plan for possible changes in future trade flows.	During the year, the risk to our supply of raw materials is considered to have increased as a result of the potential implementation of the EU's Carbon Border Adjustment Mechanism, which would increase the cost of raw material purchases from outside the EU.			
Supply of goods and services Our operations depend on an ongoing supply of equipment, consumables and services, and as a consequence, sensitivity to disruptions in suppliers' production and supply chains is a risk for Boliden.	We work actively to reduce price and supply risks by having multiple qualified suppliers in each category and area. In cases where there is only one supplier, we reduce the risk through buffer stocks and by identifying alternative supply solutions. In this regard, the organization's ability to adapt rapidly has been a success factor.	Supply chain risks have during the year mainly centered around inflation and Boliden's ability to source products and services at price and cost levels that make sense for the business. Chemicals have been the most troublesome area and lots of effort has been put into finding alternative sources to secure the most cost efficient supply possible.			
Energy prices Because energy accounts for around 17 percent of operating costs, changes in energy prices constitute a significant risk for our financial performance.	In Norway, Odda has a long-term electricity agreement with inflation adjusted pricing clauses. The contract portfolios in Sweden, Finland and Ireland have shorter terms and the Group is partly more exposed to market prices, which has had a negative impact on the operating profit. We anticipate continued high price volatility in the electricity market, which is partly managed through longer electricity contracts, activated in 2023 and 2024, in Sweden and Finland. At the same time, we analyze opportunities for long-term contracts on an ongoing basis.	Due to Russia's invasion of Ukraine there is still instability in the European gas market.			

Financial risks

Description of risk	Risk Management	Comments for the year			
Exchange rate and metal price risks Pricing terms for products are based mainly on metal exchanges, and ours are priced largely in USD. As a result, transaction exposure arises from binding undertakings to our customers and suppliers, where the cost of raw materials and exchange rates may differ from the final sales value, or in fixed price offers made in different currencies long before delivery. Changes in exchange rates and prices have a major impact on Boliden's profit and cash flow.	Transaction exposure in conjunction with binding undertakings are hedged while the smelters' process inventories are not hedged. Forward exchange contracts are used to hedge the sales price and exchange rate when purchasing input raw material, or in fixed price sales agreements. We make constant calculations concerning the way in which changes in metal and exchange rate markets affect Boliden's financial position. For major investments the Group may enter into contracts to hedge forecasted sales from metal price and currencies. Future investment payments in currencies other than the local currency may be hedged under certain defined circumstances. See note 27 and the sensitivity analysis in note 28.	The risk is considered to have remained fairly constant during the year even as we have seen large fluctua- tions in exchange rates, interest rates and metal prices			
Currency risk in translation exposure A translation difference arises when converting net investments in overseas operations into SEK in conjunction with exchange rate fluctuations, which risks impacting Other comprehensive income negatively within the Group.	Under our finance policy, we do not actively eliminate the effect of translation exposure through equity hedging. However, if an external borrowing requirement exists, the liability in foreign currency is used as equity hedge against the foreign asset pool. The main borrowing currencies are SEK and EUR.				
Interest rate risk Changes in market interest rates affect profits and cash flows.	Our finance policy allows an average fixed interest term of up to four years. Further information provided in note 29.	The Group's loan portfolio had an average fixed interest term of 1.1 years (1.7). Interest rate swaps are used to extend the fixed interest term.			
Refinancing and liquidity risk The risk that Boliden will be unable to obtain the requisite financing or meet its payment obligations due to insufficient liquidity.	We limit refinancing risk through diversification of counterparties, financing sources and maturities, and through good governance to ensure compliance with loan agreement terms. Current liquidity is available in the form of unutilized credit facilities, and is reviewed regularly.	The average term of total loan limits was 3.3 years (3.4) at year-end, and net payment capacity totaled SEK 14,843 m (23,005). The risk is considered to have remained fairly constant during the year as banks in general have kept a neutral risk appetite.			
Credit risks and financial operations Credit and counterparty risk refers to the risk that a counterparty in a transaction may fail to fulfill their obligation, thus causing the Group to incur a loss.	Our finance policy mandates a Standard & Poor's credit rating of minimum "A" for financial counterparties when entering into new transactions, and sets a maximum deposit of cash and cash equivalents per counterparty.	Credit quality and the counterparty diversification for derivatives were considered to have been good in 2023, and at year-end the credit risk in external deriva- tive instruments had a market value of SEK 366 m (415).			
Financial reporting Inaccurate financial and operational reporting poses a risk to the Group.	The Group has a well functioning internal control structure. There are control functions at the local unit level, as well as at the business area and head office levels, and all of these work within a common financial reporting framework. We carry out annual controls of the framework. Impairment test on assets are completed annually and when indicators arise, to ensure that assets are recoverable.	During 2023 risk workshops have been performed on all sites to ensure that financial reporting risks are properly addressed and controlled. For further infor- mation regarding impairment test see note 14.			