

## Boliden in brief

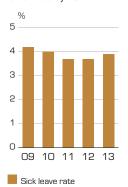
Boliden is a metals company with a focus on sustainable development. The Company's core expertise lies within exploration, mining, smelting and recycling. The roots are Nordic, the business global. Boliden's main metals are zinc and copper, but the production of lead, gold, silver and other products is also of considerable importance for the Group's profitability. The Group has approximately 4,800 employees. Revenues in 2013 totalled SEK 34 million (SEK 40,001 m).

#### Gender breakdown

The percentage of women working within Boliden was 17.7 per cent at the year end, corresponding to an increase of 0.8 percentage points since 2012.

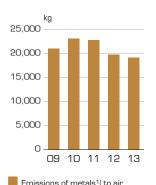
#### Sick leave

In 2013, the sick leave rate was 3.9 per cent (3.7%) in relation to the goal of max. 4.0 per cent by the end of 2014. Boliden will continue to work towards all units meeting this or a lower rate by 2014.



#### Emissions of metals<sup>1)</sup> to air, 2007-2013

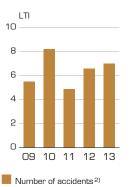
Emissions of metals to air have fallen by 45 per cent (43%) since 2007. There were no major deviations in 2013, and overall performance was satisfactory.



1) Copper, zinc, lead, nickel, cadmium and arsenic.

#### Accidents 2)

The number of accidents leading to absence from work (LTI) for 2013 increased to 7.0 per one million hours worked, compared with 6.6 in 2012. The level in 2011 was 4.9.



2) The accident frequency is reported, starting in 2012, for Boliden's own personnel including contractors.



## **Boliden locations**

## **Putting Boliden on the map** Mining areas Tara – zinc and lead Garpenberg – zinc, silver, lead, gold and copper The Boliden Area – zinc, copper, gold, silver and lead Aitik - copper, gold and silver Smelters Kokkola - zinc and sulphuric acid Odda – zinc and aluminium fluoride Rönnskär – copper, gold, silver, lead, zinc clinker and sulphuric acid Harjavalta - copper, gold, silver, sulphuric acid and nickel smelting Bergsöe – lead alloys The Boliden Area Stockholm - Head office and Business Area Smelters Boliden – Business Area Mines Neuss - Sales office Kokkola Leamington Spa – Sales office Harjavalta Garpenberg Odda Stockholm Leamington Spa Neuss Mining areas **S**melters Offices

# Aiming for leadership in efficiency and responsiblity



Boliden aims to be a world class metals company. This means that we shall be among our indus-try's leading companies in terms of customer satisfaction, efficiency and responsibility.

Metals are an ever-present and vital component of society. Boliden extracts minerals and produces high quality metals in a cost-efficient way. The work throughout the value chain – from exploration to customer delivery – is characterised by care for people, the environment and society.

To further articulate that commitment, Boliden became a signatory to the UN Global Compact in 2012, and continues to actively support its principles on human rights, labour, the environment and anti-corruption.

Global demand for metals has been increasing for a number of years now. Rapid economic development in emerging markets with large populations rising from poverty and political unrest has been a major driving force in this trend, and Boliden's metals are fundamental to this wealth equalisation. China has enjoyed a notable position as an engine for the world's metal markets, but this prominence is expected to decline sometime around 2020, and the question then is whether other countries can make similar improvements to standards of living, with urbanisation and growing prosperity.

The mature economies are also important to metal demand. The transition to renewable energy and the development of modern communication and information technology, for example, requires large amounts of copper and zinc. Energy based on wind power or solar panels requires many times more copper than traditional forms of energy, as these systems are designed for windy or sunny days but are only utilised intermittently. Various different international and regional initiatives to reduce climate change impact will most likely benefit Boliden's business offering, while also putting new demands on the Group's own operations, emphasising the importance of operational efficiency.

The New Boliden Way (NBW) lays down the Group's overall guidelines when it comes to values and areas with scope for continuous improve-ment, and helps ensure stable processes and reductions in resource requirements. Process stability results not only in high production levels and low costs, but also helps ensure improved environmental performance and safer workplaces. Unplanned production stoppages can have a negative impact on the environment, due to the associated risk of pollution and spills and, at the same time, can

put pressure on employees and, potentially, give rise to a risk of deviations from safety routines and an increase in unsafe behaviour.

Boliden's sustainability priorities aim to improve sustainability performance and operational efficiency, and both address risks and provide the pre-conditions necessary to take advantage of opportunities. The aim is that they contribute to running the operations in a way that takes external impact and stakeholder expectations into account. The priorities guiding Boliden's sustainability efforts, as of 2014, are:

- To create a safe work environment
- To secure tomorrow's talent pool
- To achieve diversity and a better gender balance
- To minimise impact on soil, air and water
- To use resources efficiently
- Reclamation responsibility and preservation of natural values

In 2013, Boliden set new sustainability targets for the period until 2018.

Area	Target 2018
Number of accidents at each unit	0
Absence due to sickness	Below 3.0 per cent
Percentage of female employees	20 per cent or more
Discharges of metals to water	Reduced by 25%
Emissions of metals <sup>1)</sup> to air	Reduced by 10%
Emissions of sulphur dioxide1 to air	Reduced by 10%
Carbon dioxide intensity of CO <sub>2</sub> per tonne of metal	≤ 0.77
Number of environmental accidents per month (Accident, category A) <sup>2)</sup>	0

#### Performance in 2013

2013 saw the continuation of Boliden's focus on health and safety leadership, but the trend in these areas, was, unfortunately, negative. The target was and continues to be zero accidents, and the current accident rate is unacceptably high. The safety culture must be improved if we are to achieve the target of zero accidents, and to this end, a new organisation was established in 2014 to manage these activities.

Boliden's environmental performance was positive, overall, and most of the environmental targets set for 2013 were met with a good margin. Going forward, Boliden's objective of reducing our negative impact on soil, air and water will be challenged by planned production increases. Production volumes and emissions to air and water are interlinked, making it particularly challenging to keep carbon emissions down.

<sup>1)</sup> Base year 2012.

<sup>&</sup>lt;sup>2)</sup> A serious accident that causes significant harm and/or results in a violation of laws or permits.

Boliden's long-term efforts to promote gender equality and equal opportunities were rewarded with the 2013 Swedish Industry Equality prize. The trend in this area is positive, but it can still be accelerated. Boliden has set a target of female employees constituting 20 per cent of the total workforce by 2020, and by the end of 2013, had achieved a figure of 17.7 per cent.

Boliden has performed well in general but the accidents rate.

#### A long history of sustainability management

Boliden, as a corporate entity, has existed for 90 years now, and that long and successful history has been contingent upon the company acting re-sponsibly, understanding the wider context, taking environmental and social factors into consideration across the business, and being responsive to stakeholders' expectations.

Right from the start, Boliden has had close links with the local communities where the operations are based, and to this day, Boliden is an im-portant actor in communities in which we operate. Boliden is often the largest employer there and hence has a significant economic impact, both directly and indirectly. This has forged a relationship based on mutual interests and Boliden makes use of local skill pools, recruits locally, and makes use of the access to public services and infrastructure.

Boliden's operations affect the landscape and large numbers of people to varying degrees and they, in turn, have different views and expectations of Boliden and the way we act, and conducting relevant sustainability work requires Boliden to be responsive to stakeholders' expectations.

Boliden engages the people who live in the vicinity of its operating units in a variety of activities on a regular basis. These include the "Open House" sessions, where the public is invited to visit the plant

and acquire information in an informal way. Boliden also invites the public to Public Consultations ("Samrådsmöten") to discuss special issues under more formal circumstances. There is always an open channel that individuals in the community can use to bring their concerns to the company. Specially-designated employees are in regular contact with Group's neighbours and sometimes even visit people at their homes to discuss matters of concern.

Over the years, Boliden has developed a systematic approach to sustainability management and performance follows up. The targets and prioritised areas are set in order to address Boliden's most significant impact, risks and opportunities. There is a clear delegation of responsibilities at all levels of the organisations and sustainability performance is followed up at every Group management meeting, Board meeting, and the local management meetings.

To learn about Boliden's most significant sustainability risks and mitigating actions, see pages 49–50 in Boliden 2013 Annual Report.

Stockholm, February 2014

Lennart Evrell President & CEO

## Boliden sustainability reporting

Boliden's 2013 sustainability reporting is composed of two units: one that is integrated into the Annual Report 2013 that describes the Group's social, environmental and economic responsibility, and one that reports our impact and results according to the GRI (Global Reporting Initiative) reporting framework. The information presented in the Annual Report discloses how Boliden works and performs in relation to a set of prioritised sustainability issues. Information presented in this GRI Report describes the Group's sustainability progress in greater detail and is structured according to the GRI Sustainability Reporting Guidelines, version 3.0. Boliden's sustainability report has achieved a B+ application level which means that the report has been externally assured and that the application level has been checked by a third party. The sustainability information for 2013 has been subjected to a limited review by Ernst & Young AB; please see the limited assurance statement on page 65 in the Annual Report.

#### **GRI** content index

The information below is a content index for the disclosure of strategy, organisational profile, report parameters, management approach, performance indicators and sector supplement indicators (MM) as specified by the GRI guidelines and reported by Boliden. It also includes references to Boliden's environmental, social and economic goals and results. Status statements are provided in the respective performance indicator reporting text.

Indicator fully reported
 Indicator partially reported
 GRI Rep. = GRI Report 2013
 AR = Annual report 2013

Profile disclosure		Reference
Strategy and analysis		
1.1	President's Statement	AR 6-7, GRI Rep. 4-5
1.2	Key impacts, risks, and opportunities	AR 49-50, 56-57, 59-61, 63-64, GRI Rep. 4-5, 9
Organisational profile		
2.1	Name of the organisation	AR 102
2.2	Primary brands, products, services	AR 16, 26–27
2.3	Operational structure of the organisation	AR 26-27, 86
2.4	Location of organisation's head office	AR 127
2.5	Number and names of countries where the organisation operates	AR Inside of front cover and back cover
2.6	Nature of ownership and legal form	AR 8-9
2.7	Markets served	AR Inside of front cover and back cover, 4-5
2.8	Scale of reporting organisation	AR 2, 79-80
2.9	Significant changes during the reporting period regarding size, structure, or ownership	No significant changes
2.10	Awards received in the reporting period	AR 1
Report parameters		
3.1	Reporting period	Calendar year
3.2	Date of most recent previous report	Annual Report including sustainability report 2012, published in March 2013
3.3	Reporting cycle	Annually
3.4	Contact point for questions regarding the report or its contents	AR Inside of front cover and back cover, GRI Rep. 8
3.5	Process for defining report content	GRI Rep. 9
3.6	Boundary of the report	GRI Rep. 8–9
3.7	Specific limitations on the scope or boundary of the report	GRI Rep. 9
3.8	Basis on reporting on entities that can significantly affect comparability from period to period, and/or between organisations	GRI Rep. 9
3.9	Data measurement techniques and the bases of calculation	GRI Rep. 8
3.10	Explanation of the effect of any re-statements of information pro- vided in earlier reports	Not applicable
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	AR 97
3.12	Table identifying the location of the Standard Disclosures in the report	GRI Rep. 6–8
3.13	Policy and current practice with regard to seeking external assurance for the report	AR Inside of front cover, 65

Profile disclosure		Reference
Governance and CSR management		
4.1	Governance structure of the organisation	AR 102–106, GRI Rep. 9
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	AR 104
4.3	Number of members of the highest governance body that are independent and/or non-executive members	AR 104
4.4	Mechanism for shareholders and employees to provide recommendations or direction to the highest governance body	AR 102, 109, GRI Rep. 23
4.5	Linkage between compensation and the organisation's performance	AR 35
4.6	Process in place for the highest governance body to ensure conflicts of interest are avoided	AR 102-106
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body	AR 103–104
4.8	Internally developed statements of mission or values, codes of conduct and other principles	AR 18-19, 63, GRI Rep. 4-5, 9
4.9	Procedures of the highest governance body for overseeing the organisation's identification and management of economic, environmental, and social performance	AR 104–105
4.10	Process for evaluating the highest governance body's own performance	AR 105
4.11–13	Commitments to external initiatives	AR 7, 63, GRI Rep. 4-5, 9
4.14	Stakeholder engagement	AR 4, 63, GRI Rep. 9
4.15	Basis for identification and selection of stakeholders with whom to engage	GRI Rep. 9
4.16	Approaches to stakeholder engagement	AR 56, 63, GRI Rep. 9, 28-30, 32
4.17	Key topics and concerns that have been raised through stake- holder engagement	AR 64, GRI Rep. 9

Indicator		Reference	
Environmental performance (EN)	Performance, targets, risk management and policies	AR 49, 59, 64, GRI Rep. 4-5, 9-10	
EN1	Materials used by weight	GRI Rep. 11	
EN2	Recycling and materials used that are waste	AR 62, GRI Rep. 11	
EN3-5	Energy use and energy efficiency	AR 61, GRI Rep. 12	
EN7	Initiatives to cut indirect energy use	AR 61, GRI Rep. 13	
EN8-10	Water use	AR 116, GRI Rep. 13	
EN11-14	Biodiversity	GRI Rep. 13–14	
MM1	Amount of land disturbed or rehabilitated	AR 61-62, GRI Rep. 13-14	
MM2	Number and percentage of total sites identified as requiring biodiversity management plans and the number (percentage) of those sites with plans in place	GRI Rep. 13–14	
EN16-18	Greenhouse gas emissions	AR 59-61, 116, GRI Rep. 15	
EN20	Other significant air emissions	AR 61, 116, GRI Rep. 16	
EN21	Water discharge	AR 60, GRI Rep. 17	
EN22	Waste types and disposal methods	AR 62, GRI Rep. 17-18	
MM3	Total amounts of overburden, rock, tailings, sludges and their associated risks	GRI Rep. 17–18	
EN23	Significant spills	AR 59, GRI Rep. 18	
EN28	Significant fines	GRI Rep. 18	
EN29	Significant environmental impacts from transport and travel	AR 61, GRI Rep. 19	
Social performance	Performance, targets, risk management and policies	AR 49–50, 56–58, 63, 116, GRI Rep. 4–5, 9, 20	
Labour practices and decent work (LA)			
LA1	Workforce	AR 116, GRI Rep. 21	$\bigcirc$
LA2	Employee turnover	GRI Rep. 21	
LA3	Benefits	GRI Rep. 22	
LA4	Collective bargaining agreements	GRI Rep. 23	
LA5	Notice regarding operational changes	GRI Rep. 23	
LA6	Representation in health and safety committees	GRI Rep. 24	
MM4	Number of strikes and lock-outs exceeding one week's duration, by country	GRI Rep. 23	

Indicator		Reference	
LA7	Injuries and occupational diseases	AR 56-57, 116, GRI Rep. 24	0
LA8	Assistance regarding serious diseases	GRI Rep. 25	
LA9	Health and safety topics covered in formal agreements with trade unions	GRI Rep. 25	
LA10-11	Training, skills management and lifelong learning	AR 57, GRI Rep. 25	$\bigcirc$
LA12	Performance and career development reviews	GRI Rep. 26	
LA13	Composition of employees and governance bodies	AR 108-110, 116, GRI Rep. 26	$\bigcirc$
LA14	Equality in remuneration	GRI Rep. 27	<u> </u>
Human rights (HR)			
HR1	Investment agreements that include human rights clauses or have been screened	AR 63, GRI Rep. 28	
HR2	Suppliers and contractors screened on human rights and actions taken	AR 63, GRI Rep. 28	
HR3	Employees trained on human rights	GRI Rep. 28	<u> </u>
HR4	Incidents of discrimination and actions taken	GRI Rep. 28	
HR5	Freedom of association and collective bargaining	GRI Rep. 28	
HR6-7	Child labour, forced and compulsory labour	GRI Rep. 29	
MM5	Number of operations taking place in or adjacent to Indigenous Peoples' territories, and number and percentage of operations or sites where there are formal agreements	GRI Rep. 29	
Society (SO)			
S01	Local community engagement	AR 4, GRI Rep. 30	
MM6	Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples	GRI Rep. 30	
MM7	The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous Peoples, and the outcomes	GRI Rep. 30	
MM8	Number of company operating sites where artisanal and small-scale mining takes place on, or adjacent to, the site; the associated risks and the actions taken	GRI Rep. 30	
MM9	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process	GRI Rep. 30	
MM10	Number and percentage of operations with closure plans	GRI Rep. 30	
S03	Training in anti-corruption policies and procedures	GRI Rep. 31	<u>-</u>
S04	Incidents of corruption	GRI Rep. 31	
S05	Public policy development and lobbying	GRI Rep. 31	
S07-8	Anti-competitive behaviour and compliance	GRI Rep. 31	
Product responsibility (PR)			
MM11	Programmes and progress relating to materials stewardship	AR 61-62, GRI Rep. 32	
PR1	Customer health and safety	GRI Rep. 32	•
PR3	Product and service labelling	GRI Rep. 32	
PR5	Practices related to customer satisfaction	GRI Rep. 32	
Economic performance (EC)	Performance, targets, risk management and policies	GRI Rep. 33–34	
EC1	Economic value generated and distributed	GRI Rep. 34	-
EC2	Climate change implications, risks and opportunities	AR 49, 60-62, GRI Rep. 34	
EC3	Benefit plan coverage	AR 81, 89–90, GRI Rep. 34	
EC4	Significant financial support received from government	GRI Rep. 34	
EC5	Entry and minimum wage	GRI Rep. 34	$\bigcirc$
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	GRI Rep. 34	
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	AR 4, GRI Rep. 34	

For further information on our measurement methods, definitions or other guidelines, please contact Boliden Group Communications.

#### **Accounting Principles**

The financial data presented is taken from Boliden's audited annual accounts. The Boliden Group reports in Swedish kronor (SEK).

Each operation has an environmental reporting manual that defines and describes measurement and calculation methods according to Group directives. Environ-mental data, including energy-related data, is collected on a monthly, quarterly or annual basis and consolidated at Group level.

Calculation methods for direct  $\mathrm{CO}_2$  emissions are stipulated by national legislation, and in connection with the EU emissions trading

scheme. All other emissions have been measured and/or calculated based on periodic measurements. More detailed measurement techniques, calculation methods and assumptions are re-ported in connection to relevant indicators.

#### **Boundary of the report**

Ilnformation in this report, except environmental performance data, covers facts and figures from Boliden's nine operational units, from the Group's Head office and various staff functions as well as sales offices.

Environmental performance data is limited to Boliden's nine operational units (as they represent Boliden's significant environmental impact). No changes in organizational structure or operations that impact the ability to compare environmental data have taken place.

## Management approach, organisational profile and report parameters

Sustainability is an integral part of Boliden's strategy and operations. The basis for the sustainability work is that all operations are conducted in accordance with legislative provisions and permits in the countries in which the Group operates. Boliden works proactively by formulating guidelines and goals that are fundamental to its operations from a sustainability point of view. In order to systematically control and develop our operations, management systems have been implemented to secure that significant sustainability aspects of the operations are covered. This makes it possible to minimise the risks associated with metal production.

Boliden's way of working also facilitates adaptation with market conditions and ensures compliance with future legislation. Boliden is a signatory to the UN Global Compact since 2012.

#### The New Boliden Way

The New Boliden Way (NBW) is the Group's organisational and production philosophy that governs overall policies, guidelines and instructions. Its purpose is to im-prove overall productivity and create a culture characterised by continuous improvements. Stable processes are a prerequisite for a good sustainable development. Boliden's mission, vision and core values constitute the foundation of NBW. These principles describe how to develop Boliden into a world-class metals partner, acknowledged for added value to customers, shareholders and other stakeholders. Boliden focuses on activities that add value as well as standardised processes and methods that can be replicated throughout the Group.

#### **Policies and management systems**

Boliden has a governance model comprising Group-wide and local policies, instructions and guidelines, tools and local management systems that correspond to the challenges the company faces. The overall steering documents are collated in the Management Manual, which is available to every employee via Boliden's intranet. Work at Boliden's operations is conducted in accordance with certified environmental as well as occupational health and safety management systems; ISO 14001 and 0HSAS 18001. The Group's smelters are also certified in accordance with the ISO 9001 quality management system. An updated energy management system in accordance with ISO 50001 is being implemented and will gradually replace the former systems based on EN 16001. This upgrade of the energy management system started in 2012 and is expected to be completed before the end of 2014.

In order to remain on the LBMA list of recommended gold producers, the Good Delivery List, Boliden during 2013 underwent an external review according to the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. Companies included on the list take upon them-selves to assure that the raw material supply chain fulfils a set of ethical criteria. No minerals shall be derived from raw materials that have financed terrorism, been subject to money laundering or is complicit in any other violation of human rights.

#### Responsibility and monitoring

Boliden's Group management has the ultimate responsibility for the Group's sustainability work. The management group includes the Senior Vice President - Corporate Responsibility who ensures that sustainability issues are addressed continuously. The work is largely carried out through Group-wide networks in order to facilitate the dissemination of Boliden's goals and strategies as well as exchange of expertise and experience between the Business Areas and between production units. There are networks for health and safety, environment, human resources and communications. The managers of these report directly to Group management. Boliden's Board of Directors reviews the Group's sustainability work annually. Environmental performance, sick leave rates and accident rates are presented at every Group management meeting and at every Board meeting.

#### Dialogue for greater responsibility

Boliden's operations affect many people in various ways, and similarly, these stakeholders have different views and expectations of Boliden.

In order to carry out a relevant sustainability work, Boliden needs to identify and address the top priority issues. By conducting dialogues with stakeholders, Boliden meets the demand for increased transparency and learns about stakeholders' demands and expectations. The stakeholders identified by Boliden are employees, shareholders, customers, business partners, investors, local communities, authorities, industry and NGOs. These groups are identified as having both power, legiti-macy and cause to directly or indirectly influence Boliden's business. Dialogue is conducted in different ways with different groups, i.e. bi-annual employee surveys, open house meetings with employees and the local community, formal and informal meetings with authorities and capital market days and AGMs. Examples of issues raised by stakeholders are safe operations, mitigating environmental and community impact, local employment, risk management up and down stream.

Boliden participates in several external initiatives and organisations relevant to sustainability development. A few examples are; the Association of Finnish Steel and Metal, the International Zinc Association (IZA), the International Cadmium Association, the International Copper Association (ICA), the European Copper Institute (ECI), the Scandinavian Copper Development Association, SveMin and Euromines.

Boliden's ambition is to be the first sustainable link in the metals' value chain. In order to achieve this Boliden must lead by example and be a stable, long-term and responsible business partner.

Boliden evaluates the way in which business partners address sustainability issues in their operations since 2010. The Evaluation of Business Partners (EBP) is a systematic process where business partners are evaluated from a business and from a sustainability perspective. The evaluation is based on Boliden's Corporate Responsibility Business Guidelines, on the principles in the UN Global Compact, the ILO, applicable ISO standards as well as the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. In 2013, Boliden underwent a certification process according to the latter. As part of the evaluation process, suppliers conduct a self-assessment. 60 suppliers completed the self-assessment during 2013. Audits are performed in relevant cases and are followed up through action reports, two audits were conducted in 2013.

It is the duty of every manager to evaluate the business partners within his or her area of responsibility.

#### **Prioritising sustainability issues**

Identifying and selecting the most relevant sustainability issue is an ongoing process involving all units within Boliden. The overall strategy and vision, the impact from the operations, the aim to be the first sustainable link in the metals' value chain and to achieve operational efficiency are the basis of the identification from an internal perspective. External drivers and expectations articulated by stakeholders as well as existing and potential legislation are considered in the identification process to make it more relevant. Efforts to further formalise and strengthen the process of identifying material sustainability issues were initiated in 2013. Boliden prioritises sustainability issues that:

- Directly impact Boliden's success
- · Directly impact Boliden's stakeholders
- Are fundamental to Boliden's ability to operate
- Boliden is able to control.

This approach enables Boliden to set relevant goals and improve performance. Boliden has identified the following key sustainability challenges:

- Creating a safe workplace
- Achieving diversity and a more even gender distribution among employees
- Securing tomorrow's skill pool
- Minimising the negative impact on soil, air and water
- Using resources efficiently
- Reclaiming and protecting nature
- Generating a positive economic impact on the local community.

#### Limitations

Some of the areas that need to be addressed are wholly or partially beyond the Group's direct control. Boliden cooperates with various external parties and stake-holders to address such matters and to identify joint ways to improve. One of the ways in which Boliden does this is through the EBP programme. Learn more at www.boliden.com

## Environmental performance (EN)

Boliden's environmental responsibility entails continuous work towards reducing the negative impact of the Group's operations. The ambition is to go beyond legislative and regulatory requirements. Systematic and farsighted environmental work facilitates compliance with future legislation and stakeholders' expectations. It will also strengthen Boliden's long-term competitiveness.

### Boliden's environmental targets, 2009-2013

00410.0000.0040	PER IN COAC
GOALS 2009-2013	RESULTS IN 2013
To promote the development of Boliden's environmental performance the following goals were set	
<ul> <li>Discharges of metals<sup>1)</sup> to water shall be reduced by 25 per cent.</li> </ul>	Discharges of metals to water have fallen by 58 per cent (53%) since 2007.
<ul> <li>Discharges of nitrogen to water shall be reduced by 20 per cent.</li> </ul>	Discharges of nitrogen to water have fallen by 26 per cent (14%) since 2007.
<ul> <li>Emissions of metals<sup>2)</sup> to air shall be reduced by 25 per cent.</li> </ul>	Emissions of metals to air have fallen by 45 per cent (43%) since 2007.
<ul> <li>Emissions of sulphur dioxide to air shall be reduced by 10 per cent.</li> </ul>	Emissions of sulphur dioxide to air have fallen by 27 per cent (5%) since 2007.
<ul> <li>Emissions of carbon dioxide shall not increase by more than 3 per cent (taking planned production increases into account).</li> </ul>	Carbon dioxide emissions have increased by 4 per cent since 2007 at comparable measurement points (excluding emission sources added through the smelters' implementation of ETS. If these sources are taken into account, Boliden has seemingly increased its carbon dioxide emissions by 22 per cent.)  The excess over the 3 per cent target can be largely explained by the major contribution to total carbon emissions that resulted from Boliden's mine expansions. The expansion at Boliden's smelters (e-scrap recycling) has also contributed to a significant increase in total carbon dioxide emissions. These emissions are mainly those referred to as "Direct emissions".

(Base year 2007)

The environmental goals are presented in absolute figures (kilos or tonnes). The goals have been broken down by operation and are reported on a monthly basis in order to facilitate follow-up.

Boliden performed well in relation to the established environmental goals. Most emission and discharge levels were well below the limit values set in the environmental permits, and consequently also below levels set in present and future environmental legislation.

Group targets for the period of 2014–2018 have been developed through discussions involving all operations and finally approved by Group Management.

### Boliden's environmental targets, 2014-2018

GOAL	BASE YEAR 2012	GOAL 2018
<ul> <li>Metal discharges to water shall decrease by 25 per cent</li> </ul>	29 tonnes	19 tonnes
<ul> <li>Emissions of metals to air shall decrease by 10 per cent</li> </ul>	20 tonnes	18 tonnes
<ul> <li>Sulphur dioxide emissions to air shall decrease by 10 per cent</li> </ul>	8,300 tonnes	7,300 tonnes
<ul> <li>The relative emissions of carbon dioxide shall stabilize to the 2012 level (tonne CO<sub>2</sub> per tonne produced metal), regardless of increased production</li> </ul>	0.77 t/t	≤ 0.77 t/t
<ul> <li>Boliden shall have zero environmental accidents every month (Accidents classified as level A)<sup>1)</sup></li> </ul>	0	

 $<sup>^{1)}</sup>$  A serious accident that causes significant harm and/or results in a violation of laws or permits.

<sup>1)</sup> Copper, zinc, lead, nickel, cadmium and mercury.

<sup>&</sup>lt;sup>2)</sup> Copper, zinc, lead, nickel, cadmium and arsenic.

#### Measures to reduce emissions and discharges

Stabilising  $CO_2$  emissions in conjunction with planned increases in capacity and production poses a major challenge for Boliden. The Group is working on the drafting of a new climate change strategy and all units have, as part of this work, mapped their  $CO_2$  emissions and the points within the respective processes with the biggest  $CO_2$  footprints. The results of the work will form the basis for action plans and subsidiary goals aimed at stabilising  $CO_2$  emissions.

Using the best available technical solutions, consuming resources efficiently, and replacing fossil fuels with renewable ones will all continue to be important components of Boliden's efforts to reduce and stabilise CO<sub>2</sub> emissions. All units are also obliged, as part of the New Boliden Way, to work continuously to improve process efficiency.

The way in which Boliden manages nitrogen discharges to water will be particularly important in the years ahead. The ongoing expansion projects will result in marked increases in the mines' nitrogen discharges (by up to an estimated 45 per cent) by 2018. A specific nitrogen action plan will be drawn up and the management and monitoring of water consumption will be improved through the establishment of a dedicated Water Management plan that will apply to all units.

An action plan will also be drawn up with the aim of reducing diffuse emissions (ore dust or emissions from open converter plants that are spread on the wind). The aim is, of course, to reduce emissions, but also to improve both the monitoring and management thereof. Stricter legislation is anticipated in this area.

Boliden's reclamation work is important and by 2018, the Group aims to have completed the reclamation of at least five prioritised projects.

#### Measures to ensure zero environmental accidents

The zero environmental accidents vision will be achieved through stable and upgraded processes, more complete reporting – including incident reporting and follow-up work – and ongoing work on attitudes.

All of the environmental goals are followed up on a monthly basis, with the exception of the  $\rm CO_2$  goal, which is followed up quarterly. The follow-up work occurs in conjunction with the Group's management group meetings. Boliden presents the results in the company's quarterly reports.

#### EN1 - Materials used by weight

There were no significant changes in the use of materials in 2013 compared to 2012. In the reporting however, we have also included tonnage of total rock, ore and concentrates in the material use. Waste rock and sand are reported under EN22 Waste as process waste. Some of the concentrate produced in the mines is sold to external parties. The total smelting material feed comprises of concentrates both from Boliden's own mines and from external mines, purchased second-

ary materials and secondary materials sent from one smelter to another. See illustration on page 11 for further information.

Materials are mostly weighed in connection with loading and/or charging (ore, concentrates, and most smelting materials). Mined rock is based on calculations (waste rock and ore). A minor part of input materials is calculated from input and stock.

2009	2010	2011	2012	2013
56,265,000	62,277,000	68,807,000	81,805,000	83,703,000
24,000,000	33,000,000	37,000,000	40,000,000	43,000,000
860,000	926,000	929,000	895,000	891,000
2,234,000	2,360,000	2,513,000	2,585,000	2,530,000
499,000	578,000	651,000	657,000	617,000
131,000	133,000	127,000	133,000	131,000
	56,265,000 24,000,000 860,000 2,234,000 499,000	56,265,000 62,277,000 24,000,000 33,000,000 860,000 926,000 2,234,000 2,360,000 499,000 578,000	56,265,000       62,277,000       68,807,000         24,000,000       33,000,000       37,000,000         860,000       926,000       929,000         2,234,000       2,360,000       2,513,000         499,000       578,000       651,000	56,265,000       62,277,000       68,807,000       81,805,000         24,000,000       33,000,000       37,000,000       40,000,000         860,000       926,000       929,000       895,000         2,234,000       2,360,000       2,513,000       2,585,000         499,000       578,000       651,000       657,000

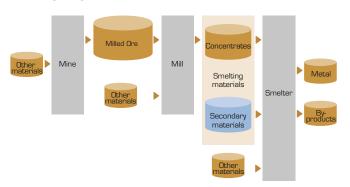
## EN2 - Percentage of materials that are recycled input materials

Boliden uses its own and other companies' by-products and residues by extracting and recycling metals. The Boliden Rönnskär smelter began using a new electronic scrap recycling facility in 2012. This made Boliden the world leader in e-scrap recycling. Boliden Bergsöe, which recycles 70,000 tonnes of lead acid batteries and other lead scrap per year, is, furthermore, the only secondary lead smelter in the Nordic region.

The recycling input rate (RIR) shows the fraction of secondary materials in the total input to Boliden Smelters. Recycled materials include secondary materials from external sources and secondary materials sent from one plant to another within the Boliden Group. By-products and non-product outputs recirculated internally at the sites, and slags sent from smelters to mines, are not included.

The reporting has been complemented since last year to include nickel concentrate from Harjavalta. The nickel concentrate comprised an average of 10 per cent of the total quantity of process materials between 2008 and 2013.

#### In the beginning there was rock...



EN2 Percentage of materials used that are recycled input materials	2009	2010	2011	2012	2013
Total secondary feed	261,300	274,100	273,300	322,600	331,600
Total feed (primary and secondary)	2,234,000	2,360,000	2,513,000	2,585,000	2,530,000
Recycling rate	12%	12%	11%	12%	13%

#### EN3 - Direct energy consumption by primary energy source

Metal production can be very energy intensive, both in the mining phase and in the refining processes. Boliden's energy consumption is a major cost item, accounting for approximately 18 per cent (18%) of the Group's total costs. Energy consumption in 2013 totalled 16.4 [16.1] million gigajoules (GJ). Electricity accounts for 13.9 (14.0) million GJ, which is equivalent to 3.9 (3.9) TWh.

Boliden's energy policy states that energy efficiency is a continuous process in which the work should be conducted systematically and based on good scientific and technical principles.

Coke, coal, oil and fuel gases are used for the reduction and smelting of copper, lead and zinc concentrates. Diesel is used for transportation

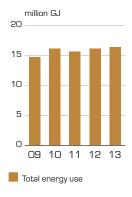
purposes, in mining operations and for internal transportation. Limited amounts of heating oil and gas are used for heating purposes during the cold season. Several trials have been conducted during the last 5-year period, evaluating the use of biofuels in metallurgical processes, but the consumption of renewable primary fuels has been negligible in the larger context.

The reported energy usage is based on invoiced incoming and outgoing deliveries, supplemented by internal measurements and stock inventories at the end of the year. Conversion between weight and energy has been done using energy values specified by the supplier or by using tabled values provided by national bodies.

Energy use and energy efficiency	Unit	2009	2010	2011	2012	2013
Direct energy, Coal & coke	GJ	1,862,000	1,793,000	1,708,000	1,711,000	1,843,000
Direct energy, Gas	GJ	376,000	376,000	394,000	382,000	376,000
Direct energy, Oil	GJ	1,135,000	1,354,000	1,071,000	1,050,000	1,015,000
Direct energy, Diesel & petrol	GJ	1,192,000	1,196,000	1,368,000	1,601,000	1,698,000
Total direct energy use (EN3 Non-renewable)	) GJ	4,565,000	4,720,000	4,541,000	4,745,000	4,932,000
Total direct energy use (EN3 Renewable)	GJ	0	0	0	0	0
Intermediate energy, purchased electricity	GJ	11,711,000	13,179,000	13,451,000	14,030,000	13,880,000
Intermediate energy, purchased heat	GJ	499,000	533,000	367,000	404,000	394,000
Total direct and intermediate energy input	GJ	16,775,000	18,432,000	18,359,000	19,179,000	19,206,000
Produced energy used internally	GJ	1,744,000	2,220,000	2,371,000	2,045,000	2,169,000
Produced energy sold	GJ	2,111,000	2,285,000	2,780,000	3,039,000	2,791,000
Boliden total energy use	GJ	14,664,000	16,147,000	15,579,000	16,140,000	16,415,000
Boliden specific energy use	GJ/tm	11.77	12.65	11.99	12.38	12.78

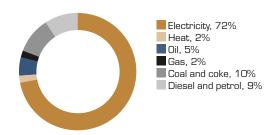
#### Total energy use, 2009-2013

Energy use totalled 16.4 (16.1) million gigajoules in 2013.



#### Energy input, 2013 per source

Energy accounts for approximately 18 per cent (18%) of the Group's operating cost.



#### EN4 - Indirect energy consumption by primary source

Electricity is the dominant source of indirect energy in the Group. Out of 14,274,000 GJ of indirect energy used, 97 per cent comprises electricity and only 3 per cent is purchased heat. The origin of the electricity varies between the countries in which Boliden operates. In Norway, hydropower is the dominant source, while hydro and nuclear power dominate in Sweden. In Finland, the supply is a combination of different sources, and in Ireland there is a higher proportion of fossil fuels. Based on invoiced deliveries and supplier information on the 2012 origin of electricity, the primary source distribution for purchased electricity is estimated to be 24 per cent (31%) fossil, 43 per cent (39%) renewable, and 33 per cent (30%) nuclear. Boliden has not calculated the primary sources for purchased heat.

## EN5 - Energy saved due to conservation and efficiency improvements

#### Energy management systems

Boliden is in the process of upgrading its energy management systems. As part of that upgrade, all units are to implement energy management systems in accordance with ISO 50001. In 2012, two units, namely Boliden Tara and Boliden Harjavalta, achieved ISO 50001 certification. Other operations, previously certified in accordance with EN 16001, are expected to make the transition to ISO 50001 before the end of 2014.

#### **Energy efficiency initiatives**

Boliden strives to take advantage of excess heat from the processes, transforming it either to electric power or for use in external district heating or steam deliveries. In 2013, 2,169,000 (2,045,000) GJ of heat have been used internally, and 2,791,000 (3,038,000) GJ have been delivered externally for use in public district heating systems in Finland and Sweden, for example.

## EN7 - Initiatives to reduce indirect energy consumption and reductions achieved

Boliden promotes energy efficiency on a broader scale through voluntary commitments within the framework of national programmes, e.g. through the Swedish Energy Agency's PFE programme, the Finnish equivalent called MOTIVA, and collaborations with Enova in Norway and SEAI in Ireland. In practical terms, these projects typically promote optimisation of mills, ventilation systems, simplified drive mechanisms, more efficient pumps and compressors etc. The main aim of these programmes is to increase the efficiency with which electricity is used, and hence to bring about reductions in indirect energy consumption.

The ongoing Swedish PFE programme (2010–2014) and a recently completed Enova project in Norway can serve as examples. The starting point for PFE is the introduction of certified energy management systems. The energy reviews are used to generate a list of measures designed to improve energy efficiency, which the company then imple-

ments during the remaining three years of the programme. At Boliden, this has led to the introduction of procedures for purchasing high-consumption electrical equipment and new routines for evaluation of life-cycle costs in construction and renovation. PFE focuses on energy efficiency and the priority is, therefore, to produce a list of measures that will improve the efficiency of electricity usage. The current projects in the Boliden Area, Boliden Aitik, and Boliden Garpenberg Swedish mines aim to save 369,000 GJ/a of electricity, with a saving of 224,000 GJ/a reportedly having been achieved after the first two years (2010–2011). A project aimed at improving the energy efficiency by modernising transformers and rectifiers in connection with re-spacing of the electrolysis process, was completed at Boliden Odda in 2013. It is estimated that this project has yielded electricity savings on the order of 288,000 GJ/a.

#### EN8, EN10 - Water use

Boliden's operations are located in areas where there is currently no scarcity of water. Boliden nonetheless aims to reduce both its consumption of fresh water and the discharge of used water, in order to minimise the environmental impact. There are no water sources that are significantly affected by water withdrawal on the part of Boliden's operations.

Waste water from nearby operations is not withdrawn or used by Boliden's operations, but in Harjavalta and Kokkola, waste water from

adjacent operations is led into Boliden's waste water treatment plants for treatment before being discharged to recipients. The volume is not reported to Boliden. Since 2012, rainwater that naturally feeds into the system is reported as collected rainwater. 2013 Rönnskär has adjusted the calculation of recycled volume of water, which affects both the total amount and the percentage of recycled water volume.

Volumes are based on data from flow meters

EN8 Total water withdrawal per source	2009	2010	2011	2012	2013
Total water withdrawal in million m <sup>3</sup>	134.8	140.3	153.0	160.0	155.0
– by source					
Sea water	82.8	84.5	94.0	101.8	95.0
Surface water (lake/river)	38.6	43.1	44.6	39.6	40.5
Collected rain water	1.6	1.3	1.3	21.9	0.66
Ground water	9.8	9.4	11.1	16.3	16.9
Municipal water	2.0	2.0	2.1	2.3	2.2
EN10 Percentage and total volume of	2009	2010	2011	2012	2013

EN10 Percentage and total volume of water recycled and reused	2009	2010	2011	2012	2013
Total volume of water recycled in million m <sup>3</sup>	185.12	198.30	191.95	179.78	104.08
Percentage of water recycled	137%	141%	125%	112%	67%

#### EN11-14, MM1-2 - Biodiversity

Access to large areas of land is necessary for a vast majority of Boliden's activities i.e. exploration, mining, construction of tailings ponds and dams. Boliden's land holdings include key habitats, habitat protection areas, nature reserves and voluntary designated areas for nature conservation. Most of the mines are located in rural areas in northern parts of Sweden. The exception is Tara Mines, which is located near the community of Navan in Ireland. The smelters are all located in industrial areas adjacent to a community.

The majority of Boliden's acreage is adjacent to reindeer grazing land and Boliden prioritises in-depth dialogues with representatives of the reindeer industry to ensure the optimum protection of their interests.

This may, for example, entail ensuring that the reindeer herds can roam freely between grazing areas, or that grazing land is, as far as possible, maintained in an undisturbed condition and that the lichen and plants on which the reindeer feed are included in the flora planted when areas are reclaimed

Almost 30 per cent of Boliden's total land holdings of approximately 19,900 (19,500) hectares comprise used and affected land and 70 per cent consists of forest and woodland adjacent to operations.

Land management (hectars)	2009	2010	2011	2012	2013
Total land holding	18,850	18,900	19,400	19,800	19,900
Disturbed and not yet rehabilitated (opening balance)	4,755	5,468	5,668	5,656	5,787
Disturbed in the reporting period	735	238	12	137	110
Rehabilitated in the reporting period	22	38	24	6	16
Disturbed and not yet rehabilitated (closing balance)	5,468	5,668	5,656	5,787	5,881

Soil conservation and the reclamation of mining areas that have reached the end of their productive lifespan are part of Boliden's operations and responsibility. The reclamation programmes are designed to reduce the impact on surrounding areas of land and the local biological diversity. In 2013, approximately 16 (6) hectares were restored/ reclaimed, while 110 (137) hectares were utilised. By the end of 2013 Boliden had a total of just under 5,900 (5,800) hectares in use and not yet restored. At the end of 2013, a total of SEK 1,651 million (1,618 m) had been allocated for the reclamation of both mining areas and smelters.

Total land holding by site, hectares	Type of operation	Country	2013 ha
Aitik	Mine	Sweden	6,577
Bergsöe	Smelter	Sweden	13
Boliden Area	Mine	Sweden	1,848
Garpenberg	Smelter	Sweden	1,232
Harjavalta	Smelter	Finland	451
Kokkola	Smelter	Finland	340
Odda	Smelter	Norway	40
Rönnskär	Smelter	Sweden	153
Tara	Mine	Ireland	803
Old mining areas and forests	_	Sweden	8,403

In order to promote responsible forestry, Boliden's forests are FSC certified and Boliden has assigned approximately 10 per cent of its productive forested land for nature conservation. This area is partly protected through the establishment of nature conservation land, key habitats and habitat protected areas, and partly managed to promote nature conservation interests. The areas protected by Boliden mainly comprise older forests, wetlands and areas dominated by deciduous forest. Over time, some of the older forests are becoming more and more primeval. In areas dominated by deciduous forest, forestry is conducted in a way that prioritises deciduous tree species. Deer hunting occurs, wherever possible, in order to maintain biodiversity and keep grazing pressure at an acceptable level.

On the productive forested land, Boliden manages the forestry from a landscape ecological perspective. Over the past years, the Group's forestry management in these areas has included prescribed felling, which is intended to benefit deciduous wooded pastures, and controlled burning in order to promote certain species and biological diversity. By adapting the forest management in areas used for outdoor recreation, social values are created and maintained. Boliden's ambition is for the wildlife on Boliden's land to be in harmony with the forestry, hunting and other public interests. Current long-term plans extend for at least ten years and include remediation, planned measures and allocated money for a number of abandoned pit mines. Boliden is constantly working to develop new options for remediation. The Group's interventions in older abandoned mining areas are often aimed at complementing the old techniques with new.

The establishment of new mines and the expansion of existing businesses require land to be utilised. The physical impact on surrounding areas of land of opening a mine is considerable. A substantial amount of forested land must often be cleared to create space for infrastructure and buildings. Building a smelter also necessitates the construction of a tailings pond, which has a large surface area, and it is sometimes necessary to redirect watercourses and make use of small lakes. The aim, at all times and in spite of the substantial inroads that must be made into the countryside, is to have the minimum possible impact and all changes to be made must be included in the environmental impact assessment that forms the basis of the environmental permit issued before the operations may commence. Once the mine is operational, the impact continues in the form of waste products – such as waste

rock and tailings sand – traffic, noise, dust and other emissions and discharges to air and water (See EN2).

Nowadays, when mines are opened in previously undisturbed areas, all of the relevant areas' natural and cultural values are inventoried. This is part of the EIA, (En-vironmental Impact Assessment) which is a mandatory part of the permit application process for new activities. The EIA makes it possible to measure the effects on the flora and fauna before, during and after any operation is carried out. This inventory, or baseline, can be used as a reference when planning and utilizing the remediation actions. EIAs are also carried out and a current baseline established in conjunction with changes to existing operations and the establishment of new operations in already disturbed areas.

Boliden's operations are located in areas where mining activities have been carried out for anything between decades and several hundred years by a variety of different parties in times when environmental legislation did not exist and knowledge levels were much less developed than is currently the case, and it is consequently not only impossible to determine an original baseline, but difficult to quantify the precise long-term impact of the activities. Studies are, however, carried out continuously in order to detect any effects on the surrounding flora and fauna, whether negative or positive. The studies are often conducted in collaboration with research institutes such as LTU, IVL etc. or carried out by consultants hired by Boliden.

100 per cent of the used and affected land is subject to assessment under the criteria that specify the requirement for a biodiversity management plan. Closure and re-mediation plans, including biodiversity aspects, are a mandatory part of the environmental permit issued to operate a mine.

Strategies will be further developed for the definition of proper compensation measures for application when utilising land and thus causing loss of biodiversity. A biodiversity creation methodology is being developed at closed mines with the aim of optimising the surface potential of previously utilised land.

Once reclamation work is completed, the measures must be inspected by the environmental authorities who will either approve them or propose additional measures. Boliden continues to monitor and manage the areas that have been reclaimed for an indeterminate period of time, and this may, if necessary, entail implementing additional measures in already reclaimed areas.

There are various different types of protected area in the vicinity of the majority of Boliden's mining operations, such as wildlife and plant sanctuaries, key biotopes, protected watercourses of national interest, nature reserves, and Natura 2000 areas.

The Aitik mine, which is located within the drainage basin of the Natura 2000-classified Kalix and Torneälv rivers, together with their source waters and subsidiaries, is one example of this.

Reporting of planned and ongoing reclamation work, together with the status of completed reclamation work, is part of Boliden's mandatory environmental reporting and is an important part of the ongoing communication with the supervisory authorities.

A list of prioritised reclamation objects has been drawn up and is updated continuously on the basis of the results of studies showing changes in the status of the respective objects. An object may be anything from measures designed to improve dam safety, or large-scale ground installation projects, to out-and-out nature con-servation in the form of water treatment, planting or installation of nesting boxes for birds. One of Boliden's ambitions for the period from 2014 to 2018 is to complete work on the five most prioritised objects.

Boliden's vision is for reclaimed mines to merge with the landscape in a natural way and for the measures taken to add something of value to the environment, over and above the value that existed before the land was utilised. See the "Thank you for the loan" film at www.boliden.com under Press/films.

#### EN16 - Total direct and indirect greenhouse gas emissions by weight

Boliden's direct carbon dioxide emissions arise primarily from the use of carbonaceous reducing agents, from fuels in metal extraction processes, and from the use of fuels for mining operations and road transportation within the company. The indirect carbon dioxide emissions derive from purchased electricity.

The direct emissions are calculated in accordance with the procedures laid down in the WBCSD GHG Protocol, together with additional guidelines from the EU and/or national authorities. The indirect emissions resulting from electricity have been calculated with a constant emission factor in Sweden and Finland for the current target period from 2008–2013. The indirect emissions from the primary production of electricity have been calculated by Boliden using a variety of different principles, depending on the country. In Sweden and Finland, emissions have been calculated with a constant factor (110 g/kWh) during the current target period from 2008–2013. This emission factor reflects the average Nordic production during 2007–2008, the base period for the Group targets. In Norway, the emission factor has been set to 0 because of the direct connection to hydropower production, while in Ireland, the calculations have been based on emission factors reported by the power suppliers (370 g/kWh in 2012).

 $\mbox{CO}_2$  emissions have increased by 4 per cent (4%) since 2007 at comparable measurement points, excluding emission sources added through the smelters' imple-mentation of ETS. The goal was to limit the increase to 3 per cent, given the planned production increases.

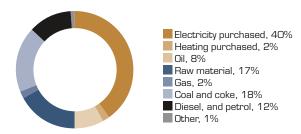
The calculation method for direct emissions has, however, been updated and adapted in line with ETS during this monitoring period. The original estimate was essentially based on the consumption of fuel and reducing agents during the production process, together with indirect emissions from purchased electricity. It became necessary, in conjunction with the implementation of ETS at five smelters within the Group, to apply a more comprehensive emissions computation. This process

began during 2009–2010 and also takes into account the input of carbon from concentrates and other raw materials. We do not have acceptable data (i.e. reliable carbon analyses for all materials) available in order to make an accurate and comparable retroactive calculation of these emissions from the beginning of the monitoring period, and Boliden has, therefore, apparently increased its carbon dioxide emissions by 22 per cent (23%) from the base year.

Note. Data in this GRI Report is compiled before the EU-mandated ETS reporting to the competent national authorities. The  $CO_2$  reporting within the framework of ETS is carried out in accordance with separately audited procedures in each country, and although we seek to report the same data, we cannot guarantee that the Group's GRI disclosure will correlate exactly to the  $CO_2$  numbers reported within ETS.

#### Carbon dioxide emissions, 2013 per source

The total reported CO<sub>2</sub> emissions are 1,000 Mtonnes for the year.



Greenhouse gas emissions	Unit	2009	2010	2011	2012	2013
Direct emissions (including sources added since 2007)	tonnes	486,000	510,000	499,000	574,000	578,000
Indirect emissions, purchased electricity	tonnes	356,000	398,000	408,000	416,000	402,000
Indirect emissions, purchased heat & steam	tonnes	5,000	6,000	17,000	18,000	20,000
Total CO <sub>2</sub>	tonnes	848,000	913,000	924,000	1,008,000	1,000,000
CO <sub>2</sub> intensity, emissions per tonne produced metal	tn/tn	0.68	0.72	0.71	0.77	0.78

## EN17 - Other relevant indirect greenhouse gas emissions by weight

Boliden utilises a comprehensive transportation system for transporting raw materials, products and by-products by ship, rail, or road, depending on the volume being transported and the distance involved. A large number of suppliers and subcontractors are part of Boliden's transportation system and it has proven difficult to compile a uniform report based on information provided by the respective carriers. A more comprehensive calculation of emission levels has, therefore, been conducted for the 2011 fiscal year. We consider these, our own calculations, to be more reliable than the non-uniform data provided by our suppliers. The quality of data is consequently considered to be high, and the result can be also used as an estimate for 2012 and 2013, given that the volumes and transportation streams are similar.

Road transports have been calculated using the NTM models and assuming fossil fuel-powered and standardised trucks. Sea transports have been calculated using the NTM models and assuming fossil fuel-powered and standardised ships. Assumptions are made for positioning and time for loading/unloading in harbour. Rail transports have been calculated using the NTM models, with relevant emissions data for rail-way diesel and national railway electricity mixes. We estimate, based on these calculations, that emissions linked to transports to our sites are on the order of 12,000 tonnes  $\rm CO_2/a$ , and that emissions linked to transportation from our sites are on the order of 68,000 tonnes  $\rm CO_2/a$ . Only transports chartered by Boliden have been accounted for.

## EN18 – Initiatives to reduce greenhouse gas emissions and reductions achieved

The GRI definitions state that this indicator should reflect reductions of emissions identified under EN-16. The reductions result from measures such as energy savings and energy efficiency initiatives reported in EN-5 and EN-7. Ongoing energy efficiency measures (e.g. PFE programme Boliden Mines) have yielded a reduction of 7,000 t/a CO2, with another 4,400 t/a CO2 planned. Boliden strives to deliver the excess heat from its processes for use in district heating, whenever possible. The heat supplied by Boliden Bergsöe, Boliden Rönnskär, Boliden Kokkola and Boliden Harjavalta in 2013 is equivalent to 230,000 t/a of CO2 if the same amount of heat had been produced from a fossil fuel source.

Boliden is also, over and above these measures, actively initiating attempted reductions in fossil fuel emission by means of fuel substitution tests, participation in demonstrations of electrified road transports, and improved heat recovery/exchange with the aim of phasing out the use of fossil fuels for heating purposes.

Boliden is a co-owner of BasEl, and its production company for windbased power, Vindln AB, which is building and operating wind farms in Scandinavia. The purpose of Vindln is to take a longer term approach and to deliver low cost, renewable electricity. Vindln currently produces over 200 GWh and its goal is to produce 1 TWh within the next few years through the further development of wind farms in Sweden and Finland.

#### EN20 - Other significant air emissions

Other significant air emissions deriving from Boliden's operations are sulphur dioxide, nitrous gases, metals and dust. The figures for sulphur dioxide and nitrous gases presented below are divided into emissions from stacks and diffuse emissions from fuel used in both stationary and mobile equipment and the use of explosives. The figures for metals and dust include the emissions from stacks but exclude the diffuse emissions. Boliden has no emissions of VOC or POP.

Diffuse emissions are generated at both mines and smelters and the environmental impact is due to dust particles containing metals being dispersed by the wind. All operations are working systematically to reduce particle emissions to air, e.g. by enclosure of dust-generating equipment and salting and watering roads. The diffuse emissions are difficult to quantify, but are monitored using various scientifically recognised methods.

#### Summary of managing the reduction efforts

Boliden's efforts to reduce emissions are based on an overall analysis of the Group's environmental impact and the identification of a number of focus areas. The environmental impact and risk assessments are revised on a regular basis, as are the measures to be taken, the process of identifying relevant milestones and the resources needed to achieve the overall objectives. The work is controlled and conducted by each individual operating facility, as local circumstances may differ. Follow-up work at Group level is conducted on a monthly basis.

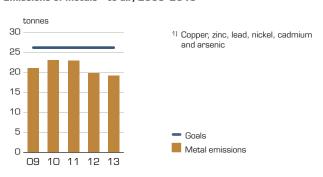
Sulphur dioxide emissions to air are mainly attributable to gases generated during the smelting processes at the Harjavalta and Rönnskär copper smelters. The amount of sulphur dioxide emitted during the process depends on such factors as process stability and the efficiency of the abatement systems, and, to some extent, on the amount of sulphur in the raw material. One way of reducing emissions is, therefore, to control the smelting process and to allow emission levels be a factor

when deciding which raw material to smelt at a specific time. The monitoring and control of abatement systems for effective gas cleaning is important work which is carried out on a daily basis.

The work continues, with a focus on process stability and improvement and/or replacement of technical solutions. The emission of metals to air during the period 2007–2013 decreased, mainly due to well-performing abatement systems and stable processes with few disturbances.

Emissions to air are mainly based on periodic monitoring in accordance with such standards as SS-EN 14385 or other applicable standards. Emissions from fuel are calculated using the fuel properties data provided by the supplier. Accredited laboratories, both internal and external, are used for analyses of samples taken on site.

#### Emissions of metals<sup>1)</sup> to air, 2009-2013



Emissions to air	Unit	2009	2010	2011	2012	2013
NO <sub>2</sub>	tonnes	520	480	530	510	360
NO <sub>2</sub> , indirect emissions from fuel and explosives	tonnes	210	230	190	190	180
SO <sub>2</sub> 1)	tonnes	6,930	6,850	7,410	8,140	6,290
SO <sub>2</sub> , indirect emissions from fuel	tonnes	37	59	37	37	32
Dust containing metals	tonnes	60	67	65	64	58
Metal emissions to air (Cu+Zn+Pb+Ni+Cd+As)	tonnes	21	23	23	20	19

<sup>1)</sup> SO<sub>2</sub> emissions from the copper refinery in Pori are excluded and will be included within the next target period 2014–2018.

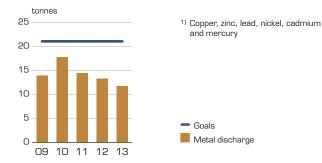
#### EN21 - Water discharge

Discharges to water derive from dams and tailings ponds at the mine sites, and from water treatment plants and surface water at both smelter sites and mine sites. Boliden's smelters account for approximately 70 per cent of metal discharges to water while the mines account for the remaining 30 per cent. As far as nitrogen is concerned, the Boliden mines account for just over 70 per cent of the discharges and the nitrogen mainly arises from the use of explosives and their handling. The remaining 30 per cent comes from wastewater recycling at the Kokkola smelter.

Ensuring efficient and stable operation at water treatment plants and recirculating the process water as much as possible is an important part of reducing discharges to water. Boliden's operations include purifying process water, as well as a significant amount of the rainwater that falls within the industrial areas. In recent years, there has been heavy rainfall and this underlines the need for increasing the water treatment capacity. Several of Boliden's operations have consequently implemented measures designed to meet this need.

Boliden has considerable expertise when it comes to the nitrogen flow and nitrogen compounds that occur as a result of its processes, and is, therefore, able to work systematically to manage those levels. Reducing nitrogen discharge levels involves investing in and using the right technology, and continuously improving the handling of explosives and blasting procedures.

#### Discharges of metals to water, 2009-2013



EN 21 Total water discharge by quality and destination	2009	2010	2011	2012	2013
Discharged water volume in million cubic metres	109.2	116.5	105.9	118.8	116.9
- to rivers/lakes	51.7	58.2	51.1	58.6	54.9
- to seas	57.5	58.4	54.8	60.2	62.0
- to municipal treatment plants	0	0	0	0	0

Once the water cleaning process is completed, the smelters discharge their water to the sea while the mines discharge the water into rivers and lakes. The water discharged to recipients is monitored to ensure that levels of pollutants are within the quality standards stipulated in the

environmental permit. Accredited laboratories, both internal and external, are used for analyses of samples taken on site. No discharges are made into wetlands, ground water or municipal treatment plants. Volumes are based on flow meters

EN 21 Total water discharge		2009	2010	2011	2012	2013
Metal discharge to water <sup>1)</sup> (Cu+Zn+Pb+Ni+Cd+Hg)	tonnes	13.9	17.8	14.5	13.3	11 7
Nitrogen to water (N-tot)	tonnes	225.4	199.0	205.2	252.8	218.8

<sup>1)</sup> Metals in water discharges from the sulphuric acid plant in Kokkola, copper refinery in Pori and from the dewatering of iron sand process in Rönnskär are excluded and will be included within the next target period 2014–2018.

## **EN22**, MM 3 – Waste types and disposal methods including overburden, rock, tailings and sludge, and their associated risks

Boliden processes a number of different metals and substances that are both toxic and environmentally harmful. The mining and smelting operations generate residual waste consisting of waste rock, tailings, slag, sludge and dust.

EU waste legislation currently has a strategic approach to waste as being a resource and deposition as being the last option (Waste Framework Directive, 2008/98/EC). There is already considerable awareness of the importance of waste issues within the Boliden Group: e.g. waste sorting, significant recycling of process residues and scrap, good reporting procedures and ongoing waste projects. The majority of Boliden's process and mining wastes are sent to landfills in accordance with the EU Landfill of Waste Directive (1999/31/EC) and the Mining Waste Directive (2006/21/EC). The remainder is used as construction material or as filler material. Waste rock tips are covered continuously, wherever possible, in order to prevent weathering or leaching. Boliden's mine waste is generally handled in accordance with applicable environmental permits that specify how and where it may be stored and how it shall be covered and reclaimed.

Extensive monitoring programs are in place to ensure a high level of dam safety and several measures to increase dam safety have been finalised or are in progress. Boliden is responsible for around 40 dam facili-

ties in Sweden, Norway, Finland, Ireland and Canada. They are used or have been used to deposit tailings sand or other waste and for water management. This figure includes both operational and decommissioned facilities. Dam facilities are managed according to GruvRIDAS.

Correctly processed waste can be turned into valuable products. What is considered waste for one operation can often constitute a raw material for another. Ap-proximately 45 per cent of the process residues generated are sent to another Boliden site for metals recovery or final deposition. Appropriately handled, the trade in waste and by-products can be of benefit to society by increasing overall resource efficiency. Boliden works continuously to identify internal and external recycling or landfill solutions for any process wastes generated. Boliden receives significant amounts of waste from external parties for recycling, construction purposes or safe deposition in landfills.

The export of waste to landfill or for recycling is extensively regulated. Boliden has also developed procedures for monitoring and following up on the receiving party's processing operations to ensure that their waste processing is acceptable from a health and environmental viewpoint.

An expansion in 2012 made Boliden Rönnskär the world's leading recycler of electronic scrap, with an annual capacity of 120,000 tonnes. The lead smelter, Boliden Bergsöe, is one of Europe's four biggest players

in lead recycling, and each year, the plant receives about 70,000 tonnes of lead batteries and lead scrap from all over the Nordic region.

The secondary raw materials, i.e. electronic scrap and waste batteries, contain plastics that are incinerated in the process. The incineration of the plastics has two purposes: it serves as a reducing agent in order to produce the metal and it also generates heat that is necessary for the process. The excess heat from the process is reused for, amongst other things, district heating.

Since 2013, Rönnskär no longer reports slags treated in the Boliden Area as non-hazardous waste. The slags are reused in the concentrator plant and remaining waste is reported as tailings by the Boliden Area.

Volumes are mainly based on loaded weight. Waste rock tonnage is based on calculations of volume and density. Tailings are based on calculations of tonnage of ore minus tonnage of concentrate output.

There are no statistics available for overburden as it is seldom that any overburden exists, and what does constitutes an insignificant vol-

ume of waste. Metal-bearing sludge is not considered waste, but rather is reused in the process. Sludge that is not reused in the process accounts for an insignificant percentage of either Hazardous waste or Non-hazardous waste, depending on its properties.

Some waste is sent for final storage in underground facilities. Tailings are, for example, used as back-fill wherever this is possible, both as reinforcement and to reduce the amount of tailings above ground. Odda stores jarosite and slag in mountain caverns. Rönnskär is in the process of completing underground disposal facilities for arsenic-bearing waste. Kokkola is using old salt mines in Germany to store mercury, containing the waste in a secure way.

Boliden has no organic waste material that is suitable for composting, other than small amounts from canteens, which is sent for municipal treatment.

Boliden does not use deep well injection or incineration of waste as fuel

Wastes	Unit	2009	2010	2011	2012	2013
Hazardous waste, total	tonnes	664,000	722,000	750,000	756,000	737,000
Whereof waste to external use, treatment or recovery	tonnes	2,800	3,300	3,800	5,300	5,400
Whereof waste to external disposal	tonnes	1,070	1,100	480	630	10
Non-hazardous waste, total	tonnes	406,000	362,000	340,000	443,000	221,000
Whereof waste to external use, treatment or recovery	tonnes	53,600	59,600	63,200	64,500	82,100
Whereof waste to external disposal	tonnes	1,100	700	800	900	700
Waste rock, total	tonnes	32,380,000	29,270,000	31,646,000	41,635,000	40,836,000
Waste rock for internal construction	tonnes	2,507,000	3,811,000	3,417,000	5,013,000	2,902,000
Storage of waste rock for future use	tonnes	16,643,000	5,892,000	11,954,000	30,280,000	30,937,000
Sold waste rock	tonnes	72,000	107,000	23,000	54,000	206,000
Tailings, total	tonnes	22,814,000	26,304,000	35,974,000	39,290,000	41,674,000
Tailings for internal construction	tonnes	1,309,000	1,278,000	2,362,000	1,957,000	2,753,000

#### EN23 - Significant spills

Approximately 600 tonnes of copper concentrates spilled when a freight train carrying concentrates from Aitik to Rönnskär derailed. The transport service was run by Green Cargo, and the Swedish Transport Organisation was responsible for the decontamination of the area.

A total of five larger oil spills, i.e. 150-400 litres, were reported from Aitik and the Boliden Area. All spills occurred within the mining areas and were immediately sanitised. Any contaminated soil was exca-

vated. A leakage of approximately 30 tonnes of tailings occurred inside the concentrator plant area in Garpenberg. The ground was sanitised.

None of these events have entailed any significant environmental impact or caused lasting harm to the surroundings. Investigations have been conducted in conjunction with all of the incidents in order to ascertain the causes of the spills and, wherever possible, to institute measures that will prevent any repeats.

#### **EN28 - Significant fines**

Boliden has been fined on three occasions in the past five years for violating environmental laws and regulations. In 2012, Boliden was fined SEK 100,000 for pursuing operations in a quarry by the Hötjärn tailings pond in the Boliden Area before the permit had been renewed; in 2011 the Group was fined SEK 50,000 for an oil leakage into the sea at the Rönnskär smelter that occurred in 2010; and in 2010,

the Group was fined SEK 75,000 for exceeding the air shock wave limit in connection with a blasting round the Aitik mining area in 2007.

During the reporting period there have been O non-monetary sanctions.

No cases have been brought via dispute resolution mechanisms during the reporting period.

Fines	Unit	2009	2010	2011	2012	2013
Significant fines	number	_	1	1	1	0
Monetary value of significant fines	SEK	_	75,000	50,000	100,000	0

## EN29 - Significant environmental impact of transporting products and other goods and materials used in the organisation's own operations, and transporting members of the workforce

Transportation of material and goods plays a major part in reducing emissions to air from Boliden's operations. In 2013 41,000 (39,000) tonnes of fuel was used for internal transportation on our operational sites.

When determining the areas on which to focus in order to reduce the environmental impact from transportation, Boliden uses statistics from the existing consumption of fuels, the tonnages transported and the alternatives that are available when choosing routes and means of transport. Experts in planning and purchasing are constantly working to optimise our transportation, both from an environmental and from an economic point of view. This optimisation work includes everything from choosing the fuel and engines in Boliden's own vehicles, to choosing suppliers of transportation services with the best possible environmental performance.

Boliden's transports are dominated by three main flows: transports within facilities, especially mines; transports of smelting material from mines to own and external smelters; and transports of metals and by-products from smelters to customers.

Most of these shipments involve moving large volumes between fixed destinations and they are, therefore, well suited to sea and rail transport. Where this is not possible, road transport is used. A high fill factor and a large share of return load improve the efficiency of road transportation.

About 90 per cent of Boliden's raw material is transported by sea or rail. Boliden's sharp increase in shipments of recyclable materials has, for example, essentially been handled using the Group's existing Copper Shuttle rail solution.

In 2011, the UN's International Maritime Organization (IMO) introduced new regulation concerning the sulphur content in marine fuels that is scheduled to come into force from 2015. Boliden generally welcomes stricter laws and regulations that aim to reduce environmental impact. In this particular case, however, the consequences for Boliden and other industries in northern Sweden and Finland that depend on maritime transport are still uncertain. It seems that the new rules could negatively impact Boliden's competitiveness, and Boliden is consequently participating in joint initiatives in Sweden and Finland, and at EU level, to promote rules that do not distort competition.

As a producer and importer of metal concentrates, Boliden has taken measures to comply with the new IMO MARPOL Annex V criteria for substances harmful to the marine environment. In practice, it is a tank lorry that receives the contaminated wash water from the ship and transports it to Boliden's internal landfills or water treatment plants.

A relatively small part of the environmental impact from transportation comes from business travel, but Boliden uses video and web conferencing equipment and telephone conference calls to reduce its business travel. These measures have reduced the need for air travel.

## Social performance

Boliden can generate value by having top quality operations, processes and products. To achieve this goal, Boliden must have employees who are skilled, committed and who accept personal re-sponsibility. Boliden must, in turn, offer its employees a safe and inspiring working environment. By acting responsibly towards neighbours, business partners and other stakeholders, Boliden can maintain a good reputation as a metals company and employer.

### Boliden's social targets, 2009-2013

GOALS 2013	RESULTS IN 2013
<ul> <li>The Group has adopted a zero harm philosophy, which means that all units shall endeavour to have zero accidents every month.</li> </ul>	Boliden had no months with zero accidents in 2013, and on average, Boliden's nine operating units achieved 6 months with zero accidents. In 2013, the accident frequency increased to 7.0 from 6.6 per one million hours worked in 2012. Performance is followed up on a monthly basis. Boliden has included contractors in the statistics since 2012, and when contractors are included, the LTI frequency in 2013 was 8.9 [9.1].  Boliden has systematically eliminated dangerous elements, trained employees in safe behaviour and provided protective equipment, but the number of accidents has still increased over the last two years. Mapping the causes of accidents has given no clear answers, but in order to reverse the negative trend, Boliden will strengthen its managers' leadership skills and expertise in health and safety and investments in this area will continue, including the launch, in January 2014, of a new health and safety organisation. The goal of zero accidents remains for the period 2014–2018.
<ul> <li>The Group's sick leave rate shall not exceed</li> <li>4.0 per cent by the end of 2013.</li> </ul>	The sick leave rate was 3.9 (3.7) per cent at the end of 2013. Boliden's systematic and preventive work with health and effective rehabilitation has yielded positive results, and the work will be further progressed for the new target period. The sick leave target figure for the new period from 2014–2018 has been further tightened, and shall not exceed 3 per cent.
<ul> <li>All white-collar workers in Boliden will be trained in performance evaluation.</li> </ul>	Boliden's top 100 managers, and the employees reporting directly to them (700 employees in total), were trained in performance evaluation during 2013.

### Boliden's social targets, 2014-2018

#### **GOALS 2018**

- Number of accidents at each unit shall be O.
- Absence due to sickness shall be below 3 per cent.
- 20 per cent of Boliden's workforce shall be women.
   On 31st December 2013, women accounted for 17.7 (16.9) per cent of the Group's total number of employees, and 23 per cent of Boliden's top 100 managers.

## Labour practices and decent work (LA)

#### LA1 - Total Workforce by employment type, employment contract, and region

#### Total number of employees by region<sup>1)</sup>

Country	2010	2011	2012	2013
Sweden	2,429	2,488	2,893	3,030
Finland	944	904	947	967
Norway	326	321	308	310
Ireland	699	696	697	658
Other	14	14	12	12
Total in Group	4,412	4,423	4,857	4,977

#### Total nr. of full time and part time permanent employees by region<sup>1)</sup>

	20′	12	201	13
Country	Full time permanent	Part time permanent	Full time permanent	Part time permanent
Sweden	2,717	65	2,805	54
Finland	838	37	844	40
Norway	307	0	294	0
Ireland	666	6	634	7
Other	8	4	8	4
Total in Group	4,536	112	4,585	105

#### Contract type and white and blue collar by region<sup>1)</sup>

		2012				2013		
Country	Temporary employees	Permanent employees	White collar	Blue collar	Temporary employees	Permanent employees	White collar	Blue collar
Sweden	111	2,782	943	1,950	171	2,859	978	2,052
Finland	72	875	295	652	83	884	309	658
Norway	1	307	91	217	16	294	94	216
Ireland	25	672	193	504	17	641	184	474
Other	0	12	12	0	0	12	12	0
Total in Group	209	4,648	1,534	3,323	287	4,690	1,577	3,400

<sup>1)</sup> Number of full time permanent employees by 31st December 2013 legally reported.

#### LA2 - Total number and rate of employee turnover by age group, gender and region

The personnel turnover rate was 4.7 per cent (4.4%). The total number of employees leaving employment during the reporting period was 219 (204), 35 (30) of whom were women.

#### Permanent employees leaving employment by region

	2012		2013		
Country	Number	%	Number	%	
Sweden	127	5	118	4.1	
Finland	56	6.4	48	5.4	
Norway	10	3.3	17	5.7	
Ireland	11	1.6	36	5.6	
Other	0	0	0	0	
Total in Group	204	4.4	219	4.7	

#### Employees leaving employment by age and gender

	2010		2011		2012		2013	
Country	Number	%	Number	%	Number	%	Number	%
<30 years	16	8.5	13	6.5	20	9.8	15	6.8
30-50 years	39	20.7	48	23.9	48	23.5	54	24.7
>50 years	133	70.8	140	69.6	136	66.7	150	68.5
Male	165	3.8	177	3.9	174	4	184	4
Female	23	0.5	24	0.5	30	0.6	35	0.7

#### LA3 - Benefits

In general, Boliden offers a comprehensive and competitive package of market-orientated salaries and benefits, and considers the ability to recruit and retain competent employees as a prerequisite for its success. In 2013, total wages and benefits for our employees amounted to SEK 2,451 million (SEK 2,437 m).

The profit-sharing system for all employees, introduced in 2007, means that a profit share is payable when the return on capital employed reaches 10 per cent. The maximum profit share (SEK 25,000/full-time employee) is payable when the return on capital employed reaches 20 per cent. In 2013, the return on capital employed was 5 per cent (13%) and the amount the programme will receive for 2013 is now to be decided. In 2012, the amount per employee was SEK 8,575, in line with legislative provisions in the respective countries.

While the benefits offered by Boliden are similar in all regions in which Boliden operates, they are not identical due to legislative differences in such areas as parental leave, parental pay and opportunities for working shorter hours during the early childhood years. In Sweden, Ireland and Norway, for example, Boliden provides com-pensation for employees on parental leave as a complement to the compensation from the social security systems in these countries. In Finland, all compensation for employees on parental leave is paid exclusively by the social security system.

#### Finland

All of Boliden's employees in Finland have valid contracts of employment regulating their salaries and other general working conditions. Furthermore, all employees, including temporary workers and those working part time, receive benefits in addition to those included in the collective agreements and individual employment contracts. The benefits are: employers' liability insurance (statutory), travel insurance, leisure time accident insurance, sports insurance, insurance against treatment injury (statutory), group life assurance (statutory), employment pension insurance (statutory), maternity/paternity leave. All employees benefit from the various leisure and healthcare activities provided by the company.

#### Ireland

All of Boliden's employees in Ireland are paid competitive salaries, allowances and bonuses, as well as shift premiums (as outlined in collective agreements and/or individual employment contracts). Employees are, furthermore, entitled to the following benefits: life assurance, health insurance (subsidised or fully paid), access to company healthcare, disability cover (white-collar employees only), pension, retirement provision, maternity/paternity leave, annual leave and public holidays, and reimbursement of travel and other work-related expenses.

These benefits are provided for all full-time and part-time employees (sometimes proportionately) as well as employees who are on a fixed term contract. Summer students and temporary employees on very short-term contracts, however, are not entitled to all of the above benefits.

#### Norway

All of Boliden's employees in Norway have valid contracts of employment regulating their salaries and other general working conditions. All employees are, furthermore, entitled to the following benefits: life assurance, travel insurance (official company journeys), health insurance (fully paid), disability cover, defined contribution of five or eight per cent from base salary, and a defined benefit of 70 per cent (incl. state pension) of salary between 62 and 67 years of age, optional loans for consumer goods (max. NOK 30,000), maternity/paternity leave (10 per cent paid by company), annual leave and public holidays, and reimbursement of travel and other related expenses.

The benefits do not differ between full-time and part-time employees. Temporary workers, however, are not entitled to consumer goods loans (max. NOK 30,000) or to company pensions.

Temporary workers on short-term contracts (e.g. summer students) are only entitled to life assurance, travel insurance (official company journeys) and disability cover.

#### Sweden

All of Boliden's employees in Sweden have valid contracts of employment regulating their salaries and other general working conditions. All employees, including temporary workers and part-time workers, also have benefits in addition to those included in the collective agreements and individual employment contracts. All permanent employees in Sweden (including part-time workers) are entitled to the following benefits: life assurance, health insurance and disability/invalidity coverage, healthcare fund, dental care, parental leave agreements, retirement provision, company profit-sharing scheme and company bonus schemes. All employees are, furthermore, included in the various leisure and healthcare activities arranged at the different units.

Temporary workers receive the following benefits: life assurance, health assurance and disability/invalidity coverage. The level of all these benefits is higher than that stipulated in national legislation.

## LA4 - Percentage of employees covered by collective bargaining agreements

The number of employees at Boliden covered by collective agreements on 31st December 2013 was 4,948 (4,784), representing 98.2 per cent of the total workforce.

## Employees covered by collective bargaining agreements per country, %

Country	2010	2011	2012	2013
Sweden	99.7	99.2	100.0	99.9
Norway	94.9	94.1	99.7	100.0
Finland	100.0	99.9	99.0	99.5
Ireland	91.9	92.0	92.0	98.8
Total	98.2	98.1	98.5	99.4

#### Region Binding collective agreements in place between Boliden and;

Finland • The Finnish Metalworkers' Union

- Trade Union Pro
- Federation of Professional and Managerial Staff

Ireland • The Services, Industrial, Professional and Technical Union

- Power Union (TEEU)
- British and Irish trade union UNITE

Norway • Industri Energi

- The Norwegian Engineers and Managers Association (FLT)
- Lederne
- Negotia
- The Norwegian Society of Engineers and Technologies (NITO)
- The Norwegian Society of Graduate Technical and Scientific Professionals (Tekna)

Sweden • Unionen

- The Swedish Association of Graduate Engineers
- Ledarna, Swedish Organisation for Managers
- IF Metall

#### LA5 - Notice regarding operational changes

Minimum notice periods, as required by labour legislation, are always adhered to by all Boliden's operations. In general, notice periods for significant operational changes are as long as possible, and consultation with employees and relevant parties commence as soon as possible. National legislation and collective agreements set the framework and regulations for how information-sharing and negotiations are to be carried out in connection with operational and organisational changes.

A notice period can vary from weeks to months, depending on the project or proposals, and the urgency with which the required changes must be made. The trade union representatives are continuously updated about the development of the company's operations and informed before any decisions about significant changes in its operations are made. Where significant changes in company operations are necessary, employees and/or their union representatives are involved from an early stage in the process.

#### Finland

National legislation mandates that negotiations with the unions take place before the termination of employees' contracts. The trade union representatives must also be given written information about the reasons for layoffs, the number of people that might be affected, and to whom the collective agreement is applicable.

If more than ten employees are at risk of being laid off temporarily, [the employment authorities] must be informed. The minimum negotiation period is six weeks for permanent layoffs or temporary layoffs (more than 90 days). The minimum negotiation period is 14 days in cases of employ-

ees being laid off temporarily for not more than 90 days. Notice periods at an individual level are regulated in the collective agreements.

#### Ireland

Labour legislation states that minimum notice periods for ending employment depend on length of service, and/or shall be written into employment contracts. Minimum notice periods for other issues are not written into collective agreements, but are included in labour legislation.

#### Norway

The notice period is always related to employment status and ranges from 14 days for new employees on six months' probation to a notice period of six calendar months for permanent employees with a length of service in excess of ten years and aged 60+.

#### Sweden

National legislation mandates that the company and the unions must conduct negotiations before significant changes in the operations are decided upon and before employee layoffs can be performed. The trade unions must also be given written information about the reasons for layoffs, the number of people that might be affected and which collective agreements that are applicable. If more than five employees are at risk of being subject to layoffs, the regional Employment office must be informed. When larger numbers of employees are involved in the potential layoffs, the notice timeframes range from two to six months.

## MM4 - Number of strikes and lockouts exceeding one week's duration, by country

Boliden experienced no strikes or lockouts in 2013.

Boliden enjoys good relations with the different unions and there is, from Boliden's perspective, a mutual trust. The employees have three representatives on Boliden's Board of Directors. Boliden also has a Works Council comprising employee representatives from all of the countries in which Boliden operates. At local level, employee representatives/

union representatives sit on a number of different councils relating to employee management, production planning, health and safety etc.

The frequency of dialogue ensures a constant flow of relevant information, enabling the unions to understand how Boliden is performing and promoting a two-way dialogue on strategic matters.

## LA6 - Representation on health and safety committees

All units are certified in accordance with the OHSAS 18001 health and safety standard. Boliden has health and safety committees at all work-places where more than fifty employees are working on a regular basis. More than 75 per cent of the workforce is represented by the health and safety committees.

The health and safety committees identify potential hazards, evaluate these potential hazards, recommend corrective actions, and follow up on implemented rec-ommendations. The health and safety committees

hold meetings regularly and carry out inspections of the workplace.

The committee members are also available to receive worker concerns and recommendations, to discuss problems, and to provide input into existing and proposed health and safety programs.

All units have procedures for risk assessments, incident reporting and safety inspections. Boliden also promotes initiatives designed to involve employees on a more informal basis by encouraging them to contribute suggestions for health and safety improvements.

#### LA7 - Injuries and occupational diseases

Boliden has a zero harm philosophy with regards to accidents at work. The goal for each unit is zero accidents every month. Low absentee rates and low injury rates can generally be linked to positive trends in staff morale and productivity.

Boliden has a responsibility to create structures, procedures and other conditions for a safe working environment. Equipment, instructions, risk assessments, incident reporting, safety audits and inspections all help safeguard the individual's safety. Boliden continuously invests in safer machinery and equipment. All operations also regularly provide safety training for all employees (the term employee also includes, here, any form of supervised worker who is not a contractor) according to a fixed schedule, with a view to improving knowledge and awareness and to providing constant reminders of the importance of working safely.

Whatever the efforts are put in systems and techniques, however, they will not be sufficient without decisive action on the part of each individual in the form of his or her own behaviour. Every individual must take responsibility and devote time to considering and following the routines essential to accident avoidance. The principle of safety first at all times must be clearly established in every employee's mind.

In 2013, 57 (54) accidents resulting in absence from work were reported at Boliden's units by Boliden employees. The number of accidents resulting in absence from work, including contractors, was 112 (106). The number of calendar days of absence due to accidents among Boliden's employees was 1,983 (1,405), an average of 35 (26) days per accident.

There have been no fatalities in any region within Boliden in the last five years, either among employees or among contractors.

All operating sites within Boliden are certified in accordance with the OHSAS 18001 standard and have implemented standardised procedures for recording and reporting accident statistics. These procedures also comply with the statutory requirements. The countries in which Boliden operates have national legislation that complies with the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases.

The number of reported occupational diseases or data on absenteeism connected to occupational diseases is not included in our reporting since it can take several years before a reported occupational disease is finally accepted or not accepted as an occupational disease by the authorities. The absence is however included in the ordinary sick leave percentage.

#### LTI Frequency<sup>1)</sup> Boliden employees

	2009	2010	2011	2012	2013
Sweden	6.1	10.4	4.8	6.8	7.5
Norway	1.7	1.7	1.8	1.8	5.8
Finland	4.2	6.0	7.1	9.4	5.8
Ireland	6.9	6.7	4.0	4.7	7.4
Group	5.5	8.2	4.9	6.6	7.0

#### LTI Frequency<sup>1)</sup> employees and contractors

Year	2011 <sup>2)</sup>	2012	2013
Sweden	_	10.1	8.6
Norway	_	1.5	7.4
Finland	_	11.5	10.1
Ireland	_	4.9	10.0
Group	-	9.1	8.9

#### Lost day rate 3)

Lost days due to injury per 200,000 working hours, Boliden employees

Calendar days	2009	2010	2011	2012	2013
Sweden	34	45	19	19	23
Norway	1	2	1	1	14
Finland	8	27	31	35	40
Ireland	103	80	37	105	178
Group	37	44	23	35	49

#### Sick leave rate 4)

Boliden employees

Percentage	2009	2010	2011	2012	2013
Sweden	3.7	3.5	3.5	3.3	3.7
Norway	4.8	5.6	6.0	5.1	4.8
Finland	5.8	5.5	4.7	4.9	5.0
Ireland	3.5	3.0	2.4	2.8	3.1
Group	4.2	4.0	3.7	3.7	3.9

- <sup>1)</sup> The LTI Frequency is calculated per one million working hours and includes all injuries that have caused one day's absence or more from work after the day of the injury. To calculate the injury rate (IR) according to GRI, divide the LTI frequency stated above by five.
- 2) Statistics include employees and contractors working for a contracted company at Boliden's operating sites and/or on behalf of Boliden. Complete data is not available for the years prior to 2012.
- 3) The number of days' absence for contractors is not reported as there is no data available in which lost days are related to work at Boliden's operating sites and/ or on behalf of Boliden.
- 4) The sick leave rate is the total number of hours' absence due to sickness divided by the total number of scheduled working hours.

#### LA8 - Assistance regarding serious diseases

Boliden has a long tradition of encouraging and promoting employees' health and of taking steps to prevent incidents and serious diseases. As part of our occupational hygiene monitoring programmes, Boliden regularly checks its workplaces with regard to exposure, ergonomics, air quality, noise and vibrations. The results are analysed, actions taken when called for, and reported to the authorities.

Employees are screened regularly via the occupational health services provided at the workplace to ensure each individual is fit to do his or her assigned work. Any sign of illness that could be associated with work is documented and reported.

Boliden also offers all employees special assistance, such as anti-flu vaccinations, where necessary. Every operation also has an activity programme designed to promote employees' health.

Boliden's systematic health and wellness work is based on prevention as well as rehabilitation. A large number of the preventative activities managed by the units focus on identifying lifestyle and environmental factors that may have a negative impact on the level of diseases for some employees.

Employees are encouraged to keep fit and to participate in various sporting activities. Experts are invited to speak on various health risks such as cancer, diabetes and heart conditions, and on how to prevent potential health issues that may arise due to working shifts. Anti-smoking and healthy eating campaigns are carried out on an ongoing basis.

Good examples gathered from the units include:

Boliden Tara offers the PSA test for prostate cancer to males aged 50 or over. The Employee Wellbeing Programme also gives employees and their family members access to free, independent, expert information, advice and counselling on any issue that concerns them, including addiction, health, financial, marital or family problems.

All Swedish mines and Boliden Rönnskär are running a health project called "Life and Health" with the aim of promoting a healthier lifestyle. The occupational health service identifies employees at a high risk of falling sick and invites them to join the programme. Action plans on an individual basis, depending on the person's health status, are implemented. More than 100 employees are included in the programme.

## LA9 - Health and safety topics covered in formal agreements with trade unions

Formal agreements with trade unions cover health and safety aspects to some extent, one example being the Swedish SAM committee. Health and safety aspects are, however, mainly covered by national legislation.

Boliden provides free personal protection equipment at all sites and requires its use in accordance with the work procedures that were established, based on the risk assessments carried out before any work is commenced.

There are joint management/employee health and safety committees on each site, and it is mandatory for safety representatives to participate in health and safety inspections, audits, and accident investigations.

All sites provide training in accordance with a training matrix that defines the mandatory training for each position. The training each person has received is documented in the HR system. The training records serve as a basis for promotion, further training and/or repetition.

Every employee not only has the right, but is also obliged to stop any work that is considered to be unsafe. If a hazardous condition is discovered, every employee not only has the right, but is obliged to report this via Boliden's deviation system. All near misses, incidents and accidents are reported via this system and followed up systematically. If a serious deviation occurs, all employees have access to a whistle-blower function where they can file an anonymous report.

Safety inspections are carried out according to schedule at each site. Unannounced safety inspections are, furthermore, carried out in conjunction with maintenance work and projects, or for no particular reason at all. Managers, safety coordinators and safety representatives are amongst those who participate in the safety inspections. Group management take part in Group Safety Walks at least once a year, whereby all operational sites are visited and safety issues are discussed with workers on site.

Boliden is a UN Global Compact signatory and Swedish legislation also makes it mandatory to comply with the ILO standards. Employees are covered by collective agreements and all of Boliden's employees are expected to comply with the company's core values and the Code of Conduct.

All units within Boliden are certified in accordance with the OHSAS 18001 standard and in accordance with national law. Legislation in each country in which Boliden operates comply with ILO conventions.

#### LA10 - Training, skills management

It is important to achieve a balance between the company's capabilities and commitments. This means having the right skills in the right place, at the right time. Boliden's approach is to facilitate skills development during regular working hours. This means the company does not keep account of the number of training days or hours per employee.

Boliden's ability to respond to changes in the market is affected by the company's talent pool, and the skills and knowledge possessed by our employees are, therefore, vital if Boliden is to achieve its strategic and operational objectives. Boliden runs several training programmes. Keeping employees updated with regard to technology, leadership and functional skills is essential to Boliden's performance. While the work with skills management is coordinated across the whole Group, much of the responsibility is local, as each unit has knowledge of its own specific needs and circumstances.

All new employees receive introduction and orientation training in their new workplace, following a structured procedure and checklist that is signed off by the employee. All employees also receive the necessary training to enable them to perform their duties in a safe, efficient and competent manner. This applies to all blue-collar and white-collar employees, in all categories and at all levels in the organisation.

Training measures are usually conducted locally in order to optimise the way in which they are controlled and customised in line with the needs of the unit in question. The training activities include an on-going traditional leadership development programme for first-line managers, focusing on leadership and employee development. A number of statutory training measures are also provided, along with training in representing the employer on legal, labour law and human resources issues, and on ethical concerns.

Boliden provides opportunities for all employees to develop as individuals and professionals. All employees have an individual development plan, agreed upon together with their manager. It is also important that all employees get the opportunity to obtain an overview of the Group's operations and to understand how the value chain is formed. Training courses and study visits are, therefore, arranged within both our business areas.

Ongoing Group-wide programmes and initiatives include:

The Boliden Academy – programmes for Young Professionals, High Potentials, Women at Work and the Top 100 Management Team.

The annual Strategic Skills Provision Report – identifies skill requirements and proposes actions to address potential shortages.

Management Reviews and Succession Planning processes – further enhances our skills management programmes.

Talent Forum sessions have been conducted in 2013 for seven of the eleven Boliden Management teams. The Talent Forums is a new form of systematic and structured review of all top 100 Managers and those who report directly to them, and focuses on their future career and competence development. The Talent Forum sessions for the remaining four Management Teams will be completed in early 2014.

#### LA12 - Percentage of employees receiving a regular performance appraisal and career development reviews

77.4 per cent of the total number of permanent employees received a formal appraisal in 2013.

#### Permanent employees receiving an appraisal in 2013, %

Country	2010	2011	2012	2013
Sweden	_	-	_	86.9
Finland	_	-	-	88.9
Norway	_	-	-	56.8
Ireland	_	-	-	28.5
Other	_	-	-	100.0
Total in Group	_	-	-	77.4

Boliden introduced a new competence and personnel planning tool in 2013 in order to attract new qualified personnel, to develop and integrate new personnel and to develop and retain those currently employed. The tool will be used across the Group to improve the development of performance management, competence planning and succession planning. Boliden's top 100 managers and employees reporting directly to them (in total about 700 employees) were included in the first phase of the implementation.

The tool enables managers and employees to document development tasks and to follow up on goals and development plans, and also highlights their competence and expresses their desire to advance.

Development of the system will continue in 2014, adding both more users and new functions to the system. One example of this is the recruitment module, which will provide managers with support for compiling recruitment profiles, ranking applicants by qualification, documenting interviews, compiling assessments and ensuring that every new employee is given a good introduction.

#### LA13 - Composition of governance bodies

Increasing diversity is a part of managing skills development. Boliden is a member of several university networks and recruits from several different countries.

Improving the gender balance and, specifically, increasing the percentage of female employees are, for Boliden, important aspects of increasing the company's diversity.

At the end of 2013, 17.66 per cent (16.84%) of the Group's work-force were women. A long-term goal of 20 per cent by the end of 2018 has been set. The Board of Directors was 29 per cent (29%) female. Boliden practices the principle of equal pay for work of equal value, irrespective of gender, at all units. Any identified differences are immediately corrected.

#### Men and women by region

Country		2010			2011			2012		2013			
	Total	Women, %	Men, %										
Sweden	2,634	19	81	2,789	20	80	2,893	20	80	3,030	21	79	
Finland	926	15	85	938	16	84	947	15	85	967	16	84	
Norway	333	13	87	324	14	86	308	15	85	310	16	84	
Ireland	695	4	96	699	4	96	697	5	95	658	5	95	
Other	3	28	72	11	29	71	12	50	50	12	50	50	
Total in Group	4,591	16	84	4,761	16	84	4,857	17	83	4,977	18.0	82.0	

#### Women at corporate management level

	2010		201	1	2012	2	2013		
	Total	Women, %							
Board of Directors	14	29	14	29	14	29	14	29	
Group Management	5	0	5	0	5	20	5	20	
Management teams <sup>1)</sup>	75	19	86	17	84	25	87	23	
Supervisors	443	11	463	11	462	12	469	12	

#### Employees, supervisors and managers by age group, %

Age group		2010	1		2011	<u> </u>		2012	!		2013	3
	Employees	Super- visors	Management teams <sup>1)</sup>		Super- visors	Management teams <sup>1)</sup>	Employees	Super- visors	Management teams <sup>1)</sup>	Employees	Super- visors	Management teams <sup>1)</sup>
<30 years	12.2	3.4	0	13.5	2.4	0	13.8	3	0	14	1.9	0
30–50 years	47.4	50.3	52	48.1	53.8	54.7	48.8	51.3	52.4	49.1	53.4	55.7
>50 years	40.4	46.3	48	38.4	43.8	45.3	37.4	45.5	47.6	36.9	44.7	44.3

<sup>1)</sup> Management teams at group, business area and site levels

#### LA14 - Equality in remuneration

Boliden pursues an active equal opportunities policy throughout the organisation. There is also a policy that condemns all forms of discrimination or harassment based on gender. The principle of equal pay for work of equal value is applied in all of the countries in which Boliden operates. There is a salary scale for every job category and employees within a category are paid according to the scale, regardless of gender.

In Sweden, there is also a structured process for mapping and analysing the salaries of all employees from a gender perspective. This process is carried out annually and in collaboration with representatives of all trade unions. The purpose of this work is to identify differences in salary between men and women that are without proper cause. Such differences are followed by corrective actions.

In 2013, a study was conducted at Boliden's Swedish units, with the exception of Bergsöe and Commercial. The study grouped different positions together, and analysed wages on the basis of a female/male perspective. Factors such as age and length of service were also taken into account. All in all, 64 individual positions were studied, and nine cases revealed wage differences that could not be fully explained by the data. The human resources managers and/or immediate managers concerned were informed of the results and in three cases, this resulted in wages being adjusted and/or the creation of an action plan for the individual. The other wage differences were considered reasonable upon more detailed examination.

Equivalent jobs were also analysed. Once all positions had been grouped, positions dominated by women were identified within each group, and the wages were then compared with other positions in the same group. The results of this analysis did not give rise to any need for action.

Notwithstanding the legislative differences between the countries in which Boliden operates, e.g. with regard to parental leave, maternity pay and opportunities for working shorter hours during the early childhood years, Boliden encourages both men and women to take parental leave. Boliden also provides compensation for employees on parental leave in some of the countries in which we operate.

As a result of Boliden's long-term work on equality and structured career planning, Boliden was awarded the 2013 Swedish Industry Equality prize. The winner was appointed by the Industry Council, which consists of leading representatives of Swedish employer and union organisations within the industrial sector. The prize justification was:

"A company within one of our most important basic industries has, through deliberate efforts, persuaded women to become miners and has a smelter where the majority of the management team are female. This is a company that promotes members of staff who are on parental leave and was a pioneer in emphasising the importance of paternity leave at an early stage. The company not only blasts rock, it blasts a great many prejudices about the mining industry – The Equality prize goes to Boliden".

The prize is an important recognition since Boliden's stated ambition is to increase the female share of the workforce to 20 per cent by 2018.

### Human rights (HR)

#### **HR1** - Investment practices

Boliden does not operate in areas where the protection of human rights is of significant concern. Indigenous rights is addressed in indicator MM5.

Boliden complies with the UN Declaration of Human Rights, and the ILO's core conventions, and is a signatory to the UN Global Compact.

## HR2 - Suppliers and contractors screened on human rights and actions taken

One way to develop and promote sustainability management within the metals and mining industry is through cooperation with business partners.

All of Boliden's agreements with business partners include Boliden Corporate Responsibility Business Guidelines. These guidelines clearly stipulate that the business partner shall act in accordance with the 10 principles of the UN Global Compact. Boliden actively communicates the meaning of the Boliden Corporate Responsibility Business Guidelines to new and existing business partners.

Boliden has about 6000 suppliers, 120 of these represent 80 per cent of the spend. Boliden has conducted reviews of its business partners through the EBP process (Evaluation of Business Partners) since 2010. The EBP process evaluates business partners from a commercial and a sustainability perspective. The EBP work is based on the 10 principles of the UN Global Compact and on the ILO and ISO standards in the areas relating to human rights, working and labour conditions, environmental responsibility and systematic environmental work, anticorruption and, finally, the way in which a company's own sustainability work is followed up and evaluated.

The evaluation process starts with an online self-assessment that is subsequently followed up and evaluated. A dialogue is established with regard to the potential for improvement identified. During 2013 approximately 60 (70) business partners completed the self-assessment and two (5) audits were conducted. No determination of contracts due to human rights screening accrued in 2013. The audits are followed up via reporting on the measures implemented. The self-assessments and the audits are based on the content of the Boliden Corporate Responsibility Business Guidelines.

The audits are followed up via reporting on the measures implemented. Working with improvements is a precondition for a continued partnership. The self-assessment forms and Boliden's CSR criteria are available on Boliden's website. http://www.boliden.com/Sustainability/Business-partners/

#### HR3 - Employees trained on human rights

All employees of Boliden's sales and purchase departments that have the authority to enter agreements with customers and or suppliers/contractors have received training in Boliden Corporate Responsibility Business Guidelines, in how to interpret and assess the self-assessments, and in the meaning of the Guidelines' principles, including underlying conventions and initiatives. The training takes the form of lectures, workshops and role playing.

## HR4 - Number of cases of discrimination and action taken

Boliden's commitment to diversity is clearly stated in Boliden's Diversity Policy, which is a part of Boliden's Management Manual. Boliden and its employees shall:

- refrain from all forms of discrimination and harassment on the basis of gender, ethnicity, age, disability, religion, sexual orientation or any other factor:
- always focus on the person's competence, and disregard aspects such as gender, ethnicity, age, disability, sexual orientation or other circumstances:
- strive to ensure that Boliden is perceived as an equal opportunity employer in every respect described above;
- support employees in their ambition to achieve a healthy balance between working life and private life;
- forcefully act against and counter any incidences of discrimination or harassment.

The Diversity Policy states that if an incident of discrimination or harassment should occur, the employee affected shall initially raise the matter with his or her manager and secondarily, with the company's human resources function, or through the whistle blower function (accessible via the intranet).

One incident of discrimination occurred in Sweden in 2013, and was reviewed by the company. An investigation was carried out and measures were taken. The incident is now closed and no further action is required.

## **HR5 - Freedom of association and collective bargaining**Boliden complies with the ILO's core conventions and is a signatory to the UN Global Compact.

All employees have freedom of organisation and the right to join trade union associations. The company's "Code of Conduct" policy document also states that the company shall respect the right of employees to organise into trade unions and shall support all cooperation between employers and employees, as well as their respective representatives, in all areas of mutual interest.

The freedom of organisation and the right to join trade union associations are mandated in national law in all countries in which Boliden operates.

There are slight differences between the countries, however, regarding compulsory membership. In Ireland, for example, it is mandatory for blue-collar workers to be members of a trade union but not mandatory for white-collar workers. In the Nordic countries, it is not mandatory to be a member of a trade union with which Boliden has signed a collective agreement – nor does the company keep registers of union memberships at individual level. Nevertheless, all employees are treated in accordance with the collective agreements signed by Boliden.

Boliden's Works council includes employee representatives from all of the countries in which Boliden operates. The Works council holds two meetings per year at which the employee representatives meet with representatives from Boliden's Management, which also ensures the freedom of association and collective bargaining.

To learn more about employee and management relations, please see indicators LA 4 and MM 4.

The Evaluation of Business Partners (EBP) project described above (indicator HR 1–3) also covers matters relating to the freedom of association and collective bargaining.

#### HR6-7 - Child labour, forced and compulsory labour

Child labour is strictly forbidden by law in all of the countries in which Boliden operates. Boliden opposes all forms of child labour and all forms of forced and compulsory labour. They are considered to be contrary to the Group's core values. The Code of Conduct states: "We shall ensure that none of the operations controlled by the company lead to the exploitation of children. We never, either directly or indirectly, collaborate with suppliers or customers where we have reason to believe that harmful child labour is used."

Boliden also complies with the UN Declaration of Human Rights and the ILO's core conventions, and is a signatory to the UN Global Compact.

Boliden has also extended this approach to collaborations with business partners. Boliden evaluates its commercial partners' sustainability management (EBP) in the context of their operations. The aim is to establish a dialogue with partners about the ways in which the industry can achieve social and environmental improvements. This will, in turn, result in an ability to minimise the risks associated with the purchase and sale of raw materials, including recycling materials, by-products and waste.

The sustainability evaluations primarily take the form of self-assessments (questionnaires), followed by targeted audits. The evaluation is based on criteria derived from the 10 principles of the UN Global Compact and ILO and ISO standards.

The Evaluation of Business Partners (EBP) project described above (indicator HR 1-3) also covers matters relating to child labour, forced and compulsory labour.

MM5 - Total number of operations taking place in or adjacent to Indigenous Peoples' territories, and number and percentage of operations or sites where there are formal agreements with Indigenous Peoples' communities

All operations in northern Sweden (i.e. all mines within the Boliden Area and the Aitik mine) are in the reindeer herding areas. Consultation is ongoing with the affected Sami villages in active mining areas. Agreements on compensation issues and cooperation are generally in place between Boliden and the Sami villages.

### Society (SO)

#### SO1 - Local community engagement

Boliden's business operations are often of considerable importance in terms of employment in the local community, making Boliden an important local stakeholder.

The Group's operations have not only a substantial impact on job opportunities but also affect suppliers' purchasing power elsewhere in the local business sector, which, in the long term, impacts the development of the communities' service sectors. Boliden estimates that for each Boliden employee, another three to five local job opportunities are, on average, created.

Local involvement in the form of support for and partnerships with voluntary organisations and associations are other ways in which Boliden can make a positive contribution to the areas in which the company operates. Boliden's support focuses primarily on local sporting and cultural events, schools and hospitals, often linked to children and young people. In 2013, Boliden's units sponsored local activities to the tune of approximately SEK 6 million (SEK 7.2 m).

Boliden's mines and smelters utilise large amounts of resources and land that affect both people and the environment to various degrees. Dialogue is ongoing with the numerous stakeholders impacted. It is primarily conducted through discussion and cooperation but also, to meet some specific needs, through social impact assessments. Social impacts assessments are also made in conjunction with the closure of an operation, in order to assess any consequences to the community and in an effort to mitigate, as far as possible, any negative effects.

The operational sites host a range of regular and ongoing activities, such as "Open House", where the public is invited to visit the plant and to get information in an informal way, and "Public Consultations" (Samrådsmöten), where the public is invited to discuss special issues under more formal circumstances. There is always an open channel for individuals within the community to present concerns and complaints to the company. Specially assigned employees have a regular contact with neighbours and sometimes even visit people at their homes to discuss matters of concern.

Measurements are carried out on a continual basis to monitor any impact on the local community in relation to the environment in the form, for example, of dust, noise, vibrations and shock waves from blasting. Methods have also been put in place for assessing impact, e.g. through changes to traffic, the landscape, water access and land access.

When analysing complaints about vibration from blasting, for example, the blasting schedule was changed so that most people would still be at work, rather than relaxing at home. This resulted in a significant decrease in the number of complaints.

Keeping the interests of the local community high on the agenda when planning and executing mining and smelting operations is vital to maintaining good relations with the employees, their families and their neighbours, and is an essential part of being a responsible corporate citizen. Failing to maintain these good relations would be a threat to the operation, as it would hamper the ability to attract a competent workforce and would jeopardise any potential expansion.

MM6-7 - Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples, plus the extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous Peoples, and the outcomes [There were no such cases in 2013]. Boliden has routines for informing and including nearby and local residents. When the company applies for new exploration permissions or to expand the operation, there are mechanisms such as open houses and post-exploration forums that enable nearby and local residents and businesses to state their opinion. Certain parts of this process are required by law.

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

Boliden's operations do not involve artisanal mining or small-scale mining, and hence the risk does not exist. The industrial areas are, nevertheless, fenced off, with controlled access points for safety reasons, to prevent unauthorised visitors coming to harm or causing accidents.

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

There have been no resettlements of whole villages in Boliden's corporate history. The latest significant case of resettlement was when the Hötjärn tailings pond in the Boliden Area was being planned (finalised year 2010). Dialogue was initiated with two permanent residents and two holiday cottage residents in 2003, and a satisfactory agreement regarding compensation and practical solutions was reached.

As a rule, Boliden buys properties within proximity of the operations as they are put up for sale, and thus no residents are affected once the mine expands in that direction. In cases where a resident feels disturbed by a nearby operation, Boliden offers to buy the property and to compensate for any inconvenience. The aim is always to reach a solution that suits the individual's needs and makes the residents feel fully compensated.

## MM10 - Number and percentage of operations with closure plans

All of Boliden's present operations, mines and smelters, have closure plans. In 2013, Boliden worked actively on the reclamation of 2 (8) former mine sites, all of which have closure plans.

## **SO3 -** Training in anti-corruption policies and procedures

Boliden's Code of Conduct provides a framework for what is deemed responsible conduct. It applies to all employees throughout the Group, to the members of the Board of Directors of Boliden AB and to its subsidiaries. Business ethics are covered in Boliden's Code of Conduct, but recent legislation has imposed new demands on Boliden and thereby generated a need to provide a more focused anti-corruption policy and guidelines. As a starting point, a group-wide risk survey was carried out in 2012 to identify any potential corruption-related risks. Functions with external contacts were prioritised. Based on the outcome of the survey, Boliden revised its anti-corruption policy and guidelines and the new version was adopted by the Board of Directors. The organisation's anti-corruption policy and guidelines form an inherent part of the Code but are included in separate documents. Implementation of Boliden's new and revised Anti-Corruption Policy and Guidelines began, as mentioned above, in 2012 and continued during 2013.

Line managers are responsible for making the guidelines known and for monitoring compliance.

All managers and other employees whose work involves extensive external contacts with business partners, in particular with suppliers or agents, are subject to anti-corruption training appropriate for their area of responsibility, starting with the Management Development Programme – a training programme for Boliden's top 130 managers.

All of our employees, together with agents, suppliers and other third parties acting on Boliden's behalf, must comply with the Group's Anti-Corruption Policy and Guidelines. These documents are available in Boliden's Management manual on the intranet. All white-collar employees (1,588 employees in September 2013) were invited to a mandatory e-learning training session in September 2013 in order to increase their knowledge of our anti-corruption and anti-bribery work. The training was available in Swedish, Norwegian, Finnish and English, depending on where the participants were based.

Boliden has a whistle-blower function which can be used to anonymously report suspected cases of criminal activities or other serious misconduct. No relevant cases were reported in 2013.

#### **SO4** - Incidents of corruption

No incidents of corruption or actions taken against corruption were reported during 2013.

#### SO5 - Public policy development and lobbying

Conducting exploration work and operating mines and smelters requires a variety of permits and Boliden therefore seeks to establish dialogues with authorities at local, regional, national and international level. Close monitoring of legislative issues and a commitment to play an active part in the dialogue about the possible consequences are of strategic importance. Boliden is a member of several national, European and global industrial organisations.

Boliden seeks to promote energy efficiency and sustainable energy solutions on a broader scale through membership of the Swedish Energy Agency's voluntary programme (PFE), Finnish MOTIVA and Irish Sustainable Energy Ireland (SEI).

In 2005, Boliden entered into a joint partnership with a number of Swedish electricity-intensive industrial companies to form BasEl. The purpose is to promote the industries' long-term interests with regard to a stable and competitive electricity supply. Boliden is also involved in similar projects in Finland (Fennovoima) and Norway (Industriel A/S).

#### S07-8 - Anti-Competitive behaviour and compliance

Boliden conducts extensive domestic and international operations and is occasionally involved in disputes and legal proceedings arising in the course of its activities. There are no initiated or ongoing legal actions with respect to anti-competitive behaviour or compliance, with the exception of the Travis Perkins litigation, which is a civil claim for damages for alleged price increases allegedly caused by Boliden's former participation in a copper tubing cartel. There are, furthermore, no significant fines or non-monetary actions initiated or pending against Boliden

#### Legal dispute arising from the earlier copper tubing cartel

In June 2012, Boliden was served with claims in the UK courts by a number of companies in the Travis-Perkins corporate Group. Travis-Perkins claims to have sustained losses as a consequence of the copper tubing cartel in which Boliden and seven other companies were involved during the period from June 1988 to March 2001, and for which the companies concerned were fined by the European Commission in 2004. The fine and the interest on the same - a sum totalling SEK 367 million were paid by Boliden in July 2010. Boliden has contested the claim and has, in order to ensure that all relevant parties are involved, also brought contribution claims against the other cartel members. One of these companies has now also submitted a claim against Boliden's former subsidiary company, Boliden Fabrication AB, which was also found to have participated in the cartel. This company was transferred to Outokumpu in 2004 in conjunction with which Boliden undertook to indemnify Outokumpu in respect of claims that may arise and which relate to the period prior to the transfer of the company. The indemnity undertaking is not expected to increase Boliden's total potential exposure in that the European Commission found Boliden to be jointly and severally liable with its former subsidiary company.

It is currently not possible to evaluate the financial effect that the cases may have on Boliden with any degree of certainty and no provision for any obligations that may arise has hence been made.

### Product responsibility (PR)

## MM11 – Programs and progress relating to materials stewardship

Boliden has prioritised three challenges with regard to direct environmental impact; to reduce emissions to air and discharges to water; to mitigate the environmental impact; to conduct responsible waste management. These goals influence the way in which the daily operations are carried out.

Boliden implements the New Boliden Way – an organisational and production philosophy designed to increase efficiency in every aspect of the production process. It includes machinery maintenance, the quantity and choice of input materials in the process with the explicit aim of increasing efficiency, reducing the quantity of resources used, and replacing fossil resources and hazardous substances with renewable and less hazardous alternatives.

Boliden performs business partner reviews based on different sustainability criteria, including their environmental impact management, such as discharges to water and emissions to air management. The contracts with suppliers include specifications of environmental aspects in their delivery, such as levels of substances and waste management methods.

Boliden has made significant investments in the recycling industry and is now the largest electronic scrap recycler in the world.

Boliden is systematically managing the energy and heat generated in its core processes. In 2013, Boliden reused 602,000 (568,000) MWh of energy and heat and delivered 775,000 (844,000) MWh of energy and heat to public networks.

Boliden owns land and forest and is practising responsible forestry, as defined by the Forest Stewardship Council (FSC), by promoting and protecting biodiversity and creating environmental and social values.

#### PR1 - Customer Health and Safety

Boliden is actively involved in commodity organisations that carry out R&D work for each metal and by-product that Boliden sells. These organisations launch projects on behalf of the industry in order to further improve knowledge of health and safety aspects at each stage in the value chain of the product. Life Cycle Assessments have been conducted for all metals and a lot of effort is being put into increasing the recyclability of metals.

Boliden works throughout the value chain to meet business partners' demands and preferences. Boliden has an active dialogue with its business partners on envi-ronmental and quality management issues and provides relevant, factual information about our products. This limits both risks and the collective environmental impact.

The customer dialogue mainly takes the form of ongoing contacts during the contract period, in conjunction with contract renewals, and during recurring customer audits by Boliden.

Written information is available in the form of a Material Safety Data Sheet (MSDS). These are updated on a regular basis in line with legislative requirements and new scientific findings. The MSDSs are, in addition to being distributed to customers, available at www.boliden.com

The EU's chemical legislation (REACH) is implemented as part of the day-to-day operations at all of Boliden's units.

#### **PR3 - Product and Service Labelling**

Boliden is committed to meeting the increased demand for metals in a way that minimises the negative impact on people and the environment. Boliden's strength lies mainly in years of experience and expertise in the production of base and precious metals through high-quality exploration, mining and smelting operations, and recycling. It achieves its goal in this respect by means of, among other things, continuous development of new technologies and methods as well as the supply of accurate factual product information. Products put on the market by Boliden are labelled according to relevant legislation concerning transportation, storage and use, and are accompanied by the necessary documentation.

Boliden's environmental performance and the way in which the production affects the environment is, furthermore, described in a transparent and detailed manner using common assessment methods and banchmarks.

In 2013, Boliden Rönnskär was awarded the quality certificate issued by the London Bullion Market Association (LBMA) for the gold produced at the unit. Boliden has continued the work required for inclusion in the LBMA list of recommended gold producers. Companies included on the list take it upon themselves to assure that the raw material supply chain fulfils a set of ethical criteria. No minerals shall be derived from raw materials that have financed terrorism, been subject to money laundering or are complicit in any other violation of human rights. The supply chain is to be audited be a third party. Boliden employs the services of the accounting firm, KPMG AB.

#### PR5 - Practices related to customer satisfaction

Boliden collects feedback from customers through planned customer visits and via contract administrators throughout the contract execution process. Complaints are reported and handled systematically across interfaces to smelter units. Customers are engaged in the development of new products and other technical solutions through Boliden's technical customer support service.

Customers are included in the business partner reviews (EBP), offering additional channels of dialogue.

## Economic performance (EC)

Boliden's operations impact and affect many people – sometimes whole communities. The business concept entails extracting minerals and producing high-quality metals in a cost-effective and sustainable manner, in order to meet the market's demand, and thereby creating value for Boliden's shareholders. This approach also enables Boliden to continue taking extensive responsibility and enhancing its contribution to positive economic and social development within the community.

### Financial performance

GOALS	RESULTS IN 2013
<ul> <li>The return on capital employed shall exceed</li> <li>10 per cent over a business cycle.</li> </ul>	The return on capital employed was 5 per cent (14%) in 2013. The average return on capital employed during the period 2009–2013 was 14 per cent per annum.
<ul> <li>The net debt/equity ratio in an economic upturn shall not exceed 20 per cent in order to maintain a reasonable financial capacity to act in a recession.</li> </ul>	The net debt/equity ratio was 38 per cent (28%) at the end of 2013. The net debt/equity ratio increased due to a reduction in cash flow resulting from the profit performance, an increase in working capital, and large investments.
<ul> <li>The dividend paid shall correspond to approximately one third of the net profit.</li> </ul>	The Board proposes a dividend for 2013 of SEK 1.75 (SEK 4.00) per share, corresponding to a total of SEK 479 million (SEK 1,094 m) or 37.0 per cent (32.8%) of the net profit for 2013. The ordinary dividends paid during the period 2009 to 2013, including the proposed dividend for 2013, correspond to 33.5 per cent of (33.1%) the aggregate net results for the period.

#### EC1 - Economic value generated and distributed

Boliden generates profits and value through metal production and deliveries that acknowledge their social and environmental responsibility. Total net sales in 2013 amounted to SEK 34,409 million (SEK 40,001 m).

Component, SEK M	Stakeholder group	2010	2011	2012	2013	Comment
Direct economic value generated						
a) Revenues	From customers	36,716	40,323	40,001	34,409	Net sales plus revenues from financial investments and sales of assets.
Economic value distributed						
b) Costs of goods sold	To suppliers and business partners	-30,038	-34,404	-34,559	-31,419	Payment to suppliers, non- strategic investments, royalties and facilitation payments.
c) Employee salaries and benefits	Employees	-3,203	-3,282	-3,422	-3,207	Total monetary outflows for employees (current payments).
d) Payments to providers of capital	Banks and financial institutions	-319	-259	-266	-253	All financial payments made to the providers of the organisa- tion's capital.
e) Payment to government	Society	-1,374	-1,171	-651	-285	Gross taxes.
f) Community investments	Society	-5	-5	-7	-6	Sponsored local activities.

## EC2 - Climate change implications, risks and opportunities

Boliden is impacted by the effects of climate change, and the effects are both physical and financial. One example of physical implication is heavy rain putting stress on Boliden's water management systems. Over the past three years, heavy rains have led to capacity investments by Boliden in order to comply with the limits stipulated in relevant permits and to achieve the Group target of reducing discharges to water.

Metals production is a very energy-intensive process that generates both direct and indirect emissions of carbon dioxide. Boliden's direct carbon dioxide emissions primarily arise from the metallurgical processes, transportation, and heating needs. The indirect carbon dioxide emissions derive from purchased electricity. To address the climate change issue, Boliden takes part in development projects focusing on, for example, improving heat recovery, the further electrification of transports, and trials involving replacing fossil fuels with biofuels in process applications.

With new legislation in force in 2013, all of Boliden's smelters (Boliden Odda, Boliden Bergsöe, Boliden Rönnskär, Boliden Kokkola and Boliden Harjavalta) will be covered by ETS, the European Emission Trading Scheme. The ETS is very much a strategic challenge for Boliden, entailing not only calculating the costs that may be entailed in future purchases of emission allowances, but also working on opportunities to reduce emissions, given our production levels and available technology. The units' emission allowance applications for the period from 2013 to 2020 have been submitted with the aim of achieving an allocation of free emission allowances that covers Boliden's needs up until 2020. It is not clear whether Boliden will receive adequate volumes of free allowances for the whole period. The emissions and CO2 forecast are evaluated regularly and the economic impact is estimated for the coming trading period. In 2013, the Group management formulated new targets for the stabilisation of Boliden's CO2 emissions until 2018, and set an internal Carbon price as a basis for evaluating investments and mitigation opportunities.

#### EC3 - Benefit plan coverage

#### Pension undertakings

Boliden has established pension plans in the countries in which the company operates. The pension plans include both defined contribution and defined benefit plans. The defined contribution plans comply with local regulations in Sweden, Ireland, Finland and Norway. Boliden has defined benefit plans in Sweden, Ireland and a very small number in Norway. The defined benefit plan provide the employee with a fixed amount of their final salary in conjunction with the retirement. The pension costs for the year comprises of service costs, financing costs, special payroll taxes, administrative costs and settlements/reductions of pension plans. Revaluations of the defined benefit net pension liability are reported under other comprehensive income.

Costs, undertakings and other factors in pension plans are calculated by means of the Projected Unit Credit Method. The Group's reported pension liability totals SEK 1,047 million (SEK 1,382 m), which sum includes endowment insurance totalling SEK 66 million (SEK 64 m) in respect of defined premium plans in Sweden.

## EC4 - Significant financial support received from government

Boliden does not receive financial support from any government of the countries in which we operate.

#### EC5 - Entry and minimum wage

All Boliden's mining and smelting operations take place in Finland, Ireland, Norway, and Sweden. Sales offices are also located in the UK and Germany. There is no legislated minimum wage in Finland, Norway or Sweden. Collective bargaining agreements govern the minimum level of wages. Germany, Ireland and the UK have legislated minimum wages.

New employees at Boliden are not compensated based on wages subject to minimum wage rules. In general, the entry level wages for employees are set much higher than the minimum wage, and average salaries and wages are higher than the national industrial average. For blue-collar employees, there is an entry-level wage stated within the local salary agreement that is used for setting the salaries for new employees.

For white-collar employees hired directly out of universities, Boliden applies entry-level wages, depending on the level of education needed for different jobs.

EC8-9 - Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement, plus understanding and describing significant indirect economic impacts, including the extent of impacts

Boliden currently operates in countries where the infrastructure is well-developed and the need for Boliden to contribute to society by directly investing and developing infrastructure and social services is limited.

Boliden is, however, often one of the bigger companies in the local area, paying taxes in the areas in which Boliden operates, and its contribution can, therefore, be considered significant.

Boliden participates in the development of education for future engineers within the mining and metals industry.

Zinc is a mineral that is essential for the human body and deficiency is common among children. Boliden therefore supports the "Zinc Saves Kids" initiative. Learn more at http://www.zincsaveskids.org/

Boliden's operations affect and touch the lives of many people – sometimes entire communities. The value creation depends on the ability to show consideration for people, society and the environment throughout the value chain. Boliden aims to be a positive economic force.

Boliden is the biggest employer in many communities and hence also a key prerequisite for fundamental societal services and facilities in the immediate area. Boliden's indirect effect is difficult to calculate but a rough estimate suggests that for every person employed by Boliden, an average of three to five more job opportunities are created locally.

Boliden's ambition is to continue to be a force for good in the local community. The expansions at Aitik and Garpenberg are the Group's biggest investments. They have not only more than doubled the mines' productive lifespans, they have also created the preconditions needed by communities such as Gällivare and Hedemora for long-term societal planning. The impact of the Group's operations not only affects the local communities at large. Employees, shareholders, customers and suppliers all depend on Boliden's profitability, and by improving this aspect of the operations even further, Boliden will be able to continue making a positive economic and social contribution to the development of these communities and their society.

