

SUSTAINABLE STEEL
Indicators 2019 and the steel supply chain

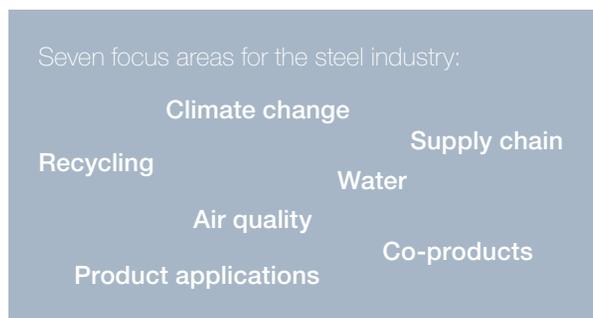


INTRODUCTION

A sustainable society and the steel industry

The steel industry continues to review and reduce any negative impact on the local environment where it operates. Society rightly demands higher standards and better performance from companies and industry and these expectations change over time.

The World Steel Association's (worldsteel) latest materiality assessment confirmed that the following seven focus areas are of key importance for our stakeholders:



Last year we commissioned an in-depth study on one of these seven areas, the steel supply chain. The outcomes of this project include a steel supply chain map and material and country matrices showing the Environmental, Social and Governance (ESG) risks within the steel supply chain. This publication provides an insight into our work.

Reporting on the industry's sustainability indicators performance every year is just one of several sustainability programmes at worldsteel.

- Our Sustainable Development Charter encourages our members to commit to sustainable development.
- Our industry-wide data collection for CO₂ emissions, safety, sustainability indicators and life cycle inventory data requires members to have a unified measurement approach to their performance.
- The Steelie Awards inspire members to take actions to implement their commitment to sustainability.
- Our Sustainability Champions programme recognises members whose sustainability efforts and performance are outstanding and exemplary.

Our journey to make the steel industry more sustainable is reaffirmed with the increased commitment and actions of our member companies.

SUSTAINABILITY HIGHLIGHTS



The **Lost Time Injury Frequency Rate** in 2018 was **0.84**, a record **low** and an 82% improvement since 2006.



96 million jobs worldwide supported and facilitated by the steel industry according to the **Oxford Economics 2019 study**.



step up : a steel industry initiative to reduce carbon intensity identified four key levers that influence energy and CO₂ intensity in the steel industry.



worldsteel is now publishing **life cycle inventory data** for **17 key steel products** on an **annual basis**.



steeluniversity launched the application **steelHub**, which **integrates industry learning** in steel company training programmes.



constructsteel launched a **Zero Energy Building Initiative**

aimed at **demonstrating steel's role** in reducing operational energy use and CO₂ emissions in buildings.

Steel supply chain and responsible sourcing

The steel industry has an unusually large and diverse global supply chain and as a result, its exposure to risks along its supply chain is wide-ranging. These include biodiversity loss, environmental issues, human rights, health and safety and the preservation of rights of indigenous people.

There is growing awareness and interest in the steel supply chain and responsible sourcing of raw materials, particularly from customers and investors. This results in increased pressure and expectations to responsibly manage the steel supply chain.

To respond to this, worldsteel with its members initiated a Supply Chain project to:

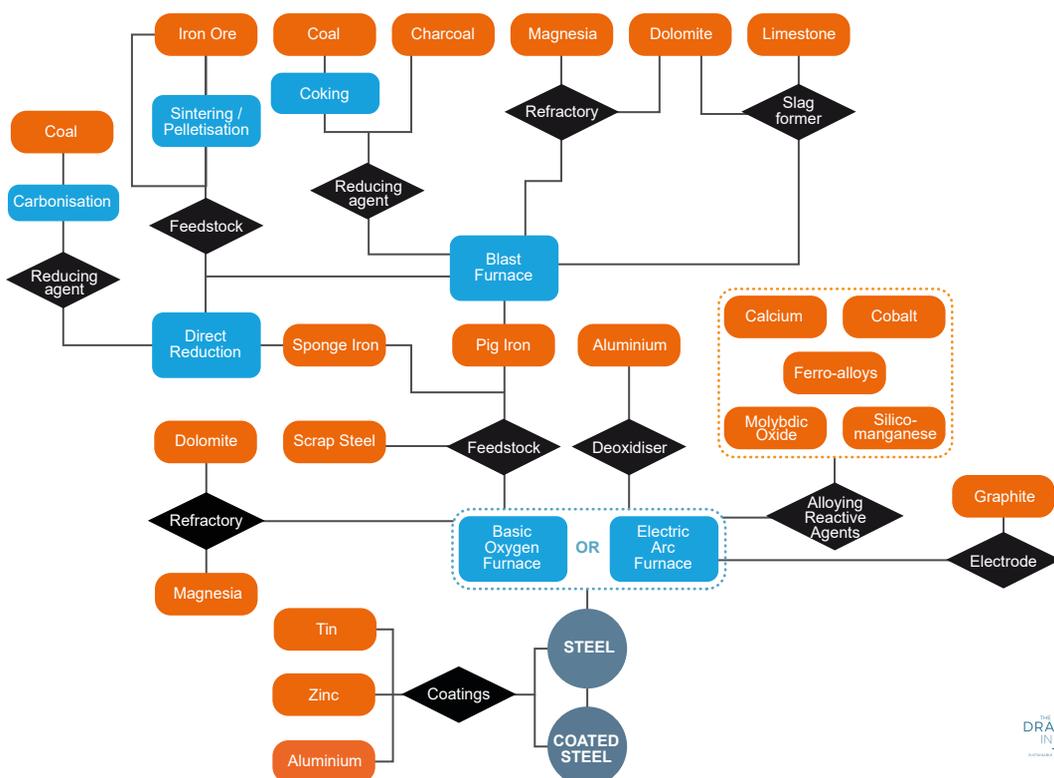
- establish a baseline understanding of the Environmental, Social and Governance (ESG) risks that the industry faces
- develop a common approach to identifying potential opportunities for positive actions that can be taken by the industry

As a first step, we have produced a steel industry supply chain illustration that maps the steelmaking processes and related raw material inputs. Supporting this, an ESG material matrix has been developed that applies 17 analytical criteria to the material inputs of the steel supply chain to produce an overview of where the greatest areas of concern lie for regulatory and civil society communities.

This has been done on a global level for 30 of the most important material inputs to the steel production process. An ESG country matrix has also been developed, which assesses the level of risk for responsible sourcing by country.

The steel industry will use this framework to identify potential opportunities that can bring a significant, positive, lasting and industry-wide impact to ESG issues throughout its supply chain.

Simplified steel industry supply chain



SUSTAINABILITY INDICATORS

Tracking our sustainability performance

The steel industry has been reporting on its sustainability performance via an industry-wide indicators data collection programme since 2004. We are one of the very few industries that report at a global level on an annual basis. This is the industry's continuous effort to demonstrate its firm commitment towards sustainable development and to openly communicate with its stakeholders.

The sustainability indicators provide a systematic approach to measurement and reporting on key aspects of the economic, environmental and social performance of the steel industry. They are aligned to the commitments outlined in our sustainable development policy and to the UN Sustainable Development Goals.

Steel companies around the world report voluntarily on up to 8 sustainability indicators every year.

In 2019, 85 steel companies contributed data for fiscal year 2018. Crude steel produced by companies who reported on one or more indicators was 970 Mt, representing 56% of global crude steel production.

The global average indicator results, participation by indicator, as well as performance trends of the steel industry for 16 years, are provided in the sustainability section of worldsteel.org.

INDICATOR		UNIT	2016	2017	2018
ENVIRONMENTAL PERFORMANCE					
1.	Greenhouse gas emissions	tonnes CO ₂ / tonne crude steel cast	1.88	1.83	1.85
2.	Energy intensity	GJ / tonne crude steel cast	20.3	19.9	20.2
3.	Material efficiency	% of materials converted to products and co-products	97.5	96.3	96.3
4.	Environmental management systems	% of employees and contractors working in registered production facilities	97.1	96.8	95.8
SOCIAL PERFORMANCE					
5.	Lost time injury frequency rate	injuries / million hours worked	1.01	0.97	0.84
6.	Employee training	training days / employee	7.0	6.1	6.4
ECONOMIC PERFORMANCE					
7.	Investment in new processes and products	% of revenue	13.0	5.9	6.0
8.	Economic value distributed	% of revenue	98.8	97.0	93.9

Notes:

Indicators 1 & 2: These indicators are calculated using route-specific energy and CO₂ intensity for the basic oxygen furnace and electric arc furnace. The indicators are also weighted based on the production share of each route. Indicator 1 includes CO₂ emissions only as these make up approximately 93% of all steel industry greenhouse gas emissions. These indicators were updated in January 2020.

Indicator 5: Lost time injury frequency rate includes fatalities and is calculated based on figures including contractors and employees.

Indicator 7: Investment in new processes and products includes capital expenditure and R&D investment.

Excellence in Sustainability Steelie Awards

worldsteel's Excellence in Sustainability Steelie Awards seeks to recognise those companies that have made a positive impact or provided benefits in all three areas of sustainability: economic, environmental and social performance.

The sustainability initiatives presented below are the 2019 finalists, and demonstrate actions being taken by worldsteel members to respond to sustainability challenges in their region. This year's winning company was ArcelorMittal for its Climate Action Report 2019. More details are available on worldsteel.org.

ArcelorMittal – Climate Action Report 2019

ArcelorMittal's Climate Action report sets out its ambition to significantly reduce CO₂ emissions globally and be carbon neutral in Europe by 2050. It lays out the choices available to the industry and outlines the components of ArcelorMittal's own climate action strategy, including their wide-ranging portfolio of low-emissions steelmaking technologies, the development of a new carbon reduction target to 2030, and the company's contribution to the development of public policies.



Climate Action
Report 1
May 2019

BlueScope Steel Ltd. – Australian Corporate Power Purchase Agreement

BlueScope entered a Corporate Power Purchase Agreement to invest in a 500,000-panel solar farm, committing to purchase 66% of the energy generated from the farm. This investment enables the company to contribute to the decarbonisation of the electricity grid by reducing 300,000 tonnes of CO₂-e emissions each year. The initiative has had a significant contribution to the local economy, creating jobs and increasing demand for local goods and services.



JSW Steel Ltd. – Conveyor system for iron ore transportation

JSW Steel has installed the world's longest pipe conveyor to transport iron ore from the mines to their Vijayanagar Works. The pipe is designed to carry 36 million tonnes of iron ore per year, removing 3,000 trucks from the road and expecting a saving of 3.86 kg of CO₂ emissions per tonne of ore transported. This has also eliminated airborne dust, improved air quality and growth of crops, and reduced road accidents and traffic congestion in the surrounding areas.



Tata Steel Ltd. – Recycle and reuse Jamshedpur township waste water for industrial application

Tata Steel set up a Tertiary Treatment Plant that can process 30 million litres of sewage water per day to enable the utilisation of treated sewage water at the Jamshedpur steel plant. This has resulted in a 16% reduction in the intake of fresh water with a further saving of up to 27% expected in the next 2 years. It also has economic benefits for the company as at full capacity utilisation, the project will save approximately INR43 million (US\$600,000) per year.



Setting the bar higher

The worldsteel Sustainability Champions programme, launched in 2018, recognises member companies who are leading the way to create a truly sustainable steel industry and society and who clearly demonstrate their commitment to sustainable development and the circular economy. Furthermore, the programme strongly encourages steel companies to set higher goals and targets, increase their efforts and make further progress in their sustainability performance.

A sustainable steel industry is crucial for the long-term health of our economy, our society and our planet and every steel company has a responsibility to help achieve this.

In 2019 worldsteel recognised six of its member companies as Steel Sustainability Champions for their work in 2018 (see below).



Steel Sustainability Champions

COMMITMENT

MEASUREMENT

ACTION



**Our contribution to a sustainable society and planet
is our responsibility**

