Sustainable steel

Sustainability Indicators 2021 and our sustainability journey
Our sustainability journey has seen three progressive phases since the foundation of the World Steel Association (worldsteel), formerly IISI, in 1967. The early years saw publications of policies, guidelines, and standards in the areas of environment, life cycle assessment, sustainable development, climate change and safety and health, which have served as the fundamental basis of our sustainability work.

This was subsequently followed by the introduction of a series of programmes and projects including our Sustainability Indicators and Sustainable Development Charter, which have required steel companies’ active engagement and participation. Many steel companies have voluntarily provided sustainability-related data, including CO₂ emissions and lost time injury frequency rate, and signed up to our Sustainable Development Charter as part of their commitment.

Further progress has been made with the industry's increased focus on quality and performance in recent years which has been strongly reflected in our latest programmes: the Steelie Awards, Sustainability Champions, Step Up, and the new Sustainability Charter.

This year, we are publishing our revised sustainability principles which reflect the rapidly changing business environment and societal expectations. These reinforced principles reiterate our commitment to being part of the solution for a sustainable society and future, highlighting the priorities of the industry. The graphic on page five and six outlines how our new sustainability principles and related programmes are aligned with the United Nations Sustainable Development Goals.

A review of our steps and progress in sustainability not only reminds us of our accomplishments but inspires us to be bolder and more ambitious in our journey towards sustainability, which continues with full support from our members.

Steel Safety Day

Moving machinery, one of the five most common causes of safety incidents, was the main focus this year. A guidance note, an online workshop and Safety Stories were provided to members to raise awareness of the causes of such incidents and to exchange experiences and learnings among members.

Voice of the Industry

Providing expertise to global sustainability initiatives and for the development of international standards. The audiences include steel industry customers, raw material suppliers as well as ResponsibleSteel, NZSMP, NZSU, and Steel Zero.

New Sustainability principles

9 new principles with 20 accompanying criteria developed from our recent industry materiality assessment, approved by worldsteel’s Board of Directors.

Climate Action data providers

216 steel sites from 52 companies provided their CO₂ emissions intensity data as part of worldsteel's 14th year of data collection.

Step Up

An operational efficiency improvement programme aiming to reduce costs and carbon emissions. 13 companies have either completed their site review or are in the process of carrying it out.

Climate Change policy paper

Our policy paper outlines the steel industry's challenges and opportunities with respect to reducing CO₂ emissions in line with the aims of the Paris Agreement.

Water management project

20 site based water management case studies from 17 steel companies will form the basis of a global map of water management in the steel industry.

WorldAutoSteel

A newly launched Steel E-Motive engineering programme, demonstrates the benefits of steel for global Mobility as a Service (Maas) ride sharing, autonomous electric vehicles and shaping the future of sustainable mobility through steel innovation.

constructSteel

Zero Energy Building initiative – constructsteel has partnered with the world's largest design firm to design a resilient and affordable net zero energy residential house which positions steel at the core of circular design.

steeluniversity

Furthering the integration of climate change in steel training, steeluniversity introduced carbon emissions into the electric arc furnace simulator.

ISSF

Together with its membership and the Team Stainless partners, ISSF launched a resilient, safe and sustainable water supply solution 'Steel Service Service Lines', that is expected to deliver tangible savings of water, maintenance demand and cost.

Life Cycle Inventory data 2020

124 sites located in 28 countries participated in the 2020 annual LCI study, contributing to the development of LCI data for 17 products on a global and regional basis.

Steel Sustainability Champions

Sustainability is a core business requirement, vital to a company’s continuing license to operate. An ethical and socially responsible approach can act as a competitive advantage for forward-thinking steel companies.

worldsteel 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 are recognised annually as Steel Sustainability Champions.

The 2020 Steel Sustainability Champions are:

<table>
<thead>
<tr>
<th>Sustainability Champions</th>
<th>JFE Steel</th>
<th>JSW Steel</th>
<th>NLMK</th>
<th>Tata Steel Europe</th>
<th>Tenaris</th>
<th>Terminus</th>
<th>Tata Steel Limited</th>
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<tr>
<td>Economic</td>
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<tr>
<td>Value distributed % of revenue</td>
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<tr>
<td>CO₂ intensity</td>
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<td>1.89</td>
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| Steel Sustainability Champions Environmental Performance of the steel industry Ilmenite Non-ferrous Ferrous Technical Committee on Research
Our sustainability journey

1967
IISI founded by 18 companies from 12 countries, changing its name to worldsteel in 2008.

1972

1993
First Sustainable Development Policy published, revised in 2002 and in 2021.

1995

1996
Policy statement on Climate Change, agreed by 181 members in 50 countries, issued and revised in 2021.

1999

2003
Steeluniversity, online learning and training programme, launched. The programme also runs steelChallenge, steelTalks and steelManagement.

2008
Annual CO2 data collection programme launched. Member companies report site or company-level CO2 emissions, benchmarking themselves against best performers and identifying scope for improvement.

2009
First Sustainability Charter published. 55 members signed, committing to 7 sustainability principles. 2018 version signed by 73 steel industry CEOs. The new and reinforced version to be published in 2022.

2010
Annual Steelie Awards launched, recognising member companies for their contribution in a series of categories positively impacting the steel industry.

2012
Online benchmarking systems launched for CO2 emissions, energy, maintenance and reliability, process yields, safety, and sustainability indicators. Upgraded versions of previous data collection, analysis and benchmarking.

2014
Annual Safety Day Campaign launched, reinforcing awareness of the main causes of safety incidents and creating a safer working environment for the entire steel industry.

2018
Sustainability Champions Recognition programme launched, recognising companies who clearly demonstrate their commitment and action to sustainability. 9 steel companies recognised in 2021.

2018
Steel supply chain project launched, mapping the characteristics of the steel industry supply chain and investigating the ESG impacts related to the steel industry.

2019
Step Up, a multi-step improvement programme, launched, to increase the operational efficiency and CO2 emissions of steel production sites, covering raw materials, energy efficiency, yield and process reliability.

2021
New sustainability principles with associated objectives and criteria published, incorporating 9 topics of ESG (environment, social and governance).
Our New Sustainability Principles

1. Transparency & prosperity
   - Benchmarking systems
   - Global Technology Innovation Forum
   - CO2 data collection
   - Breakthrough technologies
   - Low-carbon programme

2. Innovation & prosperity
   - Technical workshops and reports
   - Step Up programme
   - Sustainability principles
   - Sustainability Charter
   - Materials and country comparison matrix
   - Steel supply chain map
   - Supply chain due diligence guidelines
   - Steel supply chain map

3. Environmental care
   - LCI data collection and distribution
   - LCI methodology report
   - BuildLCA & AutoLCA
   - Circular economy and Co-products workshops
   - Air quality workshop
   - Water management workshop
   - Water management global map

4. Responsible value chain
   - Steel Safety Day
   - Safety and health data collection
   - Process Safety Management
   - Steel Safety Day
   - Safety and health guidance notes
   - Workshops and floor shop audits
   - steeluniversity
   - stewChallenge
   - steelTalks
   - steelChallenger

5. Ethical & transparent operations
   - Member companies’ initiatives
   - Member companies’ initiatives

6. Local community
   - Safety and Health Excellence Recognition
   - Safety and health data collection
   - Process Safety Management
   - Steel Safety Day
   - Safety and health guidance notes
   - Workshops and floor shop audits
   - steeluniversity
   - stewChallenge
   - steelTalks
   - steelChallenger

7. Safety and health
   - Our people
   - Our people
   - Our people
   - Our people
   - Our people
   - Our people
   - Our people

8. Circular economy
   - BuildLCA & AutoLCA
   - Circular economy and Co-products workshops
   - Air quality workshop
   - Water management workshop
   - Water management global map

9. Climate action
   - Proactively address climate change and take effective actions to minimise the industry’s GHG emissions.
   - Greenhouse gas emissions reduction targets.
   - Low-carbon programme
   - LCi data collection and distribution

10. Innovation & prosperity
    - Global Technology Innovation Forum
    - CO2 data collection
    - Breakthrough technologies
    - Low-carbon programme

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Relevance to United Nations Sustainable Development Goals

* Most relevant goals to the steel industry
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