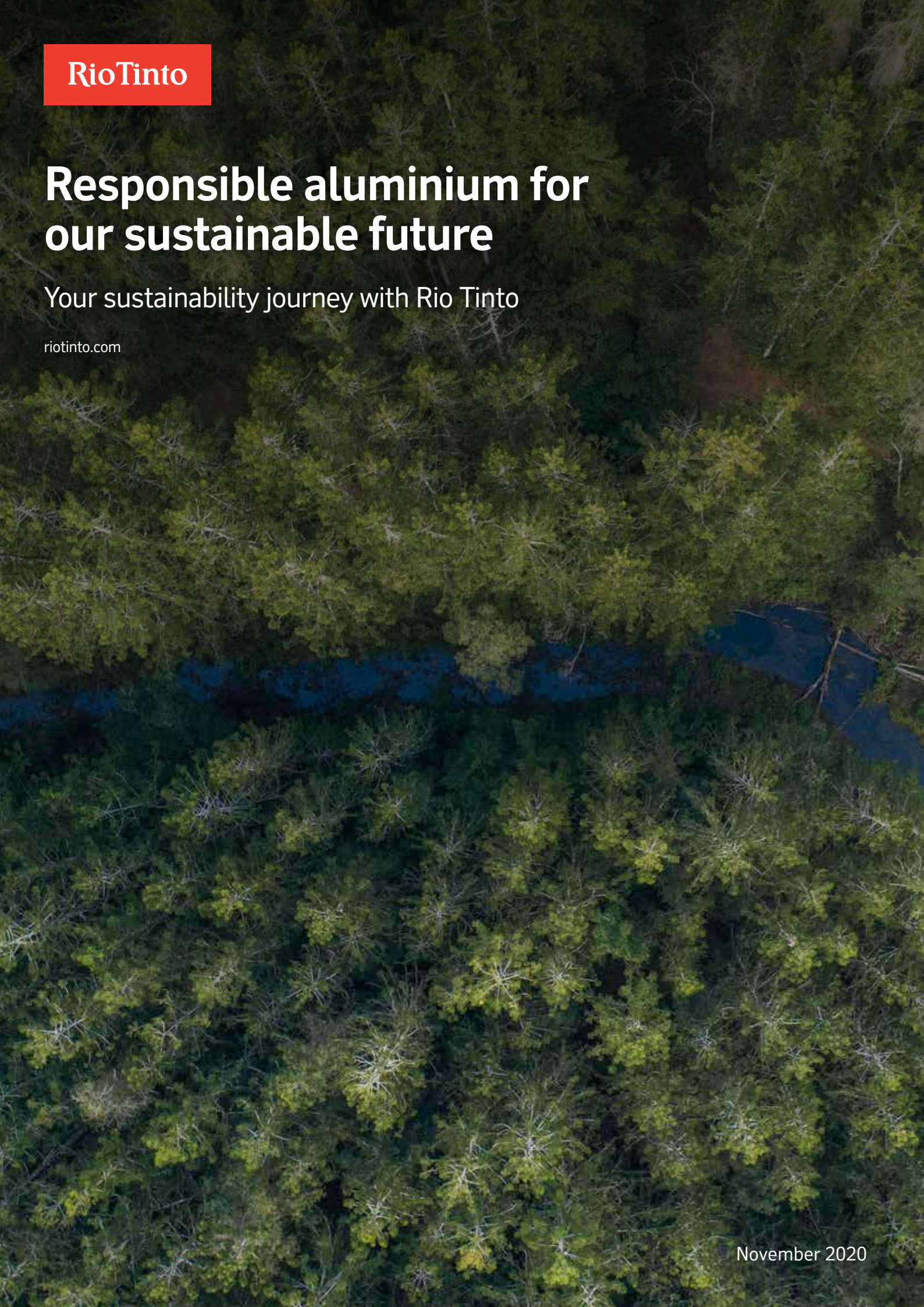


Rio Tinto

Responsible aluminium for our sustainable future

Your sustainability journey with Rio Tinto

riotinto.com

November 2020

Rio Tinto's approach to sustainability

We produce materials essential to human progress. Our sustainability strategy commits us to adopt high standards on the sustainability issues material to our business, our employees, the communities that host us and the customers that buy and use our products.

We were the first ASI-certified aluminium producer and we produce some of the highest quality, lowest-carbon footprint aluminium in the world across our global aluminium operations. Our carbon footprint is 60% below the industry average. Through ELYSIS, our joint venture with Alcoa, supported by Apple and the governments of Canada and Quebec, we are helping to further develop a breakthrough aluminium smelting technology with no direct greenhouse gas emissions.

Responsible aluminium for you and your customers

Aluminium is a metal of the future

Consumers worldwide want to limit their personal environmental impact and buy goods made responsibly. They want to know their carbon footprint and be confident the products they hold in their hands are ethically and responsibly produced through a traceable value chain.

We are committed to transparent Environmental, Social and Governance (ESG) performance. We continue to improve our sustainability credentials both in our upstream and downstream value chain.

Why care about your supply chain?

Your products are supported by a transparent, responsible and sustainable supply chain; from bauxite mining, through to alumina refining and finally aluminium smelting and casting.

It's time to think about what responsible aluminium production looks like, and consider your supply chain traceability option.

The global aluminium industry operates across different jurisdictions with varying standards and regulatory environments. How are your suppliers conducting business and what values do they uphold when it comes to sustainability and transparency?

Mining by its very nature requires disturbing land. How are your suppliers managing potential social and environmental impacts, like safety and biodiversity throughout the life of the mine?

Refining is a chemical process. How attentive are your suppliers to managing alkali chemical and bauxite residue after extracting alumina?

Smelting requires large amounts of electricity and baked carbon anodes. High temperature liquid metal is transformed into different shapes. How do your suppliers manage greenhouse gas emissions, as well as cooling water and other waste from the process?

Building trust in the supply chain

We have a product stewardship strategy and programmes that guide our approach to managing regulatory and sustainability risks and opportunities in delivering our product to market.

"We can add value to your company's own ESG journey by providing data transparency and traceability of our materials."

Tolga Egrilmezer
Rio Tinto Aluminium Sales & Marketing Vice President

Helping your sustainability agenda

Our responsibly produced and high-quality aluminium delivers competitive value to your sustainability agenda by:

- clearly showing how you are taking action to promote sustainability;
- reinforcing and promoting consumer and stakeholder confidence in your products and supply chain;
- increasing your ability to meet new demands and create potential opportunities;
- unlocking access to sustainability related financial market instruments and credit ratings;
- and reducing your risk exposure to regulations in local and international markets.

Aluminium Stewardship Initiative

The Aluminium Stewardship Initiative (ASI) certification means customers can be assured that the aluminium they purchase has been produced with high environmental, social and governance (ESG) standards, ranging from greenhouse gas emissions to human rights. ASI certifies against 11 key ESG criteria set by independent ASI standards, and is accredited through third party audits.

We were the first company to achieve ASI Performance Standard and Chain of Custody (CoC) Standard certification across our value chain. Today, we can offer ASI certified aluminium, from mine to cast house in the Atlantic and Pacific regions.

Some specifics about climate change and aluminium

Aluminium smelting, the process by which alumina is converted into aluminium, is an energy-intensive process.

Smelting accounts for around 80% of the emissions created throughout the entire aluminium value chain. On average across the industry, smelting one tonne of aluminium produces a carbon footprint of about 12 tonnes of carbon dioxide equivalent (CO_2e).

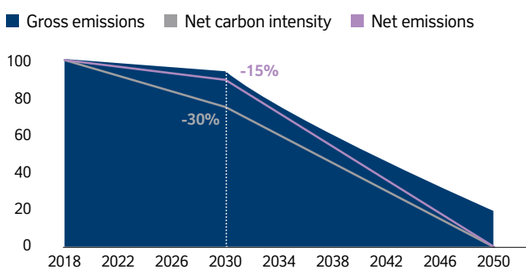
Just over a quarter of those emissions come from the combustion of carbon anodes in the smelting process. The remainder of emissions are created through electricity generation or purchase.

Rio Tinto's climate change goal and your target

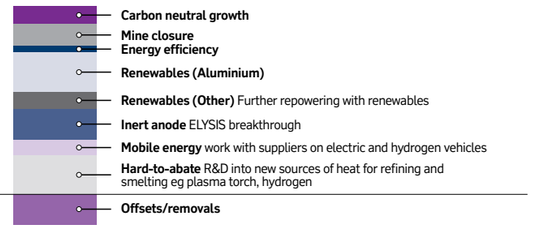
Our ambition is to reach net zero emissions across our operations by 2050. Our 2030 target is to reduce our emissions intensity by 30% and our absolute emissions by 15%. Since 2008, we have reduced the absolute emissions from our managed operations by 46% (18% when excluding divestments) and have reduced our emissions intensity by 29%.

11 key ESG criteria set by independent ASI standards

Rio Tinto scope 1&2 GHG emissions (2018 = 100)



2050 decarbonisation levers



Today, 76% of our electricity consumption at our managed operations is from renewable energy, compared with 26% of global electricity production.

This provides a unique, collaborative opportunity to tackle emissions across our whole value chain.

We continue to look for ways to reduce the carbon footprint of our aluminium operations globally, including:

- increasing the share of renewable electricity
- developing the world's first carbon-free aluminium smelting process through the ELYSIS™ joint venture.

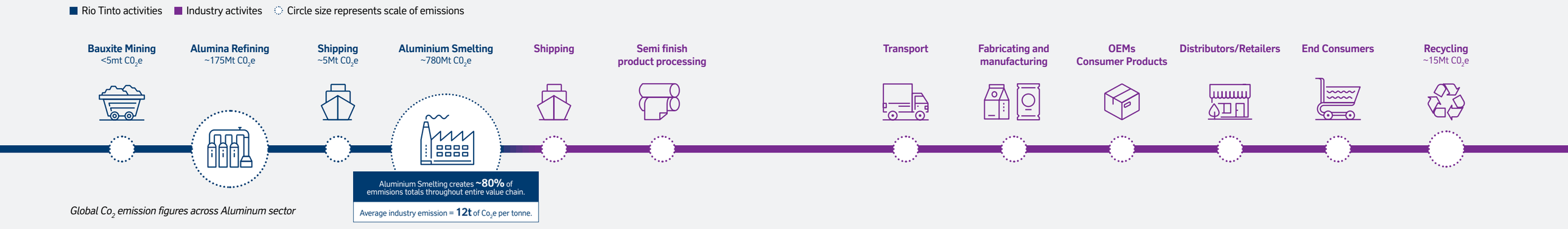
Life cycle assessment matters

Life Cycle Assessment (LCA) can be your first step to measure and communicate the environmental performance of your products to stakeholders to address their concerns and differentiate your products.

We provide LCA, from mine to cast house, conducted by third party experts based on ISO14040 and 14044 standards, deliverable in a factsheet format for transparency, consistency and reliability. It can be developed into a certified Environmental Product Declaration (EPD) based on the ISO14025 standard.

LCA is applicable to a number of business needs, such as meeting regulations, benchmarking product performance relative to a competitor, substantiating marketing claims about the product's environmental attributes, and providing an effective pathway to reduce environmental impacts in product design.

Understanding emissions throughout the Aluminium value chain



Global Co_2 emission figures across Aluminum sector

Partnering with us on your sustainability journey

Sustainability action with an upstream supply chain is a new area for many companies. A pilot programme can help you explore the opportunities. From there, we can work together to define what you need to achieve, measure and understand status-quo quantitatively, establish a benchmark, and develop workable pathways to improve your position.

1 Refine ▸ 2 Recognise ▸ 3 Reimagine

- Define your short to long-term goal and what you want to achieve.
- Consider where aluminium sits in your sustainability goal and product strategy.
- Understand business context, regulatory requirements, and sustainability reporting for your stakeholders.
- Reflect your industry's specific challenge.

- Look at your supply chain and see to what extent you can trace back and what level of information is available as of today.
- Understand the gap between your requirement and your suppliers' capabilities and offering. in terms of information, service, product quality and volume, qualitatively as well as quantitatively.

- Determine pathway and timeframe to fill the gap and achieve traceability in a sustainable way.
- Explore traceability. Prioritise sustainable operation with transparency, and establish a mechanism for continuous improvement.

The future is near. Let's work together to develop multi-dimensional sustainability options

Products
Low Co_2 and carbon free aluminium, technical service and R&D

Assessment Support
Life Cycle Assessment or Environmental Product Declaration

Assurance Scope
Holistic ESG scope with ASI certified aluminium and/or low CO_2 aluminium

Traceability Mechanism
Transparency in supply chain from mine to delivery through emerging technologies

Recycle Contents Scheme
Higher recycled contents with primary metal quality and/or closed loop solutions

Rio Tinto's integrated supply chain

55 million tonnes
of bauxite from 5 mines including:

Gove, Australia
Production: 12.2MT
Product: Bauxite

Weipa, Australia
Production: 35.4MT
Product: Bauxite

7.7 million tonnes
of alumina from 4 refineries including:

Yarwun Alumina Refinery, Australia
Production: 3.1MT
Product: Alumina & Hydrate

Queensland Alumina, Australia
Production: 2.7MT
Product: Alumina & Hydrate

3.2 million tonnes
of aluminium produced at 16 aluminium casthouses including:

Multi-sourced supply of high-quality and responsible Aluminum through our global network

Bell Bay smelter, Australia
Production: 189,000 tonnes
Products: Aluminium slab, molten metal, small form and t-foundry, remelt

Tomago smelter, Australia
Production: 303,000 tonnes
Products: Aluminium slab, billet, remelt

New Zealand's Aluminium Smelter, New Zealand
Production: 279,000 tonnes
Products: Aluminium slab, billet, high purity, foundry, remelt

Boyne smelter, Australia
Production: 296,000 tonnes
Products: Aluminium billet, EC grade, small form and t-foundry, remelt

Sohar smelter, Oman
Production: 78,000 tonnes
Products: Aluminium high purity, remelt

Alma smelter, Canada
Alouette smelter, Canada
Arvida smelter, Canada
Arvida AP60 smelter, Canada

Beauharnois casting, Canada
Becancour smelter, Canada
Dubuc Saguenay casting, Canada
Grande-Baie smelter, Canada

ISAL smelter, Iceland
Kitimat, Canada
Laterriere smelter, Canada

Full year total production figures for 2019. Quantity indicates our share of production data, where applicable.

Your sustainability partner

Rio Tinto
12 Marina Boulevard, #20-11
Marina Bay Financial Centre Tower 3
Singapore 018982

riotinto.com

For enquiry, please email to:
salesinfo@riotinto.com