



START

Definitions, Methodology & Scope Copper Label

Version: July 2024

The Environment, Social, and Governance (ESG) metrics on the START Label are based on the data collected by Rio Tinto for its internal and external reporting purposes. All site-level, product-group, and corporate-level data are for Rio Tinto's managed operations.

Introduction

Sustainability is personal, and we believe everyone should play a part. That is why we use the term **VCare – Value Chain Care**, to reiterate the importance of caring for sustainability, and use it throughout our documents.

Sustainability is also holistic, so in our START label, we track 3 pillars – **Planet, People and Progress**.

They cover a wide spectrum of metrics, including environmental, social and governance.

This document seeks to define each metric in the **START Copper Label**.

Provenance



VCare - Chain

VCare Chain provides provenance from mine to metal, demonstrating the linkage between responsible production, responsible sourcing and procurement.

Environmental Metrics

VCare Planet

These metrics focus on Rio Tinto's performance as a steward of the natural environment.



Global Warming Potential (GWP)

GWP is a measure of greenhouse gas emissions, such as CO₂ and methane. These emissions are causing an increase in the absorption of radiation emitted by the earth, increasing the natural greenhouse effect. This may in turn have adverse impacts on ecosystem health, human health and material welfare.

Greenhouse Gases (GHG) are atmospheric gases that absorb and emit radiation within the thermal infrared range, contributing to the greenhouse effect and global climate change. Many different GHGs are produced as a result of human activities, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), nitrogen trifluoride (NF₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).¹

CO₂ equivalent (CO₂-e) is the universal unit of measurement to indicate the GWP of each of the seven greenhouse gases, expressed in one unit of CO₂. It is used to evaluate releasing (or avoid releasing) different greenhouse gases on a common basis.²

The emissions are expressed as tonnes of CO₂-e per metric tonne of copper produced.

The START Sustainability Label's site data is based on "Cradle to Gate Life Cycle Assessment of Copper Cathode, Molybdenum Oxide, Gold, Silver and Sulfuric Acid of Kennecott Utah Copper, 2018 data with 2019 addendum".

This [LCA is certified by TÜV Rheinland Energy GmbH](#), unless otherwise stated. ISO 14044 methodology is used to conduct the LCA study.

The global average is based on International Copper Association (ICA) [Copper Environmental Profile](#), updated 2023. LCIA Results for 1 metric tonne of copper cathode (99.99% Cu) according to CML method.



Water Management

Stewardship of a precious resource such as water is crucial to Rio Tinto's operations and communities.

Total water consumed is the total water withdrawn minus total water discharged or returned. Total water consumed is the total water incorporated into the products and onsite uses and includes water evaporated and water lost via transmission.³

Total water discharged or returned is the sum of effluents, used water, and unused water released to surface water, groundwater, seawater, or a third party, for which the organisation has no further use throughout the reporting period.⁴

Additional information on water management standards can be found on Rio Tinto's website at [Water Quality Protection and Water Management Standard](#).

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Blue Water Consumption refers to amount of water withdrawn from ground water or surface water bodies, for use or incorporated into products, but not returned to the same drainage basin.

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1 Adapted from World Resource Institute / World Business Council for Sustainable Development's Greenhouse Gas Protocol: A Corporate Reporting and Accounting Standard, March 2004 (the GHG Protocol) (www.ghgprotocol.org)

2 <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

3 <https://docs.wbcsd.org/2014/05/CSI-Protocol-for-Water-Reporting.pdf>

4 <http://www.globalreporting.org/>

Environmental Metrics



Waste Management

Wastes and residues from operational activities are a key area of environmental risk management. Impacts are minimised through careful [waste management practices](#) across operations.

Hazardous waste includes batteries, oils, fluorinated products, tar, and other flammable, corrosive, or toxic waste.

Non-hazardous waste includes other industrial waste, including filter cloths, packaging, piping, empty bags, belts, etc.

Waste is carefully handled and stored as it impacts the land. Hazardous waste is appropriately handled to protect people, wildlife, and water quality. Other waste types are most commonly managed through recycling, off-site treatment, disposal, or placement in on-site engineered landfills.

Additional information on waste control standards can be found on Rio Tinto's website at [Hazardous Materials & Non-Mineral Waste Control Standard](#).

The data is provided based on annual site figures and expressed as metric tonnes of non-mineral waste disposed.



Energy (electricity) Source

Primary Energy Demand (PED) is a measure of the total amount of primary energy extracted from the earth. PED is expressed in energy demand from non-renewable resources (e.g. petroleum, natural gas, etc.) and energy demand from renewable resources (e.g. hydropower, wind energy, solar, etc.). Efficiencies in energy conversion (e.g. power, heat, steam, etc.) are taken into account.

For Kennecott, 100% of electricity are purchased from grid connected to renewable energy resources and electricity were paired with Green-e Energy certified carbon-free renewable energy certificates (RECs).

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Air Emissions

Clean air is critical for the health of host communities and of the surrounding ecosystems. Emphasis is on prevention, managing air quality through [operational discipline and process improvement](#).

Additional information on air quality standards can be found on Rio Tinto's website at [Air Quality Protection Standard](#).

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Eutrophication covers all potential impacts of excessively high levels of macronutrients, the most important of which are nitrogen (N) and phosphorus (P). Nutrient enrichment may cause an undesirable shift in species composition and elevated biomass production in both aquatic and terrestrial ecosystems. In aquatic ecosystems increased biomass production may lead to depressed oxygen levels, because of the additional consumption of oxygen in biomass decomposition. The emission is expressed as kilogram of Phosphate-eq (equivalent) per metric tonne of Copper.

Acidification Potential (AP) is a measure of emissions that cause acidifying effects to the environment. The acidification potential is a measure of a molecule's capacity to increase the hydrogen ion (H⁺) concentration in the presence of water, thus decreasing the pH value. Potential effects include fish mortality, forest decline and the deterioration of building materials. The emission is expressed as kilogram of SO₂-eq per metric tonne of Copper.

About 99.9% of the sulfur dioxide (SO₂) produced by the smelting process is captured and converted into sulfuric acid in the double contact acid plant.

Photochemical ozone creation potential (POCP) is a measure of emissions of precursors contributing to low level smog, produced by the reaction of nitrogen oxides and Volatile Organic Compounds (VOCs) under the influence of Ultraviolet (UV) light. Ground level ozone may be injurious to human health and ecosystems and may also damage crops. The emission is expressed as kilogram of Ethene-eq per metric tonne of Copper.

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Environmental Metrics



Biodiversity IUCN Red Listed Species

The IUCN Red List is a critical indicator of the health of the world's biodiversity. Far more than a list of species and their status, it is a tool to inform and catalyse action for biodiversity conservation and policy change, critical to protecting the natural resources we need to survive.

It provides information about the range, population size, habitat and ecology, use and/or trade, threats, and conservation actions to help inform necessary conservation decisions. The IUCN Red List Categories and Criteria are intended to be an easily and widely understood system for classifying species at high risk of global extinction. It divides species into nine categories:

- Not Evaluated, Data Deficient, Least Concern, Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild, and Extinct.⁵

Additional information on biodiversity protection standards can be found on Rio Tinto's website at [Biodiversity Protection & Natural Resource Management Standard](#). The START Label's site data is based on annual figures.



Land Management

Land disturbed is the footprint created from mining, processing, and related activities currently in use and/or not yet rehabilitated.

Land rehabilitated is land that has been disturbed for mining, processing, and associated activities, which has subsequently been rehabilitated and restored to an agreed-upon pre-activity level.

Additional land management and rehabilitation standards information can be found on Rio Tinto's website at [Land Management & Rehabilitation Standard](#).

Land disturbed and rehabilitated is provided based on annual reporting data.



Recycled Content

The recycled content in the START Label includes pre-and-post-consumer scrap and scrap sold externally.

The label aligns with the industry definition of pre-consumer scrap (i.e., a material that is diverted from the waste stream from a manufacturing process) and post-consumer scrap (i.e., a material that is reclaimed from a consumer or commercial product that has been used for its intended purpose and which can no longer be used for its intended purpose)⁶.

The pre-consumer scrap includes scrap from a secondary producer such as defect scrap, and external scrap, including material purchases from customers and other third-party entities for internal remelting. Post-consumer scrap is end of life recycling and can include copper wire and tubing, construction, or scrap yard materials.

Excluded are internal scrap produced, scrap from the smelter and scrap from the refinery. The same internal scrap produced is also consumed on-site.

The START Label's site data is based on annual figures and expressed as kilograms of recycled content produced and consumed per tonne of saleable production volume.

⁵ <https://www.iucnredlist.org/>

⁶ Adapted from ISO 14021:2016

Social Metrics



VCare - People

These metrics pertain to Rio Tinto's management of its relationships with its employees, suppliers, customers, and the communities where it operates.



Safety Performance

Safety is a core value, and nothing is more important to Rio Tinto than our employees, contractors, and communities' safety and well-being. Safety extends beyond personal safety, so we also have robust standards, processes, and tools embedded across our business to protect the environment and ensure respect for the communities in which we operate.

All Injury Frequency Rate (AIFR) = (Sum of All Injuries AI) x 200,000 ÷ hours of exposure. AI is the sum of lost time injuries and medical treatment cases. Over the past ten years, the severity of injuries and our AIFR have fallen significantly.

Critical Risk Management (CRM) is fatality elimination through an increased understanding of critical risks and critical controls embedded at the front line. We are committed to zero fatalities and a zero-harm work environment and have maintained our focus on CRM to verify that critical controls are in place.

A Potential Fatal Incident (PFI) is an incident with a safety impact that has the potential to result in a single or multiple fatalities (MRC = major or catastrophic). This number excludes an actual fatality.

The START Label's safety data is provided at a product-group level.



Contribution to Communities

Rio Tinto engages communities in inclusive ways, respecting dignity, rights, culture and way of life. Our vision is to strengthen communities to sustain and drive their progress. We aim to maximise social and economic development and minimise potential issues, like noise and dust. We plan our business for the long term and aim to play a positive role in society and the communities in which we operate, where many of our employees and their families live.

Additional information on communities and social performance standards can be found on Rio Tinto's website at [Communities & Social Performance Standard](#).

The community investments data in the START Label is provided at a product-group level. The social investments site-level data is based on annual value and expressed as millions of US dollars.



Third-Party Assessment

Our [Supplier Code of Conduct](#) sets out the expectations of our suppliers and their subsidiaries and subcontractors with respect to key issues, including human rights. It also clarifies that we may choose not to work with suppliers who do not meet our expectations.

In 2021, we amalgamated our "Know your Supplier" (KYS) and "Know Your Customer" (KYC) procedures into a single "Know your Third Party" (KYTP) Procedure. This simplified procedure aligns risk criteria and articulates the mandatory due diligence requirements for all third parties we engage with, including customers, suppliers, contractors, divestment targets, and joint venture partners.

Due-diligence processes help identify the potential risks of engaging, renewing, or extending a relationship with a third party, whether these risks relate to potential human rights impacts, bribery, corruption, money laundering, trade sanctions or denied rights party transactions. We apply this procedure to all-new third parties and renewals of contracts and engagements with existing third parties meeting the KYTP risk criteria relating to activity, country, and value per business engagement. We perform system-based monitoring on relevant third parties centrally following the completion of the third-party due-diligence screening, relating to any new enforcement actions or sanctions-related alerts, and where applicable, additional factors such as significant changes in counterparty data.

The data in the START Label is provided at a corporate level and will show the numbers of due diligence checks completed for KYC and KYS.

Governance Metrics

VCare - Progress

These metrics account for Rio Tinto's leadership, executive compensation, internal controls, shareholder rights, and the relationship between shareholders and management.



Ethics & Compliance Training

[The Way We Work](#) clarifies that we do not offer, pay or accept bribes, no matter where we operate, the situation, or who is involved.

Employees must complete an annual online Ethics and Compliance training tailored to suit the risks they are most likely to encounter in their roles. In 2020, Rio Tinto also provided additional risk-based training to employees and contractors in 23 countries and launched enhanced business integrity training online, covering integrity-driven decision-making, anti-bribery and corruption, anti-money laundering, and fraud for higher-risk roles.

This data in the START Label is provided at a corporate level.

Additional information on business integrity standards can be found on Rio Tinto's website at [Business Integrity Standard](#).



Diversity

At all levels of Rio Tinto's workforce, we want to reflect the communities in which we operate, so we focus on employing local candidates and, where needed, work with local communities and governments to develop skills and work readiness in communities.

Additional information on diversity and inclusion can be found on Rio Tinto's website at [Rio Tinto - People](#).

This data is provided at a corporate level.



Whistleblower Programme

In 2021, we launched our enhanced confidential reporting programme, myVoice, a complaints mechanism designed to help people voice concerns about potential misconduct or improper behaviour. myVoice is available to our people, suppliers (and their employees and contractors), community members, other stakeholders, and the public.

The myVoice programme permits reports to be made confidentially and anonymously, subject to local laws.

Reports to myVoice can relate to concerns about the conduct of the business or/and individuals, including suspicion of violations of our standards, policies, procedures, human rights including modern slavery, safety and environmental issues, financial reporting, fraud, and business integrity issues in general.

Additional information and the myVoice procedure can be found on Rio Tinto's website at [myVoice](#).

This data is provided at a corporate level.

Transparency

VCare - Accountability

Our voluntary commitments related to the Social category include commitments to several global standards and international norms, and participation in several international, regional, and national organisations, initiatives, and industry accreditation programmes.

These include:

- [United Nations Guiding Principles on Business and Human Rights](#)
- [United Nations Universal Declaration of Human Rights](#)
- [Voluntary Principles on Security and Human Rights \(VPSHR\)](#)
- [United Nations Declaration on the Rights of Indigenous Peoples](#)
- [OECD Guidelines for Multinational Enterprises](#)
- [United Nations Global Compact's 10 Principles](#)
- [International Council on Mining and Metals Principles for Sustainable Development and Performance Expectations](#)
- [International Finance Corporation's Environmental and Social Performance Standards](#)
- [Mining Association of Canada's Toward Sustainable Mining](#)

We also [publish](#) reports and statements related to the Social category including:

- [Annual Modern Slavery and Human Trafficking Statement](#)
- [Annual Report to the Voluntary Principles Initiative](#)

Respecting human rights is central to our values and the way we work – wherever we operate.

At Rio Tinto, we know we can affect human rights everywhere we work and beyond our operations. We also know that what we do in one location may affect people's trust in how we respect human rights elsewhere. Rio Tinto is committed to respecting internationally recognised human rights as set out in the Universal Declaration of Human Rights and implementing the UN Guiding Principles on Business and Human Rights.

This commitment includes following a range of other international standards and guidelines, including the VPSHR, the OECD Guidelines for Multinational Enterprises, and the UN Global Compact's 10 Principles.

Rio Tinto publicly reports on its human rights performance, including publishing an Annual Report to the Voluntary Principles Initiative on implementing the VPSHR and our annual Modern Slavery Statement.

Our human rights performance is also assessed through various external initiatives, including the Aluminium Stewardship Initiative (ASI), Copper Mark, the Mining Association of Canada's Towards Sustainable Mining, and the Mining Principles from the International Council on Mining and Metals (ICMM).

Additional information on Rio Tinto's approach to human rights, including our Human Rights Policy, our implementation of external and internal standards, and our salient human rights issues, can be found on our Human Rights webpage.

Contact us



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