

ICA Sustainability Indicators

Methodological Guidelines

Methodology sheets have been drafted for each indicator based on well-established methodologies. These sheets are condensed versions primarily based on the Global Reporting Initiative (GRI) definitions. Where applicable, the indicators are linked to SDG targets, based on the GRI resource, *“Linking the SDGs and the GRI Standards”* (2022).

A number of required inputs are necessary to develop the indicators:

- All the inputs that are necessary to calculate the indicators should relate only to copper production.
- The environmental indicators (i.e., CO₂ Emissions, Energy Intensity, and Water Recycled and Reused) should relate only to the processes leading to copper production. Experience from ICA life cycle activity recommends using a) for mining, allocation by mass (metal content or total mass depending on data availability) between the different base metals and b) for smelting/refining, allocation by market value for the precious metals and allocation by system expansion for the non-metals co-products e.g., sulfuric acid. For more information on allocation, please refer to tables 1, 2 and 3 within [“Harmonization of LCA methodologies for the metal and mining industry”](#) (2016).
- For financial indicators (e.g., Economic Value Distributed) that are reported at the group level, a proxy (e.g., Cu revenues/Total revenues) can be used to provide estimate only for the copper business unit.
- Tons of copper content should only include the weight of the copper content in each one of the products (concentrates, cathodes, wire rod, etc.) in order to have a common denominator.

In order to evaluate the relative importance of each part of the value chain represented it is necessary to report the following values separately:

- Mine production = total Cu content in concentrates produced. Please include the concentrates that will be further processed internally into refined copper.
- Refined production = total Cu content in refined copper (cathodes, cakes, billets, etc.) produced. Please include the refined copper that will be further processed internally into semis. There can be "double counting" with the Mine production.
- Semis production = total Cu content in semi-fabricates and products (wire rod, sheets, strips, tubes, etc.) produced. There can be "double counting" with the Refined production.

Many operations amongst companies are more diversified in their production, as they produce other commodities or products other than copper. To avoid double counting with assets shared between member companies it is recommended for the company operating the asset to report 100% of each indicator (even if the operating company is not the major shareholder).

For instances when a company has a data gap from year to year, averages of the past years may be used until data gap is filled.

1. CO₂ equivalent emissions

1.1 Definitions and remarks

Greenhouse gas emissions are the main cause of climate change and are governed by the United Nations Framework Convention on Climate Change (UNFCCC) and the subsequent Kyoto Protocol. As a result, different national and international regulations and incentive systems (such as emissions trading) aim to control the volume and reward the reduction of greenhouse gas emissions.

To identify all GHG emissions, the sources of emission are classified in direct sources or Scope 1, indirect sources or Scope 2, and other related indirect sources or Scope 3.

Direct emissions (Scope 1) of greenhouse gases are those from all sources owned or controlled by the reporting organization, including:

- Generation of electricity, heat, or steam;
- Other combustion processes such as flaring;
- Physical or chemical processing;
- Transportation of materials, products, and waste;
- Venting; and
- Fugitive emissions.

Indirect emissions (scope 2) are those of greenhouse gases resulting from the generation of purchased electricity, heat, or steam.

Other indirect emissions (e.g., from organizational travel) are not included. Other related indirect sources (Scope 3) related to purchased goods, such as pre-processed raw materials or credits from by-products (slag excluded) sold to other industries are not included.

1.2 Required inputs

- GHG emissions in metric tons of CO₂ equivalent from direct sources (Scope 1)
- GHG emissions in metric tons of CO₂ equivalent from indirect sources (Scope 2)
- Tons of copper content produced

1.3 Calculation and units of measure

CO₂ emission intensity = (Total CO₂ equivalent emissions) / (Tons of copper content produced)

Unit: Ton of CO₂e / Ton of Cu

Where:

- Total CO₂e emissions = sum of (Scope 1 + Scope 2)

1.4 References

This indicator is reported under GRI as the sum of Disclosure 305-1 and Disclosure 305-2.

Source: GRI 305: Emissions 2016

2. Energy intensity

2.1 Definitions and remarks

Energy consumption has a direct effect on operational costs and exposure to fluctuations in energy supply and prices. The environmental footprint of the organization is shaped in part by its choice of energy sources. Changes in the balance of these sources can indicate the organization's efforts to minimize its environmental impacts. Information on the consumption of primary energy sources supports an assessment of how the organization might be affected by emerging environmental regulations such as the Kyoto Protocol.

The total energy consumption is the sum of direct energy consumption and indirect energy consumption. Direct energy measures the organization's consumption of direct primary energy sources; it can be broken down into energy sources purchased, direct energy sources produced and direct energy sources sold. Indirect energy consumption measures the energy required to produce and deliver purchased electricity and any other intermediate energy products (such as district heat) that involve significant energy consumption upstream from the organization's reporting boundary.

Information can be obtained from invoices, measured (or calculated) heat/fuel accounting, estimations, defaults, etc. Amounts of joules can be taken directly or converted from invoices or delivery notes. Information about the combination of primary sources used to generate intermediate energy can be obtained from suppliers.

2.2 Required inputs

- Direct energy purchased, Direct energy sources produced, Direct energy sources sold
- Indirect energy consumption
- Tons of copper content produced

2.3 Calculation and units of measure

Energy Intensity = (Total Energy Consumption) / (Tons of copper content produced)

Unit: GJ / Tons of Cu

Where:

- Total energy consumption (GJ) = Direct Energy Consumption + Indirect Energy Consumption
- Direct energy consumption (GJ) = Direct Primary Energy Purchased + Direct Primary Energy Produced - Direct Primary Energy Sold
- Energy consumption should be expressed in Joules (J) or multiples, preferable Gigajoules (GJ). Equivalence tables can be used to convert volumes of primary sources (i.e., tons of fuel) in Gigajoules.

2.4 References

This indicator is reported under GRI as 302-1. It covers, respectively, scopes 1 and 2 of the WRI/WBCSD GHG. Scope 3 is not included.

Source: GRI 302: Energy 2016

3. Water recycled and reused

3.1 Definitions and remarks

The rate of water reuse and recycling can be a measure of efficiency and can demonstrate the success of the organization in reducing total water withdrawals and discharges. While increased reuse and recycling can result in a reduction of water consumption, treatment, and disposal costs, it should *not* replace efforts for overall reduction in water withdrawal and consumption. The reduction of water consumption through reuse and recycling can also contribute to local, national, or regional goals for managing water supplies, particularly in water stressed areas (where water availability is low and competition for access is high).

Recycling and reuse is defined as water that has been used in an operational task and is recovered and used again in an operational task, either without treatment (reuse) or with treatment (recycle). In general, there are three types of water recycling/re-use:

- Wastewater recycled back in the same process or higher use of recycled water in the process cycle;
- Wastewater recycled/re-used in a different process, but within the same facility;
- Wastewater re-used at another of the reporting organization's facilities.

3.2 Required inputs

- Water recycled
- Water reused

3.3 Calculation and units of measure

Total volume of water recycled and reused

Unit: Cubic meters (m³)

3.4 References

Note: This indicator is no longer reported under GRI 303: Water 2016. ICA recommends all members follow the ICMM Water Reporting: Good practice guide (2nd edition).

Source: ICMM Water Reporting: Good practice guide (2nd Edition)

4. Total workforce

4.1 Definitions and remarks

The size of a workforce provides insight into the scope of impacts arising from employment practices. A rise or fall in net employment, evidenced by data reported over the course of three or more years, is an important element of the organization's contribution to the overall economic development and sustainability of the workforce. The total workforce may vary depending on the country and the definition of part-time and full-time contract.

It should be reported the total workforce break down in direct employees and supervised (indirect) employees. Models, assumptions and estimation may be needed to balance the workforce in different countries. This should be based on a calendar year.

4.2 Required inputs

- Total number of employees, which may include
 - Permanent employees
 - Temporary employees
 - Full-time employees
 - Part-time employees
- Total number of workers who are not employees and whose work is controlled by the organization, which may include but is not limited to
 - Contractors hired by the organization to perform work at the organization's workplace, in a public area (e.g., a road), or directly at the workplace of the organization's client
 - Workers of one of the organization's suppliers, where the organization instructs the supplier to use particular materials or works method to manufacture the products or deliver the services
 - Volunteers or interns performing work for the organization

Note: Beginning in 2023 for reporting years 2021 and 2022, ICA will request a breakdown of the total number of employees by gender.

4.3 Calculation and units of measure

Total workforce = sum of employees + workers who are not employees and whose work is controlled by the organization

Unit = People

Note: The total workforce number should correlate to the same workers as described below for the total workable hours portion of the injury rate calculation (5.3). However, some companies are only able to report the number of direct employees, without contractors. If this is the case, it should be noted by the company with their submission.

4.4 References

This indicator is reported under GRI 2 Disclosures 2-7 and 2-8.

Source: GRI 2: General Disclosures 2021

5. Injury rate

5.1 Definitions and remarks

Safety performance is a key measure of an organization's duty of care. This indicator will show whether safety management practices are resulting in fewer occupational injury incidents. There are two primary inputs to the injury rate calculation as defined below.

Recordable work-related injury definition:

- Work-related injury that results in any of the following:
 - death,
 - days away from work,
 - restricted work or transfer to another job,
 - medical treatment beyond first aid,
 - loss of consciousness;
 - or significant injury diagnosed by a physician or other licensed healthcare professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness.
- Total workable hours definition:
 - Total workable hours is defined as the total number of hours worked by workers carrying out work-related activities during the recording period (typically a calendar year). Workers are employees, contractors or third parties who are engaged in work-related activities on behalf of an employer.
 - **Employee** - An employee is a worker who has an employment contract (written or not) with the employer, excluding those who are self-employed and paid by the employer.
 - **Contractor** - A contractor is an employee of a company contracted by the employer to do work on its behalf and under its control with respect to location, work practices and application of health and safety standards.
 - **Third party** - A third party is someone present within an employer's on-site location but who is neither an employee nor a contractor. Third party individuals may be service providers, members of the general public or other visitors.
 - Contractors and third parties are also called "supervised workers" or "indirect employees".

5.2 Required inputs

- Total recordable work-related injury
- Total workable hours = hours worked by (employees + contractors + third parties) in one year

5.3 Calculation and units of measure

Injury rate = $1,000,000 * (\text{total recordable work-related injuries}) / (\text{total hours worked})$

Unit: Injuries / 1,000,000 hours worked

5.4 References

This indicator is reported under GRI as 403-9 as the rate of recordable work-related injuries.

Source: GRI 403: Occupational Health and Safety 2018 and [ICMM Health and Safety Performance Indicators: Guidance \(2021\)](#)

6. Economic value distributed

6.1 Definitions and remarks

Data on the creation and distribution of economic value provide a basic indication of how the organization has created wealth for stakeholders, including shareholders, employees, suppliers, local governments and local communities. Several components of the Economic Value Distributed (EVD) table also provide an economic profile of the reporting organization, which may be useful for normalizing other performance figures.

6.2 Required inputs

The indicator is based on the following:

Component	Comment
b) Operating costs	Cash payments made outside the organization for materials, product components, facilities, and services purchased
c) Employee wages and benefits	total payroll (including employee salaries and amounts paid to government institutions on behalf of employees) plus total benefits (excluding training, costs of protective equipment or other cost items directly related to the employee's job function).
d) Payments to providers of capital	All financial payments made to the providers of the organization's capital (incl. dividends to all shareholders, interest payments made to providers of loan)
e) Payments to government	All of the organization's taxes plus related penalties paid at the international, national, and local levels. Organization taxes can include corporate, income, and property.
f) Community investments	Voluntary contributions and investment of funds in the broader community (includes donations, charities, NGOs, research institute, etc.)

6.3 Calculation and units of measure

Economic value distributed = b + c + d + e + f Unit: Injuries / 1,000,000 hours worked

Unit: \$US

6.4 References and notes

Typically, dividends paid to all shareholders are reported on a Consolidated Statement of Cash Flows:

- Cash Flows from Financing Activities
- Payment of dividends

Income tax expense can be used as a proxy for gross taxes. This metric is typically reported on a Consolidated Income Statement under earnings before tax (EBT).

Note: The EVD will be reported and put into perspective by comparing it to the EVG (Total Revenue).

This indicator is reported under GRI as GRI 201-1.

Source: GRI 201: Economic Performance 2016

7. Sustainability reporting

7.1 Definitions and remarks

Through their activities and business relationships, organizations can have an effect on the economy, environment, and people, and in turn make negative or positive contributions to sustainable development. Responsible companies will have an integrated strategy to achieve financial results while managing sustainability impacts to create lasting value for itself, its stakeholders and society. The objective of sustainability reporting is to provide transparency on how an organization contributes or aims to contribute to sustainable development.

Understanding the links between financial results and sustainability impacts is critical for business managers, and increasingly connected to long- and short-term business success. To understand these links, organizations must identify the material sustainability topics to monitor and manage to ensure the business survives and expands. This step is at the core of the sustainability reporting process.

Thousands of organizations, of all sizes and sectors, use recognized and widespread reporting systems, such as GRI, SASB, CDP, DJSI, and IFC Performance Standards, among others, in order to understand and communicate their sustainability performance. The report is usually published on an annual basis in the shape of a digital report.

7.2 Required inputs

- Total number of companies that develop a public reporting framework for sustainability
- Total number of ICA members

7.3 Calculation and units of measure

Sustainability Reporting = $100 * (\text{Companies that publish a public sustainability or integrated report}) / (\text{Total number of ICA members})$

Unit: %

7.4 References and notes

Note: In the questionnaire, it will be asked if these sustainability reports are verified by a third-party.

Source: GRI 1: Foundation 2021 and GRI 2: General Disclosures 2021