



The Copper Mark Theory of Change

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1 Introduction

The Copper Mark is the leading assurance framework to promote responsible practices across the copper, molybdenum, nickel, and zinc value chains. The Copper Mark works to develop responsible value chains from the mine level to the end-product.

The Copper Mark Theory of Change (ToC) articulates the desired impact of the organization. The ToC uses a logic of causal chains to connect the Copper Mark’s interventions, results, short- and long-term goals to achieve the desired impact. It is intended to act as a guide to measure the effectiveness of the organization’s activities. The ToC is also the foundation for the Monitoring and Evaluation (M&E) system, which details the process to monitor and evaluate progress using indicators and external validation. The intent of the M&E system is to track progress, measure success toward achieving the desired impact, and identify areas for improvement and innovation.

2 Vision

In 2023, the Copper Mark revised the vision to, “Our vision is a sustainable society, enabled by the responsible production, sourcing, and recycling of metals.

To achieve our vision, we apply robust governance, credible standards and assurance, stakeholder engagement, and leadership strategies. Through these strategies, we work to:

- Address past, present, and future critical impacts on people and the environment throughout metal value chains.
- Support the circular economy.
- Contribute to positive legacies and a sustainable society.

3 Intended Impact

The Copper Mark envisions three types of impacts from copper, molybdenum, nickel, and zinc broadly:

1. **Use:** Copper, molybdenum, nickel, and zinc are fundamental to the energy transition, given their use in most essential renewable technologies.
2. **Production, recycling, and sourcing:** as the demand for these metal products increases, and considering their vital role in clean energy, they need to be produced, sourced and recycled responsibly.
3. **Industry contributions:** the metal industries can positively contribute to the communities in which they operate.

The Copper Mark's role is to focus on the second and third. The primary goal of the Copper Mark is to ensure the majority of the industries of the "principal covered metals" (copper, molybdenum, nickel, and zinc) implement, and have independently assured, responsible production, recycling, and sourcing practices. In addition, the Copper Mark aims to demonstrate the industry contributions to circular economy and a sustainable society.

The intended impact in this ToC is three-fold:

- **The principal covered metals industries effectively prevent, mitigate, and remedy past, present, and future critical impacts on people and the environment throughout metal value chains.** The industries are able to make significant progress toward implementing solutions to prevent the common issues associated with production, recycling, and sourcing. When prevention is not possible, the industries are able to reduce and provide remedy for the negative impacts.
- **The principal covered metals industries support circular economy.** Through circular economy strategies, the industries can increase collection, reuse, and recycling of materials and contribute to the reduction of waste and increased resource efficiency.
- **The principal covered metals industries contribute to positive legacies and sustainable societies.** The industries not only prevent, mitigate, and remedy adverse impacts, but positively contribute to people and the environment in the communities in which they operate.

4 The Copper Mark Journey

The Copper Mark launched in 2020 with a focus on assurance of copper producers. In 2023, the direction of the Copper Mark evolved to:

- Include molybdenum, nickel, and zinc within the Assurance Framework.
- Include semis-fabricators (and equivalent in other metal supply chains), recyclers, and other supply chain actors in the Assurance Framework.

- Accelerate the development of responsible value chains to respond to market developments – while maintaining our focus on critical impacts of copper production on people and the environment.

As a result, the ToC aims to include these elements. It is noted that there is an initial emphasis on copper, having been in operation for longer. In particular, there is a focus on the top three critical impacts in the copper industry. Additional work will be completed to identify the same for the molybdenum, nickel, and zinc value chains.

5 Infographic

6 Foundational Elements of the Theory of Change

Good Governance and Financial Security

At the core of the Copper Mark Theory of Change is a well-run and financially sound organization. It is well understood that without a foundation of good governance and financial security, none of the activities of the Copper Mark are feasible. Good governance refers to the governance structure of the Copper Mark and the policies and procedures that oversee day-to-day operations. Good governance does not refer to specific individuals who hold leadership positions, but rather the guidelines and processes in place to ensure accountability, business integrity, legal compliance, and transparency. The Copper Mark holds itself to a high level of responsibility to manage the organization efficiently and transparently.

Principles

The Copper Mark is based on five core principles. These principles are understood to underpin all of the interventions of the Copper Mark and are illustrated in the ToC as existing throughout. The five principles are:

Transparency: We promote and enable greater transparency and information-sharing across the metals supply chains and for end-users.

Simplicity: The uniform approach to standards setting offered by the Copper Mark will reduce the administrative burdens and minimize the costs of achieving and maintaining regulatory for participants.

Continuous Improvement: Our standards and processes are regularly reviewed, and participants must be re-assessed every three (3) years against the updated requirements.

Collaboration: We recognize existing systems already implemented by copper, molybdenum, nickel, and zinc producers. We build partnerships across metals, along the supply chain and in key geographical regions.

Inclusivity: We aim to improve production, sourcing, and recycling practices across the whole supply chains of the copper, molybdenum, nickel, and zinc industries.

Assumptions

Embedded in every ToC is the concept of assumptions. Assumptions are the external factors, not controlled by The Copper Mark, necessary to make a leap from one link in the ToC chain to the next. While there are small ones throughout the ToC, there are a few noteworthy assumptions:

1. **The long-term outcomes will lead to the desired impacts.** The ToC rests on the assumption that the long-term outcomes lead to the desired impacts. The Copper Mark understands there are other factors that will also contribute to this enabling environment and would not assume to take full credit for the effects. As an example, The Copper Mark assumes that substantially increasing water efficiency will result in mitigating water issues that are important for the people, places and market affected by the copper industry.
2. **Desired change will be achieved by lifting the industry as a whole.** The Copper Mark aims to lift the industries as a whole, to create a broader and bigger impact. The standards are regularly reviewed (every 3 years) to ensure continued alignment with international expectations to gradually move the industries forward. This strategy assumes that industry leaders will pave the way for the rest of the industry and that achievable standards will reduce the barrier to entry. For example, The Copper Mark believes that by engaging entities of all sizes and geographic locations, the overall amount of metal responsibly produced, recycled, and sourced will be greater than if The Copper Mark was only awarded a smaller portion of the industry.
3. **Good interventions combined with critical mass lead to changed behavior.** This assumption continues to say that data sharing of that changed behavior provides incentives from the market for continued or enhanced good behavior, which ultimately leads to the desired results. As an example, if the results of the Assurance Framework are readily available to interested stakeholders, those stakeholders will continue to identify and incentivize the good behavior, resulting in a cycle of continuous improvement through positive reinforcement.
4. **Copper Mark's value add is rigorous validation processes.** One element of a ToC is to acknowledge what is not part of the cause-and-effect chain. Responsible practices are implemented by the copper producers that participate in the Copper Mark. The Copper Mark aims to provide rigorous standards, assurance, and capacity building to validate those practices, recognize and measure participants' progress over time. For example, while The Copper Mark sets the expectation for pollution reduction, assesses participant implementation of that expectation, continuously monitors and reports on progress, The Copper Mark – the UK-based organization – will not be the one to substantially reduce pollution. It will ultimately be the participants, the actions of which will be validated, monitored, and reported by The Copper Mark.
5. **Different actors have responsibilities throughout the ToC to bring it to fruition.** Each element of the ToC is categorized by the actor “responsible” for its

implementation in order to bring out the desired change, meaning the actor whose behavior influences whether or not the change occurs. The actors include: The Copper Mark; Participants in the Copper Mark; NGOs/CSOs; Rights-holders; the market / investors; and the copper industry as a whole. This is further explained throughout this document.

7 Critical Issues

Methodology

Working within a multi-stakeholder working group, the Copper Mark conducted research to develop a risk matrix of key subject-matter issues related to the production, recycling, and sourcing of copper specifically. Applying a lens of probability and severity of harm / level of benefit, the working group then identified the top three critical issues. The increased demand for copper to fuel the energy transition, subsequently requiring production recycling and sourcing to rapidly expand was identified as further exacerbating the impacts related to the critical issues.

The working group acknowledged 1. That all issues are important and are managed through the Copper Mark Criteria and assurance process; 2. The some issues are already managed by a number of stakeholders and the Copper Mark's enhanced efforts may be duplicative (for example, tailings management which is a key issue is the topic of discussion in multiple fora, and while the Copper Mark engages in these efforts, it does not intend to circumvent them with new strategies and approaches); 3. Copper production is the point in the supply chain with the most potential impact, with refining and fabrication mostly occurring in low-risk jurisdiction; and 4. The efforts to understand the recycling supply chain actors and activities as they relate to environmental, social, and governance issues is still in the early stages, and therefore has been deprioritized as those initial efforts are completed.

In the Theory of Change, these issues are specifically highlighted as having their own causal chains and contributing to the intended impacts of the overall Theory of Change.

Critical Issues Defined

The critical issues are:

- **Local community engagement:** Local community engagement is cross-cutting in the mining and smelting space. It covers Copper Mark Criteria including stakeholder engagement, emergency preparedness, community health and safety, community development, artisanal and small-scale mining, security and human rights, indigenous peoples rights, land acquisition and resettlement, and cultural heritage.
- **Greenhouse gas emissions reductions:** Greenhouse gas emissions reductions spans across the value chain actors, regardless of geography or type. For this critical issue, the Copper Mark acknowledges the following shortcomings within this Theory of Change:

- Because assessments are at site-level, the collective problem of reducing GHG emissions is not accurately reflected.
- Reduction can be measured by absolute emissions or intensity (i.e., emissions per X unit of production). With the increase in production, processing, and sourcing, the absolute emissions will necessarily increase.
- The Copper Mark currently allows offsets in certain circumstances, which may dilute the absolute emissions reduced in practical terms.
- **Biodiversity:** Copper mining was identified as having the highest impact on biodiversity of any clean energy metal.¹
- **Water stewardship:** This critical issue was added to acknowledge the intensity of water use required for copper production, and the impacts that has on flow, quality and access to water.

8 Core Elements of the Copper Mark Theory of Change

In the causal chain of the ToC, there are 5 core elements:

- **Interventions:** core business activities and investments of the Copper Mark that are the impetus for change.
- **Outputs:** direct results of activities and investments of the Copper Mark.
- **Short-term outcomes:** the 5-year goal of the Copper Mark.
- **Long-term outcomes:** 6–10-year goal of the Copper Mark based on lessons learned and improved interventions over time.
- **Intended impact:** the overarching desired change of the Copper Mark interventions and activities.

Interventions (responsible actor: The Copper Mark)

The Copper Mark's interventions are broken into three main pillars. These are the three activities that most concretely demonstrate the Copper Mark's value add toward the impact and goals. While each intervention yields individual outputs, the combination is what results in the intended outcomes. A Copper Mark assumption is that all three interventions are required to produce maximum impact.

¹ <https://insights.issgovernance.com/posts/copper-or-robber-supply-risks-and-esg-issues/#:~:text=According%20to%20recent%20studies%2C%20copper,as%20the%20second%20most%20impactful.>

Standardization

The baseline of the Copper Mark is the standards its participants are required or encouraged to adhere to and implement. This includes the Risk Readiness Assessment Criteria, the Joint Due Diligence Standard for Copper, Lead, Nickel and Zinc, the Chain of Custody Standard (under development) and the SDG concept (under development). These standards build on best international practice to ensure credibility, consistency, and clarity.

Assurance Framework

Assurance is the process to validate adherence to the requirements set out in the standards. At the core of the Copper Mark is a high quality assurance process. A core principle of The Copper Mark is to recognize as “equivalent systems” where they match and meet the Copper Mark Criteria.

Supporting the Assurance Process are the associated claims. The Copper Mark has clearly articulated the claims that a participant, partner, or other stakeholder may make in relation to the Copper Mark.

Finally, the Assurance Process is complemented by a Grievance Mechanism, with a stated purpose to ensure that grievances raised with the Copper Mark are handled in a timely, comprehensive, consistent, transparent, and effective manner. It is intended to allow Copper Mark stakeholders to raise concerns, have these investigated and provide remedy where rights are violated. The Grievance Mechanism also contributes to the continuing learning of the organization and the Assurance Framework in particular.

Stakeholder Engagement and Leadership Strategies

Stakeholder Engagement and Leadership Strategy interventions can also be referred to as enabling tools. This pillar is vital in ensuring impact where the two core interventions require additional measures. Through education, training, on-the-ground projects and partnerships, the Copper Mark goals can extend to a broader range of stakeholders up and down the supply chain, throughout communities, and across the globe.

Outputs

The outputs of the three pillars have already been touched upon in their description. The outputs depend on the assumption that the interventions are robust, which relies on the interventions themselves as well as the foundational elements of good governance and stakeholder participation.

- Standards that are accepted as credible in defining responsible production practices: As a result of standardization. Results in changed behavior of NGOs / CSOs.

- Recognition between standards that creates efficiencies and diminishes audit fatigue: As a result of standardization and the Assurance Process. Results in changed behavior of Copper Mark participants.
- The market and investment community requires responsibly produced and sourced principal covered materials: there are incentives not only for initial participation but for continuous improvement and growth over time. Results in changed behavior of market / investors.
- Reliable, consistent, verified environmental, social, and governance performance data allowing for trust, accountability, and enforcement of responsible production in the principal covered metals industries: As a result of standardization and the Assurance Framework. Results in changed behavior of NGOs / CSOs.
- Measurable improvements implemented by supply chain actors: As a result of the Assurance Framework and stakeholder engagement and thought leadership. Results in changed behavior of Copper Mark participants.
- Partnerships that contribute to positive legacies: As a result of capacity building. Results in changed behavior of rights-holders.

Short-term Outcomes

In the short-term outcomes, the Copper Mark assumes a chain of events that promotes gradual change in behavior and visible improvements on the ground. As the Copper Mark framework and sphere of influence expands in the next 5-years, the following short-term outcomes are expected:

- Local community engagement
 - Rightsholders actively participate in meaningful stakeholder engagement processes.
 - Participant grievance mechanisms and access to remedy are strengthened.
- Greenhouse gas emissions reductions
 - Increase circularity and recycling of materials which emit fewer GHG emissions than the alternative.
 - Increase transparency in supply chains to inform supply chain actors of progress / shortcomings in meeting targets.
- Biodiversity
 - Reduce pollution and waste that that negatively impacts biodiversity and ecosystems functions.
 - Increase efforts toward restoration and sustainable consumption of biodiversity.

- Increase transparency in supply chains to inform supply chain actors and stakeholders of progress / shortcomings in meeting targets.
- Water
 - Reduce water consumption and increase water efficiency.
 - Reduce discharge chemicals, wastes, facilities, and other pollutants from operational activities into water sources.

Long-term Outcomes (responsible actor: copper industry)

The long-term outcomes allow space for the Copper Mark to grow in reach and uptake. The quantified objectives for each element are further outlined in the M&E Methodology. Overall, the Copper Mark understands that the primary goal is to encourage the majority of principal covered metals to be produced, recycled and sourced by responsible actors. This may be fewer, larger actors. This also accounts for the difference in terminology related to “substantial” changes in the mitigation pathway, which assumes more uptake and the less-ambitious changes in the positive contribution pathway, which assumes a more limited uptake.

The long-term outcomes are defined through the critical issues as:

- Local community engagement: measured by rightsholders confirming that conditions improve for people, ecosystems, and the local environment.
 - Respect people and communities related to metal supply chains (respect rightsholders), and remedy rightsholders where rights are violated.
 - Equitable access to land, water, and other natural resources
 - Contribute to economic and social development for the people and communities related to covered metal supply chains, measured through opportunities for sustainable, inclusive, decent livelihoods.
- Greenhouse gas emissions reductions: measured by the indicator that by 2035, 50% of the copper produced is by sites that are assured as on track to reduce emissions and meet the goals of the Paris agreement.
 - Protect the people and the environment by slowing / stopping the effects of climate change. Note this is a long-term goal for both greenhouse gas reduction and biodiversity.
 - Developing lasting solutions to contribute to the green transition without the means outweighing the benefits.
- Biodiversity: measured by the indicator that by 2035, 50% of the copper produced comes from sites that are assessed as on track for meeting no net-loss with an ambition for net gain.
 - Protect the people and the environment by slowing / stopping the effects of climate change. Note this is a long-term goal for both greenhouse gas reduction and biodiversity.

- Restore and maintain ecosystems to sustain a healthy planet.
- Water: measured by the indicator that by 2035, 50% of the copper produced, recycled, and sourced comes from sites that avoid, minimize, rectify, and compensate for adverse impacts from operational activities on water balance, flow, quality and access, and the needs of other water users and wildlife.
 - Maintain water balance, flow, quality, and access to water by other users and wildlife.
 - Restore waterbody ecosystem services.

The details and metrics used to monitor and measure progress on the TOC is further discussed in the M&E System.