International Workshop Agreement

IWA 45

Sustainable critical mineral supply chains

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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International Workshop Agreement IWA 45 was approved at workshops hosted in Tokyo (Japan), New York (USA) and a virtual workshop held in February 2024, April 2024 and May 2024 respectively.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Critical minerals are vital to the production of materials and equipment needed to deliver clean energy technologies. This means that we are increasingly relying on critical mineral supply chains, from mine to product, for the transition to net-zero emissions.

Simultaneously, we must ensure that hard-won environmental gains in critical mineral supply chains are not lost in the rush to deliver low, and zero, emission technologies, nor are the rights of communities and Indigenous people overlooked due to the new imperatives.

That presents the world with a challenge – to ensure a reliable supply of the materials needed to tackle climate change, while offering environmental and social protections which preserve human rights.

Sustainability frameworks, guidelines and standards are central to achieving these goals. They provide best-practice for the mining industry and corporations throughout the critical mineral supply chain as well as guidance for policy-makers seeking to ensure a responsible and reliable approach.

The ISO's International Workshop Agreement on Sustainable Critical Minerals Supply Chains (IWA 45) has been developed by a group of stakeholders from the mineral supply chain and designed for stakeholders in the critical mineral supply chains, who need such a framework to assess their operations and measure sustainability.

NOTE A list of IWA 45 participants is provided in Annex B.

This document is designed to assist those stakeholders in understanding the existing landscape of frameworks, guidelines and standards currently available and to determine which best suit their needs.

A survey was undertaken of a range of stakeholders across geographic regions to identify relevant frameworks, guidelines and standards that organizations are already using to assess and improve the sustainability of critical mineral supply chains.

This document examines governance structures, sustainability topic areas and requirements within existing frameworks. It details 30 frameworks, guidance and standards relevant to the sector. While there was no attempt to determine the effectiveness of any of these instruments in improving sustainability, this document provides an objective overview of the scope of governance, assurance processes and other factors. It also pays particular attention to provisions and recommendations held in common across the frameworks, as well as how they differ.

IWA participants identified many areas that should be considered in determining how extensively a standard covers sustainability issues, while assessing how existing frameworks approached the management of a wide variety of environmental, social, labour, human and Indigenous rights and transparency factors.

They concluded that, while standards and frameworks have a vital role to play in ensuring a sustainable critical mineral supply chain, it is important to avoid developing new ISO standards that duplicate or conflict with existing sustainability standards.

The IWA participants found no market need for another standard in the upstream or midstream segments of the minerals and metals sector. Instead, future ISO work is needed to explore the gaps that exist within the downstream standards landscape and how to best address them.

Above all, it is vital to engage with developing countries, Indigenous peoples and communities impacted by mining, to encourage more stakeholders to participate in developing international sustainability standards, to promote equal, shared governance and decision-making with rights holders and civil society organizations, while boosting training and building capacity for vulnerable populations.

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Sustainable critical mineral supply chains

1 Scope

This document surveys the range of existing sustainability frameworks available for critical mineral supply chains to aid understanding and assist in improving an organization's sustainability outcomes. It includes an analysis of:

— the requirements contained in existing sustainability guides or frameworks and where these tools are similar and where they diverge;

— sustainability topic areas within existing guides and frameworks that have been accepted in different regions and jurisdictions.

This document did not assess the effectiveness of existing standards or frameworks in improving the sustainability performance of their users or how performance was assessed.

The results show that the existing sustainability frameworks are extensive and varied in the upstream supply chain. The analysis undertaken as part of this document will help inform the development of potential future ISO work programs and standards development, without duplicating or conflicting with existing frameworks.

This document can also be used by organizations outside of ISO with respect to understanding available sustainability standards or frameworks.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
air pollutant
material emitted into the atmosphere either by human activity or natural processes that adversely affects humans or the environment

[SOURCE: ISO 18158:2016, 2.1.2.1]

3.2
circular economy
economic system that uses a systemic approach to maintain a circular flow of resources, by recovering, retaining or adding to their value, while contributing to sustainable development

Note 1 to entry: Resources can be considered as concerning both stocks and flows.

Note 2 to entry: The inflow of virgin resources is kept as low as possible and the circular flow of resources is kept as closed as possible to minimize waste, losses and releases from the economic system.

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