



Environmental management and circular economy — Sustainability and traceability of the recovery of secondary materials — Principles, requirements and guidance

Management environnemental et économie circulaire — Durabilité et traçabilité de la valorisation des matières secondaires — Principes, exigences et recommandations

ISO 59014

**First edition
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This document was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment*, in collaboration with Technical Committee ISO/TC 323, *Circular economy*.

This first edition cancels and replaces IWA 19:2017, which has been technically revised.

The main changes are as follows:

- extended focus going beyond the recovery of metals from recoverable resources;
- inclusion of operational requirements;
- proper recognition of subsistence activities;
- alignment with most recent developments in the ISO 59000 family of standards;
- consideration of life cycle perspective for achieving the best environmental and social outcome from the recovery of secondary materials;
- comprehensive focus on circular economy with the inclusion of a pathway methodology for the recovery of secondary materials.

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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0.1 Background

The global economy is “linear” as it is mainly based on extraction, production, use and disposal. This linear economy leads to resource depletion, biodiversity loss, waste and harmful losses and releases, all of which collectively are causing serious damage to the capacity of the planet to continue to provide for the needs of future generations.^[18] Moreover, several planetary boundaries have already been reached or exceeded.

There is an increased understanding that a transition towards an economy that is more circular, based on a circular use of resources, can contribute to meeting current and future human needs (welfare, housing, nutrition, healthcare, mobility, etc.). Transitioning towards a circular economy can also contribute to the creation and sharing of more value within society and interested parties, while natural resources are managed to be replenished and renewed and in a sustainable way, securing the quality and resilience of ecosystems.

Organizations recognize many potential reasons to engage in a circular economy (e.g. delivering more ambitious and sustainable solutions; improved relationships with interested parties; more effective and efficient ways to fulfil voluntary commitments or legal requirements; engaging in climate change mitigation or adaptation; managing resource scarcity risks, increasing resilience in the environmental, social and economic systems), while contributing to satisfying human needs.

The ISO 59000 family of standards (see [Figure 1](#)) is designed to harmonize the understanding of the circular economy and to support its implementation and measurement. It also considers organizations, such as government, industry and non-profit, in contributing to the achievement of the United Nations (UN) Agenda 2030 for Sustainable Development.^[19]

ISO 59004, *Circular economy — Vocabulary, principles and guidance for implementation*

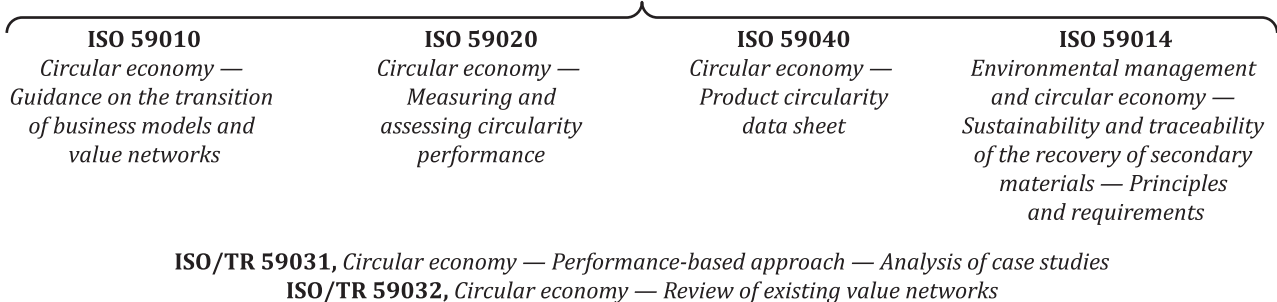


Figure 1 — ISO 59000 family of standards

Responsible, efficient and sustainable management of recoverable resources is a key action for organizations to keep more materials in a circular economy. This action is needed to respond to existing risks and impacts and growing consumer interest about the materials used, and to prevent the shifting of environmental or social impacts between life cycle stages, organizations, communities or countries. This specifically applies to organizations involved in activities and processes leading to the recovery and further use of secondary materials.

The management of waste that is considered a recoverable resource represents an important economic opportunity, while also contributing to reducing the demand for and extraction of virgin resources. The processing and subsequent use of secondary materials prevents the disposal of a resource that can provide value to another interested party(ies) and, thus, supports achieving environmental goals and improving the situation in many regions of the world.

However, inadequate waste management, poor working conditions, and lack of health and safety procedures pose risks and impacts to human health and the environment. These risks often go unidentified or ignored, particularly affecting workers in subsistence activities, communities, and the environment.

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recycled material is sustainably produced.

Traceability plays an important role in the circular flow of resources as it allows for the flow of recoverable and recovered resources, including secondary materials, to be tracked and accounted. The ISO 14000 family of standards supports efforts to identify the risks and opportunities of the preparation and use of secondary materials and to provide harmonized approaches for their environmental management. A key element is the link of environmental and social impacts in the life cycle of materials.

This document aligns with the ISO 14000 family of standards on environmental management (see [Figure 2](#)) and can also contribute to enhancing the harmonization system codes (HS code) for secondary materials.

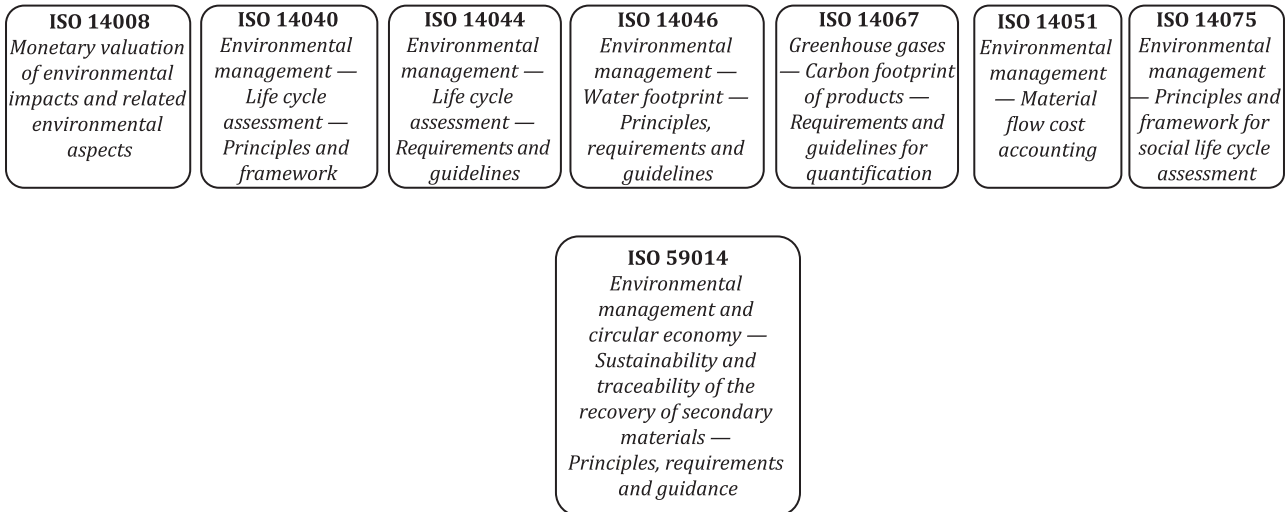


Figure 2 — ISO 14000 family of standards

0.2 Purpose and the outline of this document

This document provides principles, requirements and guidance to any kind of organization seeking to recover secondary materials. It describes the main terms and definitions (see [Clause 3](#)), principles (see [Clause 4](#)), activities, processes and organizations (see [Clause 5](#)), operational requirements (see [Clause 6](#)), organizational requirements (see [Clause 7](#)) and traceability requirements (see [Clause 8](#)).