The geopolitical influence on minerals standardization

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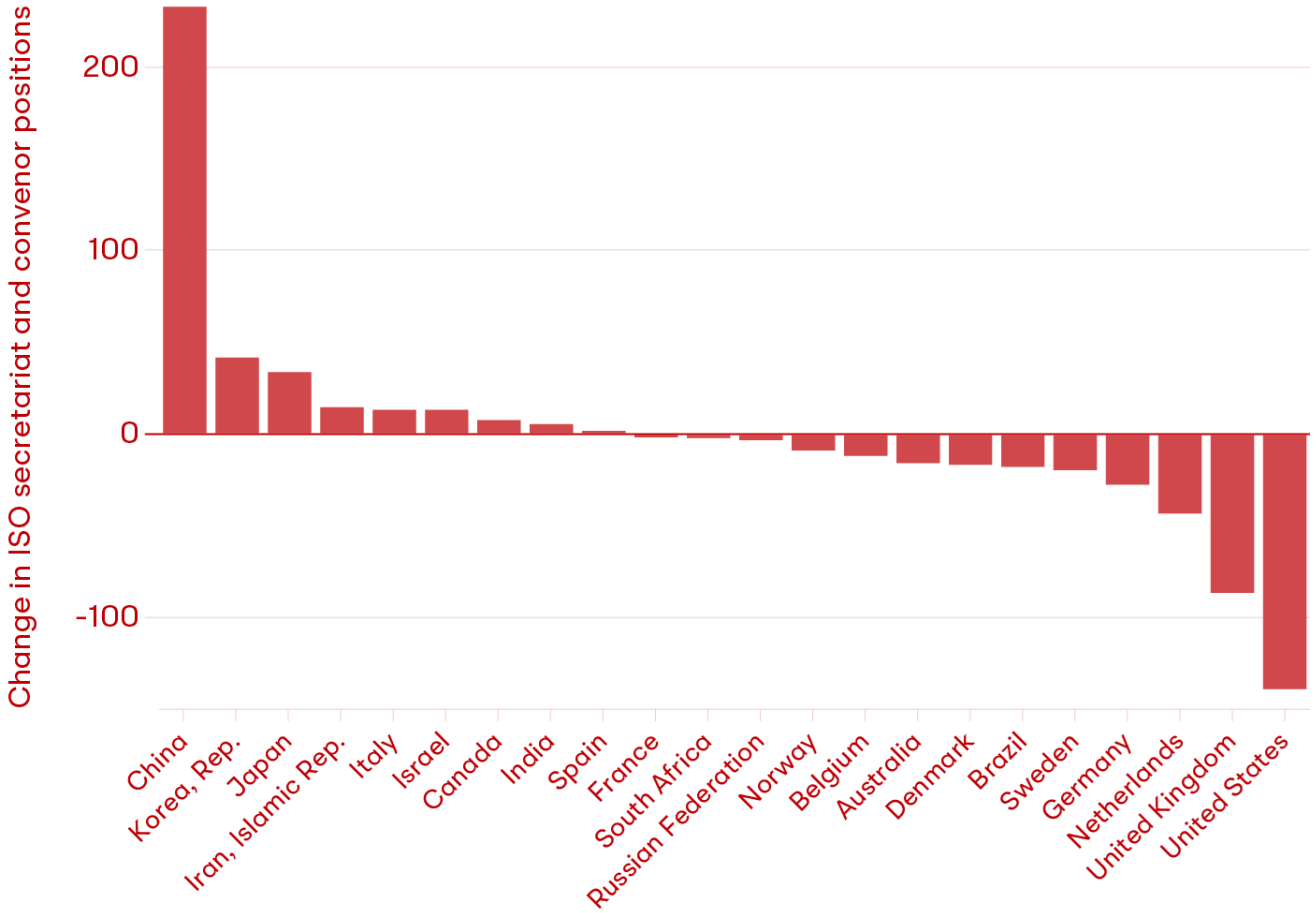
ISO leadership positions change, 2013–2023



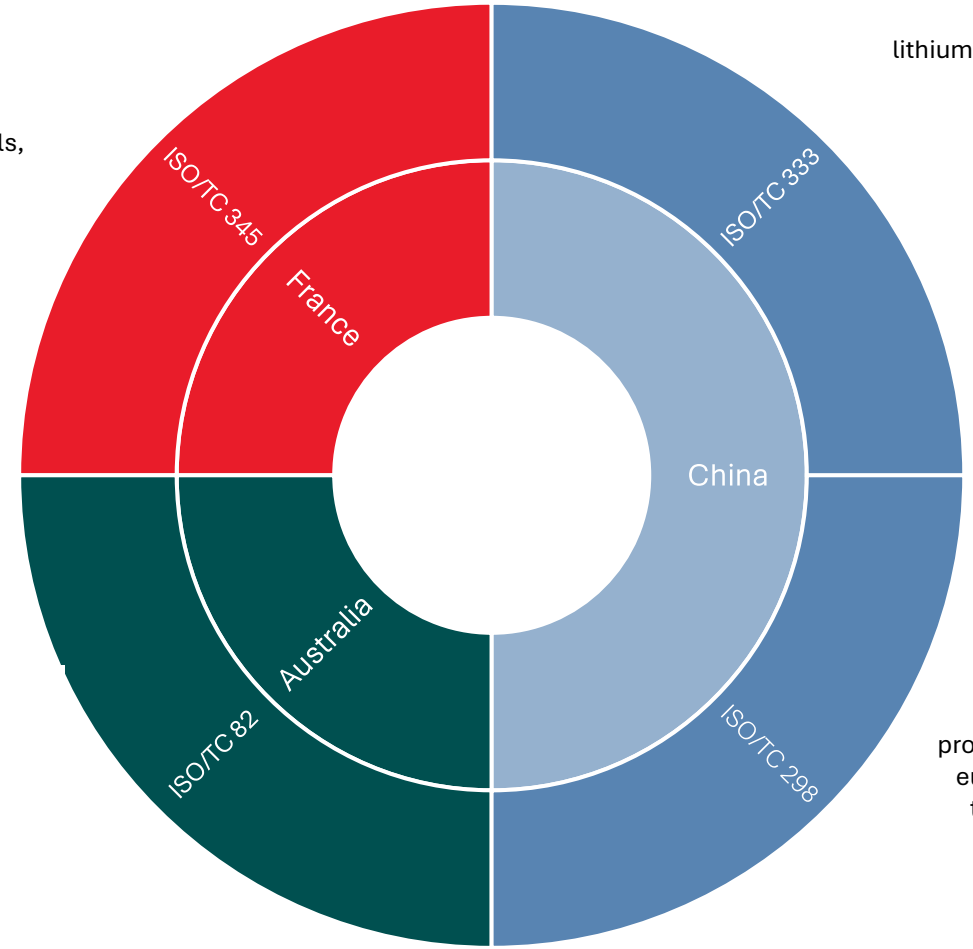
- **China is rapidly expanding** its participation and leadership in ISO technical committees.
- China **leads in participation** (778) and ranks second in terms of secretariats (90).
- China is **highly effective in translating R&D results** into international standardization work.
- EU Member States are **falling behind.**

Source: United States Studies Centre, Standards Development Organisations in an Era of Strategic Competition, 16 December 2024.c

Leadership position within critical raw materials

antimony, beryllium, cobalt, chromium, graphite, niobium, platinum group metals, tantalum, vanadium, zirconium

lithium



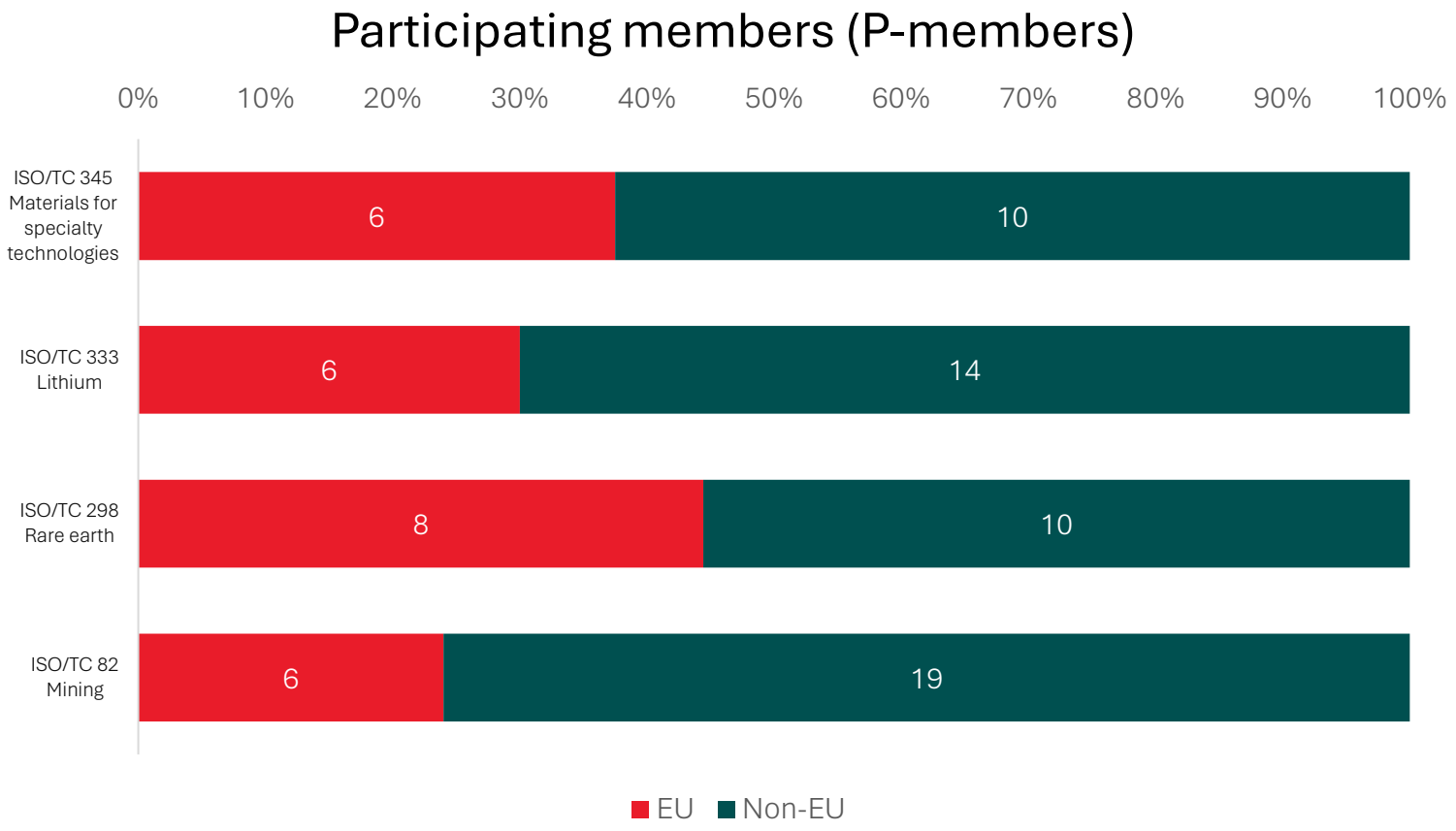
mining – including sustainability and automated and autonomous mining systems.

lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium

- **China** leads **2 of the 4** key ISO committees in the minerals domain.
- **France** leads - *as the only EU country* - **1 of the 4** relevant committees.
- **The EU has lost several leadership positions** in this field, transferring leadership responsibility to countries outside the EU.
- **Germany** has relinquished its leadership in sustainable mining and sustainable raw materials.

Source: Setting standards for critical raw materials: State of play and future prospects, Edoardo Righetti, Vasileios Rizos & Marika Moreschi, 24 January 2025.

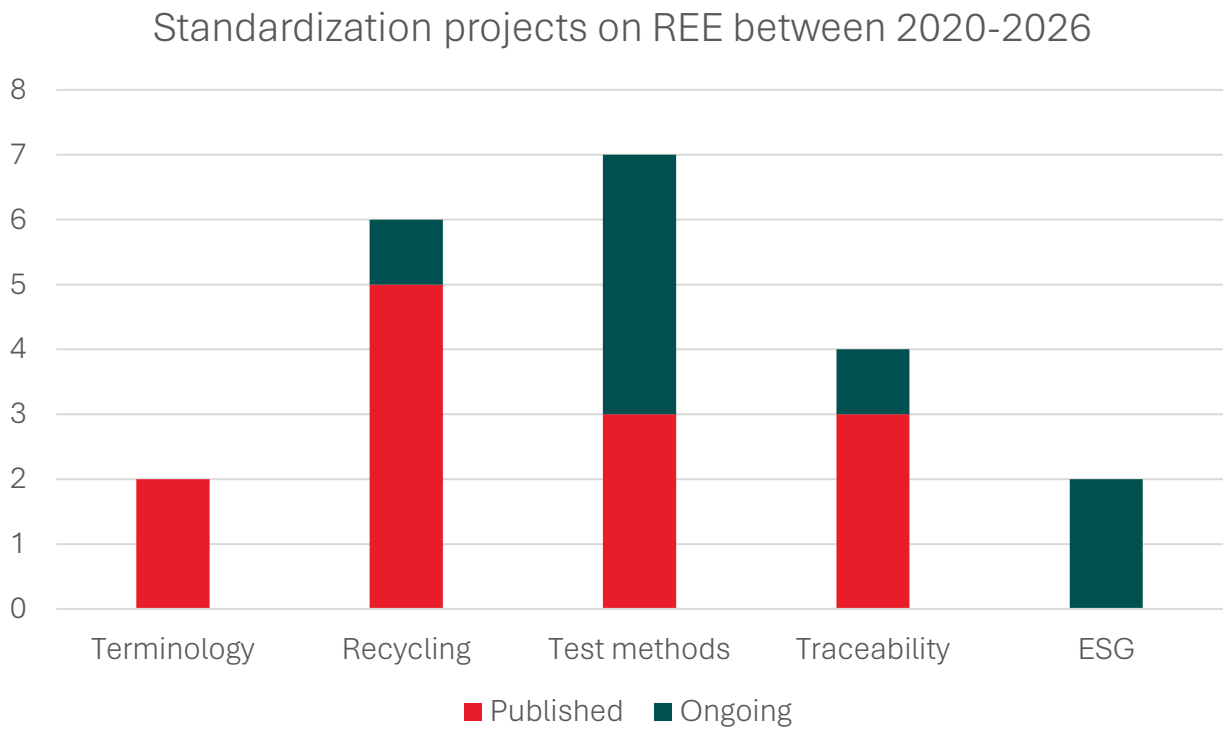
An outlook on international participation



- EU Member States constitute **a minority** in all relevant technical committees.
- EU Member States have **significantly fewer** active technical experts.
- Within ISO, each participating country has **one vote**.
- The Vienna Agreement aims to strengthen **cooperation between CEN and ISO** in relevant technical work.

Source: Setting standards for critical raw materials: State of play and future prospects, Edoardo Righetti, Vasileios Rizos & Marika Moreschi, 24 January 2025.

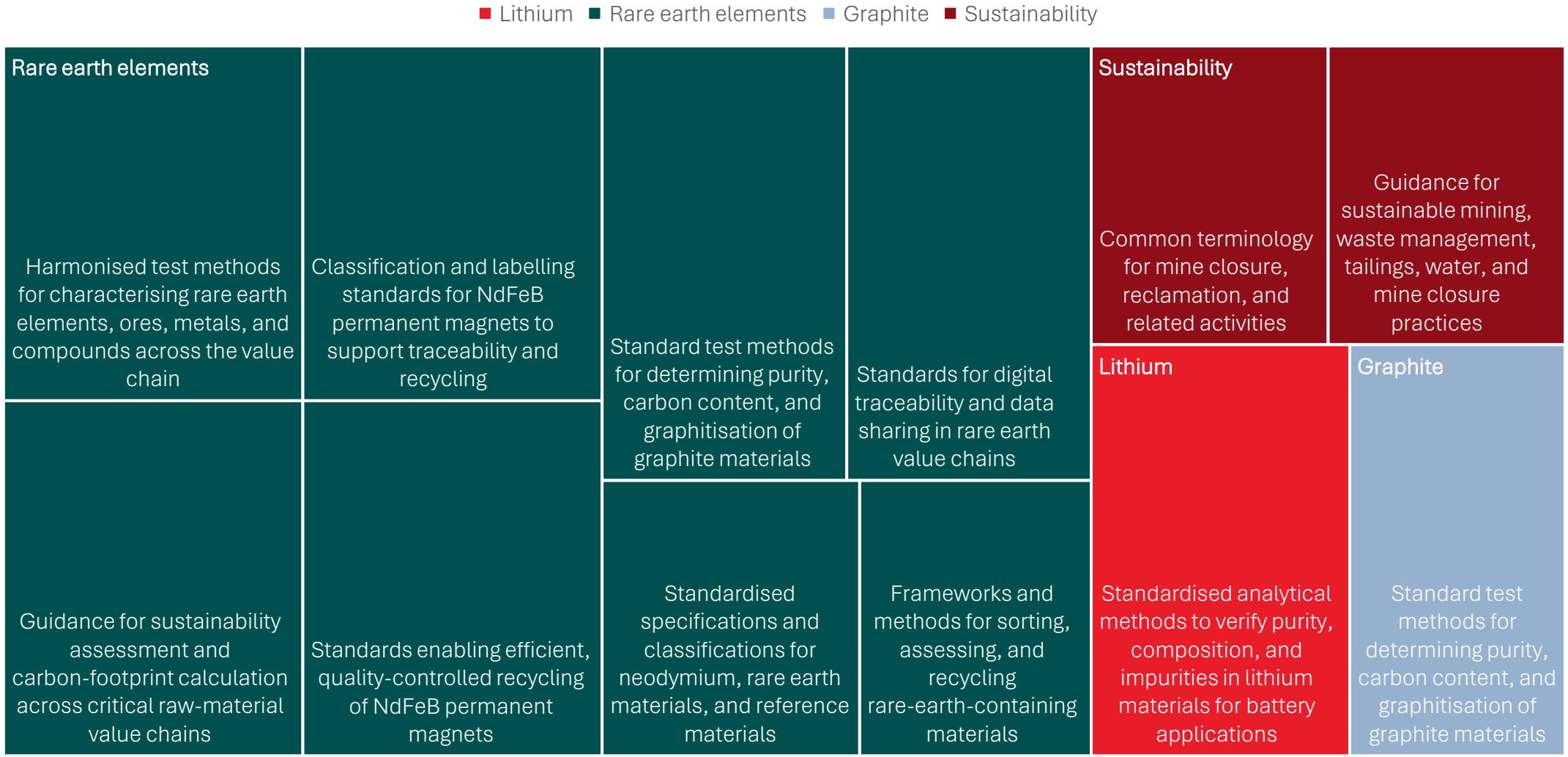
Illustrative example



- Terminology for minerals establishes a common technical and **linguistic foundation** across the value chain.
- Requirements for **measurement in waste and end-of-life products** enable improved recycling and quality assurance.
- New **analytical methods** ensure consistent determination of REE content and impurities.
- Standards for **labelling and traceability** strengthen accountability across the supply chain.

Source: ISO Metadata, ISO/TC 298 – Rare earth, retrieved from: https://www.iso.org/committee/5902483.html.

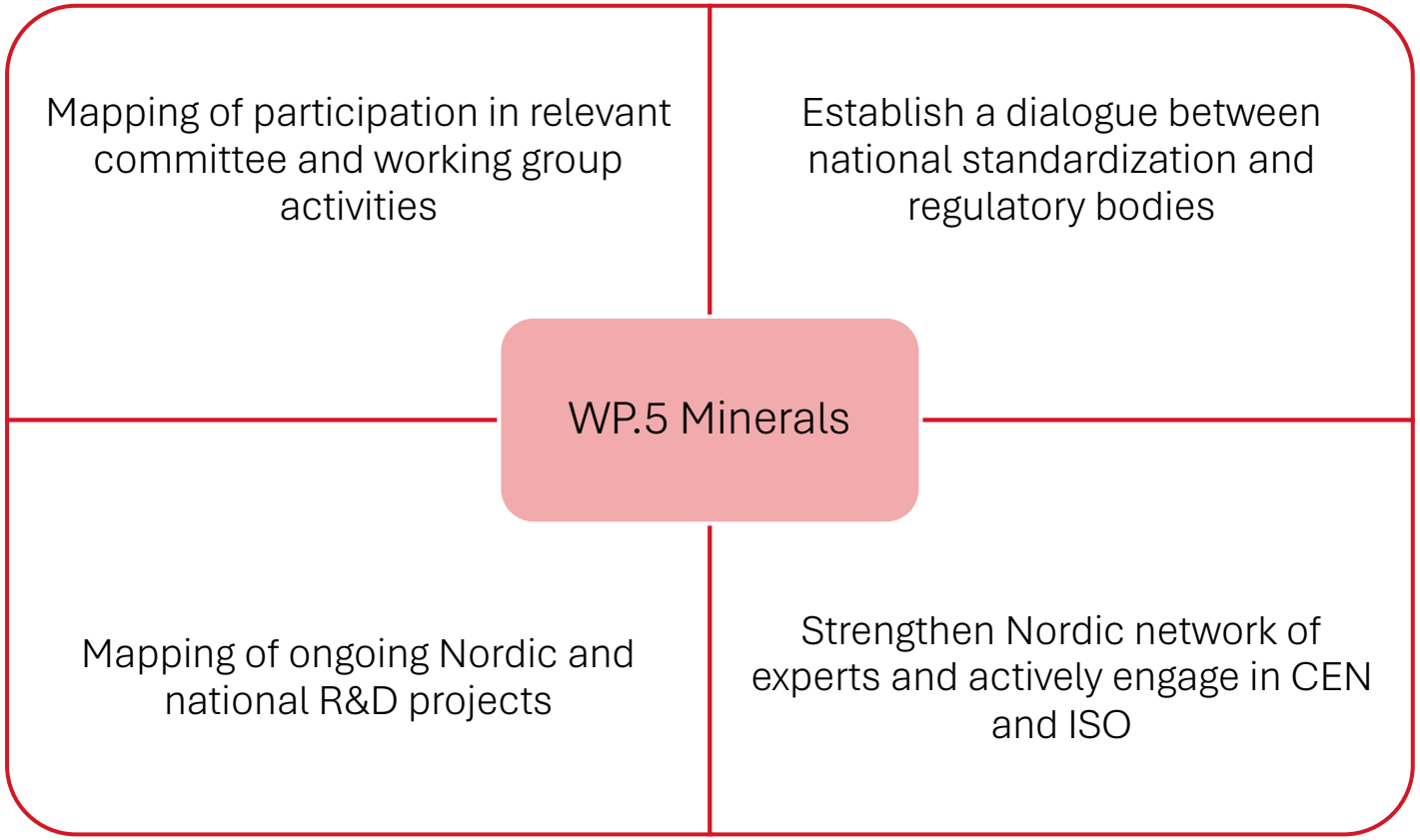
Ongoing projects in international standardization of minerals



Mapping and categorization of all ongoing mineral standardization projects 2026

Source: ISO Metadata, retrieved from: https://www.iso.org/open-data.html.

Nordic cooperation project on minerals standardization



- Nordic cooperation to highlight the role of standards in **strengthening regional competitiveness.**
- The Nordics are the **largest mining region in Europe**, with Sweden being the largest mining nation.
- Nordic countries contribute **fewer active experts** than larger ISO members
- Financed by the Nordic council of ministers

Source: Standard Norge, The Nordic Region Sets the Standard. Retrieved from: https://standard.no/en/standardisation/the-nordic-region-sets-the-standard/

Funded by the Nordic Council of Ministers

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Why the Nordics must engage in standardization

CRMA Article	What the regulation requires	Where standards are critical	Business impact
Art. 1(1), 1(2)(a)(c)	Secure supply, circularity, free movement	Common terminology, testing and specification standards	Lower compliance cost, legal certainty across EU
Art. 5–6	Strategic projects & EU capacity benchmarks	Comparable performance and sustainability metrics	Stronger project credibility, funding readiness
Art. 20	Monitoring and supply-risk assessment	Standardised data, indicators, reporting methods	Inclusion in EU preparedness mechanisms
Art. 26–29	CRM recovery, recycling and waste treatment	Sampling, recovery-rate and quality standards	Tradable secondary raw materials market

Source: Regulation (EU) 2024/1252 of the European Parliament and of the Council – Critical Raw Materials Act, retrieved from: EUR-Lex – Regulation (EU) 2024/1252.

"Sweden leads European standardization work on the sustainable production of mineral and metal raw materials from both primary and secondary sources

[…providing technical input with a direct link to the European Commission and supporting the implementation of the Critical Raw Materials Act (CRMA).]"

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The consequences of not being at the table

Loss of market access

- Non-alignment with standards underpinning trade agreements increases the risk of trade barriers and loss of market access

Reduced regulatory readiness

- Limited participation hampers the ability to translate EU legislation – *such as the CRMA and the Batteries Regulation* – into timely and effective compliance

Missed innovation and R&D spill-overs

- Not participating reduces the ability to translate research results into globally accepted technical solutions

Risk of misaligned quality thresholds

- International analytical standards may lock in test-method thresholds that fall above or below European quality and sustainability ambitions

Lower influence on sustainability requirements

- Sustainability, traceability and ESG-related standards shaped by others could impose higher compliance costs

Reduced industrial competitiveness

- Limited engagement reduces Nordic influence over rule-setting in global mining and minerals markets

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Thank you for your attention!

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