

#4 Standards for Critical Raw Materials

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Key Takeaways

- The EU and China have competing economic, technological, and sustainability goals, leading to increasing tensions over access to critical raw materials (CRMs). The EU is more dependent on imports, while China holds a structural advantage through resource control and supply chains.
- Standard setting has evolved from a technical process into a strategic geopolitical tool, enabling countries to create dependency and “lock-in” advantages. China leverages its position in technology and resources to shape standards in its favor.
- Through long-term strategies like Standards 2035, China aims to become a global standard setter, supported by strong state coordination and influence in international organizations. Its quasi-monopoly in key sectors allows Chinese standards to spread internationally.
- While Chinese influence in organizations like ISO, IEC, and ITU is significant, the EU still maintains strong representation. However, influencing standards in emerging technologies and climate-related sectors is crucial for maintaining competitiveness.
- The Netherlands should treat standardization as a strategic issue, develop a national strategy, and strengthen EU cooperation to counterbalance Chinese influence. Promoting European standards and coordination is key to protecting long-term economic and regulatory interests.

Recommendations

1. The Netherlands should recognize standardization as a strategic geopolitical tool rather than a purely technical process and codevelop a coordinated national standardization strategy involving stronger cooperation between ministries.
2. Closer collaboration with NEN and increased investment in Dutch representation in international standardization bodies are essential. This will improve access to information, strengthen influence, and help counter China’s coordinated efforts.
3. The government should stimulate public-private partnerships and encourage companies to actively engage in standard setting.
4. A coordinated EU-level approach is crucial to counter the global spread of Chinese standards, especially through initiatives like the Belt and Road Initiative. The Netherlands should promote strong European standards aligned with EU values and leverage existing frameworks to secure long-term influence.

Executive Summary

Similar yet competing economic, technological and sustainable goals set by the European Union (EU) and China point to increasing global tensions over access to critical raw materials (CRMs). The EU and the Netherlands aim to maintain economic competitiveness in a sustainable way while achieving climate neutrality by 2050. China has set similarly ambitious long-term goals toward 2049, focusing on technological leadership and strategic economic influence. Unlike the EU, which relies heavily on imports, China benefits from control over key resources and value chains, placing the EU in a relatively disadvantageous position in the future competition for CRMs.

One strategic instrument gaining importance in this geopolitical competition is standard setting. Traditionally viewed as a technical tool to ensure interoperability, standardization has become increasingly politicized. Actors with strong market positions can shape standards to their advantage, benefiting from first-mover advantages, technological expertise and global product reach. Technical standards are especially significant due to their “stickiness,” creating long-term dependencies through production systems and supply chains.

China has identified standard setting as a national priority through coordinated strategies such as *Standards 2035* and *Main Points 2020*. Its strong position in both raw material extraction and related technologies enables it to introduce standards that may become internationally dominant due to limited competition. At the same time, China is increasing its role within international standardization bodies such as the ISO. Its centralized, state-driven approach allows coordinated action by companies and institutions, often supported by greater access to information than competitors.

Chinese influence within major international standardization organizations is significant, though not yet dominant. EU countries continue to have strong representation in bodies such as ISO, IEC and ITU. However, standards related to emerging digital and climate technologies are of particular strategic importance, requiring active European engagement. While the EU is also active in value-based initiatives such as responsible mining, China is largely absent in these areas.

For the Netherlands, this requires a shift in perspective: standardization should be treated as a strategic policy instrument rather than a purely technical process. Developing a national standardization strategy and strengthening coordination between ministries is essential. Cooperation with organizations such as NEN and improved information exchange can further enhance effectiveness.

At the same time, a coordinated European approach is crucial to mitigate risks associated with Chinese standard-setting activities. EU cooperation can help counter the international spread of Chinese domestic standards, particularly through initiatives like the Belt and Road Initiative (BRI). The Netherlands should promote stronger European alignment and support the development and adoption of European standards, ensuring they reflect European technologies, interests and values.