SUMET - Urban Sustainability Responsibilities in the Mobility Electrification – Energy Transition Mineral Demand Nexus

About the Research

SUMET supports sustainable and responsible urban mobility electrification by exploring its nexus with energy transition mineral demand. Energy transition minerals are used in technologies for the energy transition, including batteries for electric cars, e-bikes and e-scooters. Examples of energy transition minerals include lithium, cobalt, nickel, copper or aluminium. Some energy transition minerals are classified as critical raw materials[1].

SUMET addresses sustainable and responsible urban mobility electrification by considering its global impacts. Mobility electrification increases demand for transition minerals. The value chains of these minerals harbour complex socio-environmental and geopolitical issues.

SUMET studies how those shaping urban mobility electrification understand:

- transition mineral demand
- the socio-environmental and geopolitical dynamics of transition mineral value chains
- the resulting urban sustainability responsibilities.

SUMET promotes shared reflection among urban planners, urban mobility entrepreneurs, raw material sector experts and other stakeholders. It identifies solutions, tools, and ideas, and offers networking and collaboration opportunities to support sustainable and responsible urban mobility electrification.

Purpose

SUMET expands urban capacities and identifies solutions to address urban sustainability responsibilities in the nexus between energy transition mineral demand and mobility electrification. SUMET:

- characterises and contrasts expert and stakeholder views
- facilitates debate on the impacts of energy transition mineral demand for mobility electrification and appropriate urban responses
- identifies solutions, design methods and replicable good practices
- highlights policy, regulation, innovation, research and capacity development opportunities
- fosters sustainable impact via networking and research proposals.

[1] Transition minerals refers to minerals used in energy transition technologies, regardless of whether the minerals exhibit supply constraints or risks. In contrast, critical raw materials are defined by specific countries or economic blocks based on economic, geopolitical and security significance and supply chain risks. Different jurisdictions can list different minerals as critical. Some transition minerals are included in critical raw materials lists. However, others are often excluded because they exhibit lower supply chain risks. See EITI, 2022, p. 17.

Activities and Schedule

The project runs from 2024 to early 2027:

	Activity
2024-27	Review of scholarly, policy and practitioner literature. Interviews with urban planners, urban mobility entrepreneurs, raw materials sector experts, and urban mobility electrification stakeholders Seminars and workshops
2025-27	Academic publications Policy briefs
2026-27	Follow-up research proposal Professional network to sustain impact

Implementing Partners

SUMET is implemented by the University of Eastern Finland's RESOURCE Research Community, with the collaboration of the Maastricht Sustainability Institute at Maastricht University.

SUMET currently collaborates on urban case studies with the Oslo Agency for Climate, Norway; the City of Tampere, Finland; and the City of Madrid, Spain.

Interested municipalities and urban regions are encouraged to contact Diana Arbelaez (see **Contact**) to explore collaboration opportunities.

Ethical Standards and Voluntary Participation

SUMET adheres to the European Code of Conduct for Research Integrity. Research participation is voluntary. To speak to someone from the project, see **Contact**.

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