LCA in mining - Legal and international outlook

Swedish Mining Research & Innovation Days

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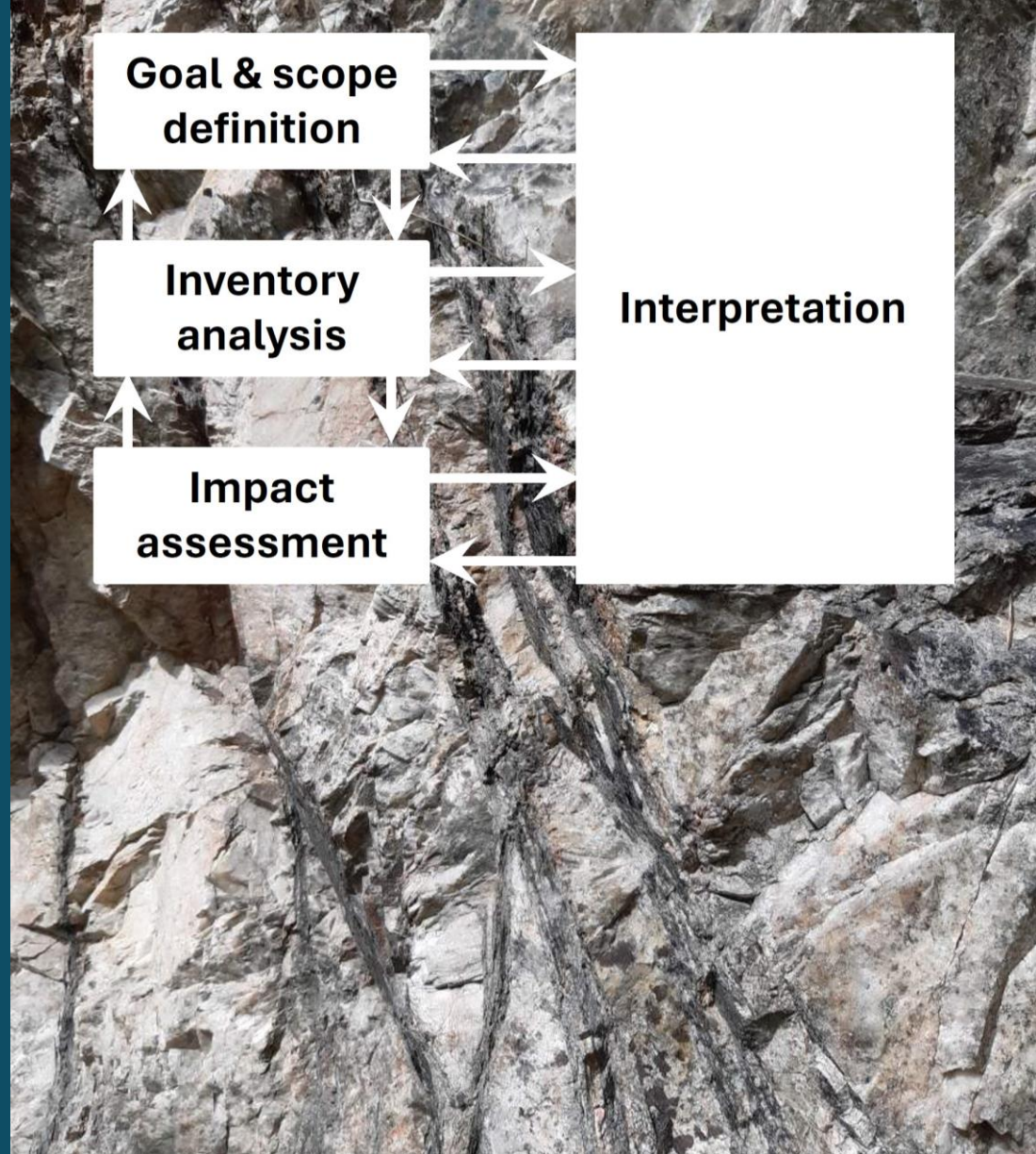

Vision

Vision: Strengthen Sweden's mining and extraction industry in light of future environmental requirements.

- The EU's new and upcoming legislation imposes increasingly stringent demands to measure and report on environmental impact – often connected to life cycle assessments (LCA).
- To meet these requirements and simultaneously create competitive advantages, the Swedish mining and extraction sector needs to act proactively.

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Project summary

Goal: This project aims to provide the industry with a clear overview of current and future legislation, with a particular focus on LCA.

- We will examine both Swedish legislation and EU directives as well as include international requirements.
- The outcome will be a knowledge base that strengthens Sweden's position in the European legislative process – from updates of regulations to new delegated acts.

LCA in mining –
a legal and international outlook

- Performed by RISE
- Bsed on litterature study and stakeholder dialogue
- The project runs between 23 Jan-18 Jul 2025
- A strategic project financed by SIP SMI which is co-funded by Vinnova, Formas och Energimyndigheten

SWEDISH MINING INNOVATION https://www.swedishmininginnovation.se

Project set up

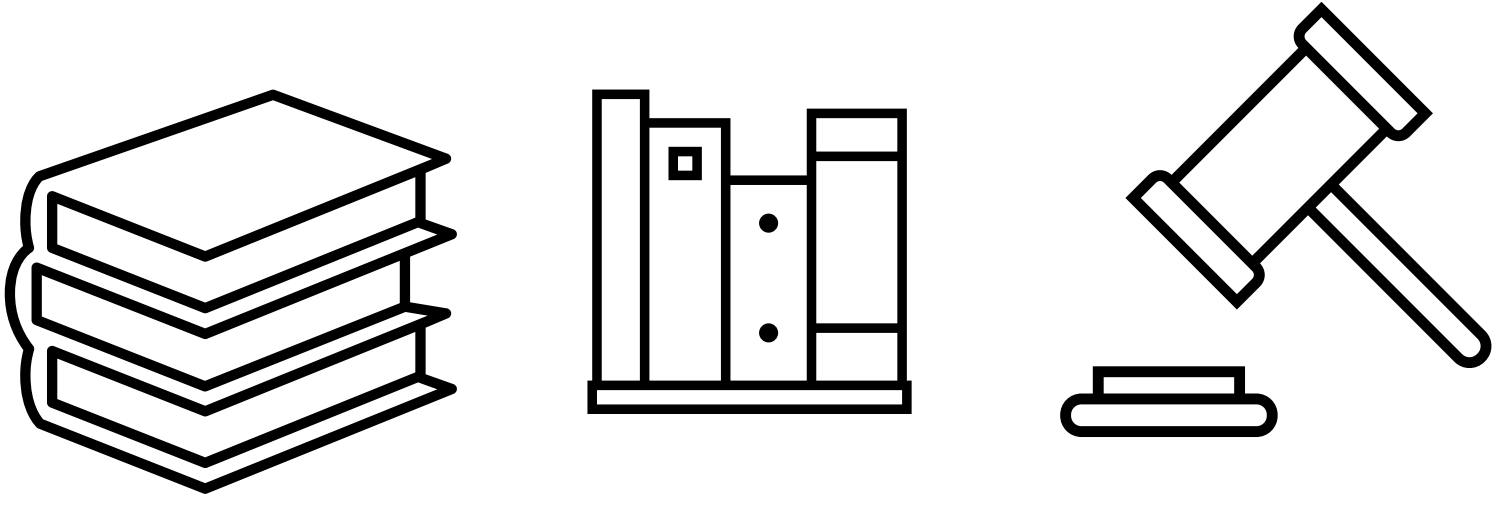
Work packages:

- Project coordination and dissemination
- Overview of legal frameworks and relevant policies
- International outlook

Deliverables:

- Report (July 2025)
- Webinar (June 2025)

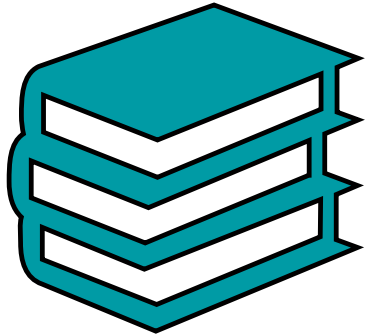
Overview of legal framework and policies



Selection criteria

- Applicable (or to be applicable) in Sweden, EU
- Focus on new and coming legislations/initiatives
- Focus on products and/or climate aspects
- Related to mining and metals
- Related to important end-user applications for metals and minerals

Input gathered from reference group



Example of relevant legal frameworks

- EU Battery Regulation
- CRMA, Critical Raw Material Act
- CSRD, Corporate Sustainability Reporting Directive

  ESRS, European Sustainability Reporting Standards
- CS3D, Corporate Sustainability Due Diligence Directive,
- Empowering Consumers Directive
- Green Claims Directive
- ESPR, Ecodesign for Sustainable Product Regulation
- CPR, Construction Products Regulation
- NZIA, Net Zero Industry Act
- CBAM, Carbon Border Adjustment Mechanism
- Industrial Decarbonisation Accelerator Act (Clean Industrial Deal)
- Public Procurement Directive (Clean Industrial Deal)
- Circular Economy Act (Clean Industrial Deal)

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Example of outcome
Critical Raw Materials Act

Article 31 "Environmental footprint declaration"

- Mandatory environmental footprint declarations for certain raw materials placed on EU market
- "Three most relevant environmental impact categories accounting for the majority of the overall environmental footprint", where climate shall be one of them
- Performance classes and threshold values to be developed
- Environmental footprint declaration made available on a free-access website and easily understandable

Annex V "Environmental footprint"

- "The declared unit shall be 1 kg of the relevant critical raw material type."
- "Extraction, concentration and refining are the three life-cycle stages"
- System boundaries described

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Example of outcome
EU Battery Regulation

Article 7 "Carbon footprint of electric vehicle batteries, rechargeable industrial batteries and LMT batteries"

(d) the carbon footprint of the battery, calculated as kg of carbon dioxide equivalent per one kWh of the total energy provided by the battery over its expected service life;

(e) the carbon footprint of the battery differentiated according to life cycle stage as described in point 4 of Annex II;

(g) a web link giving access to a public version of the study supporting the carbon footprint values referred to in points (d) and (e).

4. System boundary

The following life cycle stages and the processes involved therein shall be included in the system boundary:

Life cycle stage	Processes involved
Raw material acquisition and pre-processing	Includes mining and other relevant sourcing, pre-processing and transport of active materials, up to the manufacturing of battery cells and battery components (active materials, separator, electrolyte, casings, active and passive battery components), and electric or electronic components.
Main product production	Assembly of battery cells and assembly of batteries with the battery cells and the electric or electronic components
Distribution	Transport to the point of sale
End of life and recycling	Collection, dismantling and recycling

Raw material acquisition and pre-processing

Includes mining and other relevant sources

Other

- EU Commission recommendation on Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations

  which contains

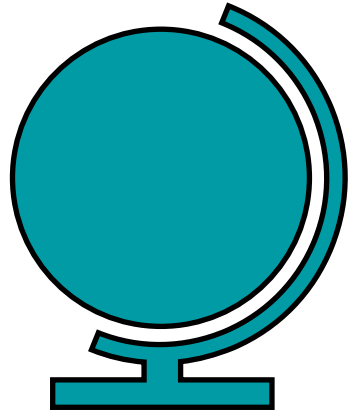
  PEF,
  Product Environmental Footprint

- EPD,
  Environmental Product Declaration
- EU Steel and Metals Action Plan

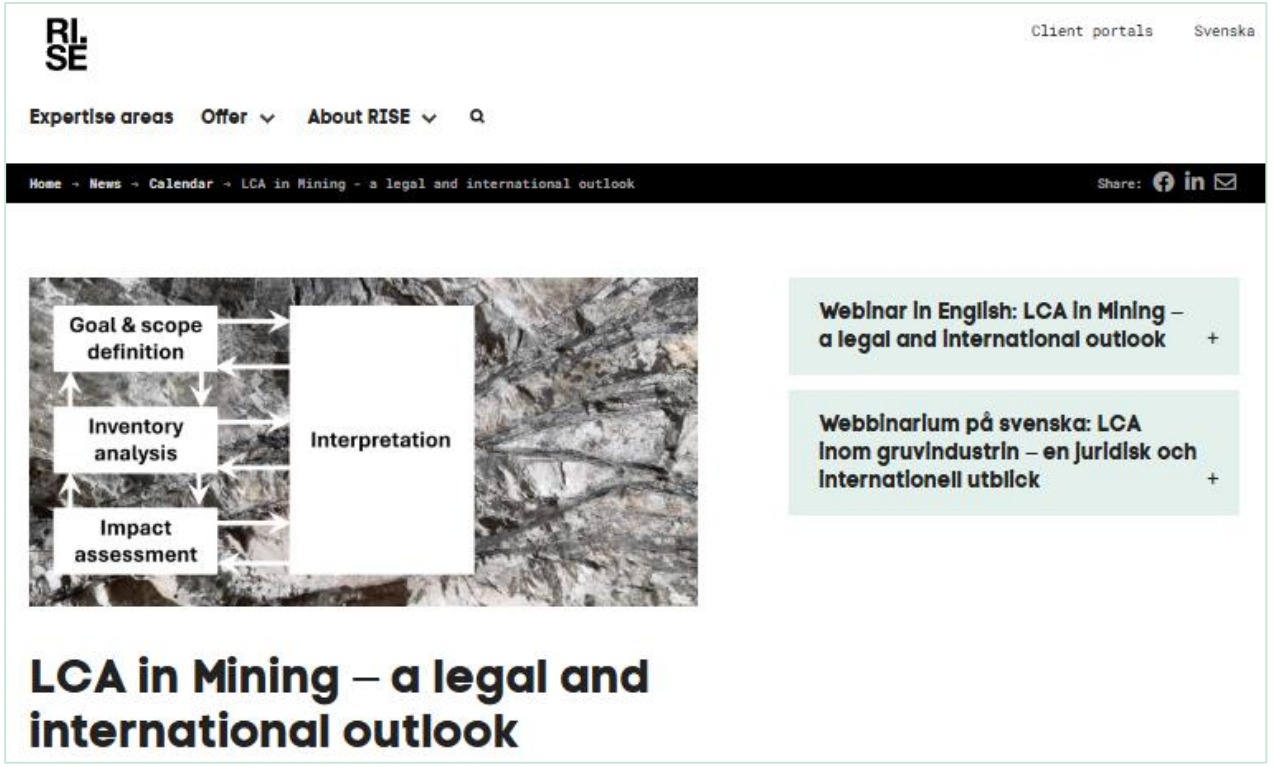
International outlook

Countries selected based on their important role in raw materials and contribution to mining development

- Australia
- Canada
- China
- Japan
- South Korea
- USA



Webinar, register now!



The outcome of the project in one hour

The same content twice:
10 June in English
17 June in Swedish

Register - RI.SE Event calendar!

Link to registration web page:
https://www.ri.se/sv/nyheter/kalendarium/lca-inom-gruvindustrin-en-juridisk-och-internationell-utblick

Thank you!

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