MICA Mineral Intelligence Capacity Analysis

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WORK PACKAGE 4

Progress June 2017

Ester van der Voet
MICA project meeting
Paris, 14 June 2017

Universiteit Leiden

WP4: METHODS AND TOOLS FOR MINERAL INTELLIGENCE

- Objectives of MICA WP4:

Inventory and Assessment of Tools and Methods for providing Expertise to Stakeholders on Mineral Intelligence

- Two starting points:
  - What do stakeholders want to know?
  - What tools and methods are available?

WP4: PLANNING

- Planning WP4
- D4.1 Factsheets methods / tools: month 10 (finished)
- D4.2 Methods/tools and stakeholder questions: month 14 (finished)
- D4.3 Case study reports: month 22
- D4.4 Recommendations for stakeholders: month 24

WP4: METHODS – D4.1

- D4.1 uploaded in October 2016
- What tools and methods are available?
- Overview in WP4.1, described in fact sheets
  - Main characteristics
  - Range of relevant applications
  - System boundaries
  - Data needs, data
  - Model used (if any)
- Classification in proposal: methods to
  - Identify and asses geological and urban mines
  - Assess society's metabolism and environmental impacts
  - Assess economic aspects
  - Forecast or estimate future resource supply and use

WP4: METHODS: D4.2

- D4.2 uploaded in January 2017
- Mapping methods on stakeholder questions
- Joint stakeholder / expert workshop of 27 september provides very important input
- List of 25 stakeholder questions (extracted from D2.1) confronted with list of methods of D4.1

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WP4 workshop "Methods and Tools for Raw Materials Intelligence"

MICA workshop 27 September 2016

Mapping research questions to methods and tools

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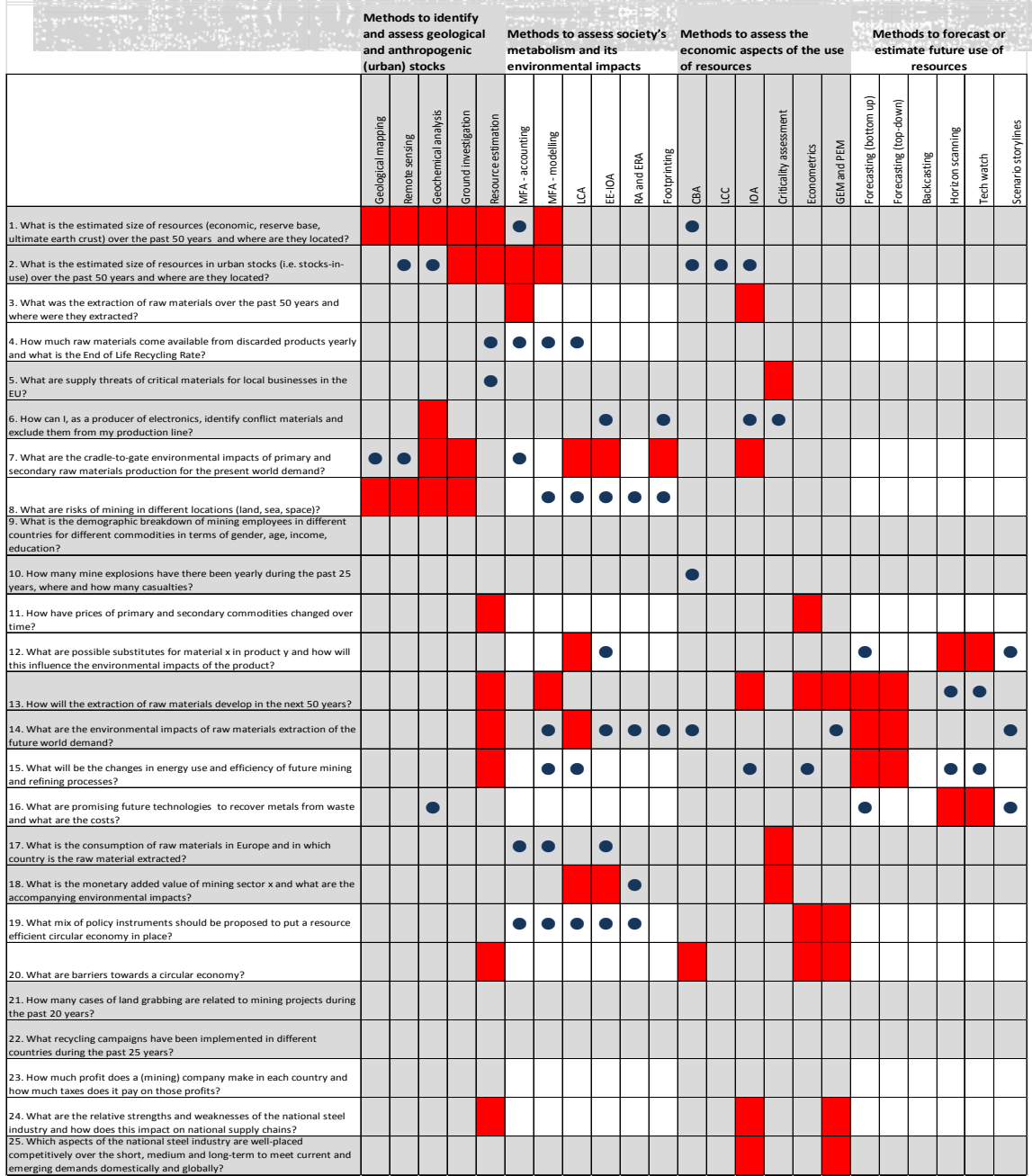

WP4: METHODS: D4.2

- Industrial ecology methods provide an essential addition to geological methods when addressing stakeholder questions, especially on supply chains, sustainability aspects, urban mining and circular economy.
- Some stakeholder questions require data, not methods, to be answered. The addition of applications (case studies) to the MICA platform can also be very useful for stakeholders.
- Stakeholder questions around policies, forecasting and social impacts are not very well addressed. Methods need to be developed and especially applied.
- Some methods are versatile, others are highly specific. This is no comment on their usefulness.
- The MICA platform will have to accommodate imprecise stakeholder questions.

WP4: METHODS: D4.2

- Combination of MFA and geological methods seems logical and fruitful
- The development of forecasting scenarios for resource use is essential for anticipating bottlenecks and formulating strategies and policies
- Global level tracking and tracing of raw materials throughout supply chains is essential for several stakeholder questions and related methods

WP4: METHODS: D4.3

- D4.3: Case studies
- Purpose: show use of methods, from stakeholder question all the way to answer
- Can also serve for development of flow sheets
- First meeting in september 2016, template developed, planning established
- Agreed on case studies using the following methods:
  - Material Flow Analysis
  - Life Cycle (Sustainability) Analysis
  - Top down forecasting
  - Economic equilibrium modelling
  - Criticality assessment
  - Urban mining inventory
  - Uncertainty analysis

WP4: METHODS: D4.3

- Preliminary case study reports discussed in WP4 meeting
- … already something to mention…?

- D4.3 due end of November 2017, no delay expected

WP4: METHODS: D4.3

- Joint WP3/WP4 workshop tomorrow
- Using expert input to combine methods and data into flow sheets (recipes) that answer stakeholder questions
- Will be used
  - To signal gaps in data and/or methods included so far
  - To provide input into WP6
  - To establish links of data/methods to WP6 ontology

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THANKS FOR YOUR ATTENTION

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