Progress on the EU Raw Materials Knowledge Base including Reserve and Resource Classification

7th Annual Meeting of the Expert Group Resource Classification
Geneva, 27 – 29 April, 2016

Slavko SOLAR
European Commission,
DG Growth,
C 2 - Resource Efficiency and Raw Materials
RMI is an integrated strategy to respond to the different challenges related to access to non-energy and non-agricultural raw materials.
Overview

Fair and sustainable supply of raw materials from global markets (1st Pillar)
- EU trade strategy for raw materials
- Raw materials diplomacy
- Assistance to developing countries

Fostering sustainable supply within the EU (2nd Pillar)
- Exchange of good practice between EU Member States
- Enhancing EU knowledge base
- Promoting research and skills

Boosting resource efficiency and promoting recycling (3rd Pillar)
- Better implementation and smarter EU waste legislation promoting resource-efficiency & recycling
- Strengthen the enforcement of the EU Waste Shipment Regulation

Cross-cutting issues
- Sector-specific criticality analyses
- European Rare Earth Competency Network (ERECON)
- Markets and stockpiling
- European Innovation Partnership on Raw Materials
- Research
EIP targets 2020

Up to 10 innovative pilot actions e.g. demonstration pilot plants for exploration, mining, processing, collecting and recycling

Substitutes for at least 3 applications of critical raw materials

Regulatory framework for primary raw materials

Regulatory framework for secondary raw materials

Raw materials knowledge base with raw materials flows and trends

Raw materials network of Research, Education and Training Centres

Pro-active international cooperation strategy of EU at bilateral and multilateral level
II.A Priority Area: Improving Europe's raw materials framework conditions

- **Action area n° II.1: Minerals Policy Framework**
  - MIN-GUIDE – ongoing H2020 project
  - Study on Permitting – DG GROW study

- **Action area II.2. Access to minerals potential in the EU**
  - MINATURA2020 – ongoing H2020 project
  - H2020 2017 call: Linking land use planning policies to national mineral policies

- **Action area II.3. Public awareness, acceptance and trust**
  - H2020 2017 call: EU network of mining and metallurgy regions
II.C Priority Area:
Knowledge, skills and raw materials flows

Action area n° II.8:
European Union Raw Materials Knowledge Base

Actions:

1) Appropriate conditions to provide a service
   • **KBA study** – DG GROW F3 2014/15 (0,2 mio €)

2) Organize relevant data input (studies, projects)
   • **Minerals4EU** – finished FP7 project 2013/15 (2,0 mio €)
   • **ProSUM** – H2020 project 2015-2017 (3,7/3,0 mio €)
   • **SmartGround** – H2020 2015/2017 (2,5 mio €)
   • **MSA study** Materials System Analysis 2014/2015(0,6 mio €)

3) Raw materials intelligence
   • **MICA** – H2020 project 2016-2018 (2,0 mio €)
II.C Priority Area:
Knowledge, skills and raw materials flows
Action area n° II.8:
European Union Raw Materials Knowledge Base

Actions:

4) Reporting (reserves and resources only)
   - Minventory – DG GROW study 2013-2015 (0,55 mio €)
   - COST ACTION MINEA – 2016 ongoing

5) Collaboration (projects partly related to EURMKB)
   - INTRAW – H2020 project 2015/20217 (2,1 mio €)
   - STRADE - H2020 project 2016/2018 (2,0 mio €)
   - H2020 2016 call: Demand-supply forecast and raw materials flows at global level

6) Improvement of data collection
   - H2020 call 2017: Optimising collection of raw materials data in Member States
DG Joint Research Centre
  JRC Ispra
  - [Raw Materials Information System](#)
  - Life Cycle Assessment data
  - Critical raw materials
  - INSPIRE

  JRC Petten
  - Materials Information System - SETIS
  - CRM for energy sector / technologies

  JRC Sevilla
  - C&D Waste

**EUROSTAT**
- 11th DATA CENTRE on Raw Materials
  (10 existing Data Centres /waste, products, natural resources, land use, soil, forest, chemicals)
- Official EU level statistics

**European Environment Agency**
- Resource Efficiency and Material Flows
Reporting
(reserves and resources only)

Minventory – DG GROW study
COST ACTION MINEA
Context

*Need for better pan-European mineral resource management
  # Security of supply (2nd pillar of RMI 2008)
    Extraction
    Land use

*Working towards a harmonisation of resources and reserves information

* A platform for future initiatives

* Planning horizon
  # What can be achieved by 2020?
  # What will take longer?
Minventory

Project Purpose

* To characterise and produce a metadata inventory of mineral resources and reserves statistical information in Europe
  # Key metadata characteristics include data ownership and systems of reporting

* To produce a roadmap to obtaining harmonised mineral resource and reserved data data across EU

* Assess the feasibility of a minerals yearbook for the EU that includes mineral resources and reserves statistical data
Options
Primary raw materials

* Multiple options for action presented with pros and cons

* All voluntary

* For reporting and communications at EU level:
  - Recommend System of Reporting aligned to the CRIRSCO-template or the UNFC system
  - Does not imply must be adopted by MS
  - Key task is to define bridging documents
  - Could be facilitated by an EU-level harmonisation body
  - INSPIRE assists in providing a reporting framework
Findings

Mining Waste

* MWD obliges publication of certain basic data for operating mines
* Targets discovery of high-risk facilities – many sites not inventoried
* Publication of data is incomplete

* No System of Reporting
* Characterised in terms useful to owner/operator
* If classified as permanent storage, falls under Landfill Directive
* ...But no stock data, and generation data incomplete.

* Abandoned or closed mining waste facilities should be treated as analogous to primary raw materials
  • Can use UNFC system
  • Level of knowledge is much lower

Recommendation: In the short term, reporting of data (according to the List of Waste codes) on mining waste generation for permanent storage facilities that fall under the Landfill Directive should be reported by all Member States to improve current knowledge of resource availability.
Many of the issues are the same as for primary raw materials or mining wastes, but emphasis is distinctly different

- Good aggregate flow data
- Non-existent site-level inventory data
- Public or private owners commonly do not publish
- List of Waste codes (especially EWC-Stat codes) lack detail required to identify secondary materials of prime interest
Take away ...

Report in PDF

Website
https://ec.europa.eu/growth/tools-databases/minventory/

Glossary
https://ec.europa.eu/growth/tools-databases/minventory/glossary
Mining the European Anthroposphere
References

EU raw materials webpage:

Check the EIP website for fresh news:

Horizon 2020 - Raw materials webpage:

Thank you for your attention!