Conference thematic session

Raw materials: sustainable exploration, extraction, processing, recycling and substitution.

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Chairman of European Technology Platform on Sustainable Mineral Resources ETP SMR (2006-2012), Poland.
Raw Materials Initiative: Analysis of supply and demand

EU economy in 2007:

1. From self-sufficiency to high import dependence
2. Need for raw materials on the EU market
3. Certain materials are particularly critical:
   1. Significant economic importance for key sectors
   2. High supply risks
   3. Lack of substitutes
4. Fundamental changes on global markets
   450 export restrictions on more than 400 different raw materials
   Strategies to secure privileged access to raw materials
5. 50% of major mineral reserves are located in low income countries.
Access to raw materials became a matter of survival in a globalised world.

**EU initiatives since 2008:**

- European Raw Materials Strategy (EU Raw Materials Initiative - Nov. 2008, official recognition of the ETP SMR in 2008);
- Significant support in the EU FP7 programme for the entire value chain of raw materials,
- Announcement of the European Innovation Partnership on Raw Materials - COM(2012) 82 final - 29 February 2012. EIP is waiting for the final approval of EP.
Activities of the ETP SMR in the EU FP7 programme between 2008 - 2012.

• Innovative concepts and processes for new high added value mineral products  *(ProMine, Experl)*

• Technologies for a sustainable increased self-sufficiency in resources  *(One Geology, EurogeoSource)*

• New strategies and technologies for mineral resources extraction, processing and recovery. *(I2Mine, ERA-MIN)*

• Reducing environmental footprint *(EO-Miners, Impactmine)*
An opportunity for new novel and efficient solutions in the extractive industry in Europe.

**STUDY ON INNOVATIVE TECHNOLOGIES AND POSSIBLE PILOT PLANTS.** (tender announced on 19th July 2011 by DG Ent.&Industry FINAL REPORT expected in the middle of 2013).

Specific attention shall be given in the Study to the following main areas:

1. **exploration, and safe exploitation**, including environmentally-sound mining technologies or extraction technologies;
2. **mineral processing and refinements technologies**, solutions for high-grade recycling including accumulation, enrichment, collecting and sorting;
3. **alternatives / substitution** for critical raw materials; or those of a significant hazardous potential.

FP7 NMP ERA-NET on the Industrial Handling of Raw Materials for European industries.

The objective of the ERA-MIN is to step up coordination of research programmes in the field of industrial production and supply of non-energy part of mineral raw materials (ENERC).

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<th>Participant</th>
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<td>1. Coordinator</td>
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<td>Material innovation Institute M2i</td>
<td>Netherlands</td>
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<td>Hungarian Office for Mining &amp; Geology</td>
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EU member states which prepared or began preparing their own Raw Materials Policy.

- Bulgaria (2011)
- Czech Republic (2011)
- Finland (2010)
- France (2010/11)
- Germany (2010)
- Greece (2011)
- Hungary (2011)
- Netherlands (2009)
- Poland (2011)
- Portugal (2011)
- Sweden (2012)
- The UK

source: [http://www.euromines.org/who_is_euro_raw_materials_initiative_map.html](http://www.euromines.org/who_is_euro_raw_materials_initiative_map.html)
1. Bilateral and trilateral dialogue has been initiated with USA and Japan. (U.S.- Japan REE Roundtable, October 2010).

2. A dedicated EU-US workshop on 3 December 2010 also with Japanese invited guests, MIT, Boston, USA (EU-USA (workshop)).


4. Agreements signed by EU/DG Ent. and governments of Brasil, Argentina, Uruguay, Chile on cooperation in mineral sector in Nov. 2011.

5. Letter of Intent signed in June 2012 between the EU and Greenland on cooperation over mineral resources.
Two pillars of the Europe 2020 Strategy which are focused on raw materials (Horizon 2020 and EIP).
Proposed role for the EIT based KIC in Raw Materials.

Implementation of Vision of Sustainable and Efficient Raw Materials sector in the whole value chain by integrating results of current and future activities which are based on:

1. EU Raw Materials Policy
2. EU Innovative programmes (FP7, Horizon 2020)
3. Cross-cutting initiatives between industrial sectors
4. Integrated higher education policy
5. Experience gained by existing KICs.

KIC on Raw Materials should be a strong Innovation Engine for the EU INDUSTRY.
Thank you

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