



Raw Materials Strategy - New Developments -

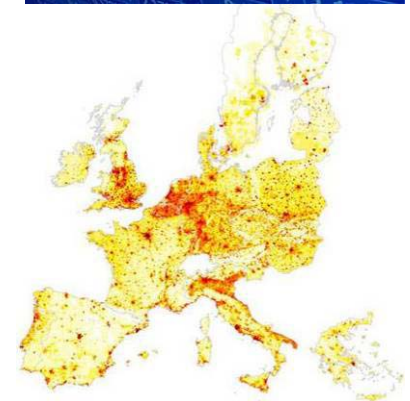
EuroGeoSource
2nd International Workshop

*10h30 – 10h⁴⁵, 8th of March 2012,
Rotterdam, Netherlands*

Challenges

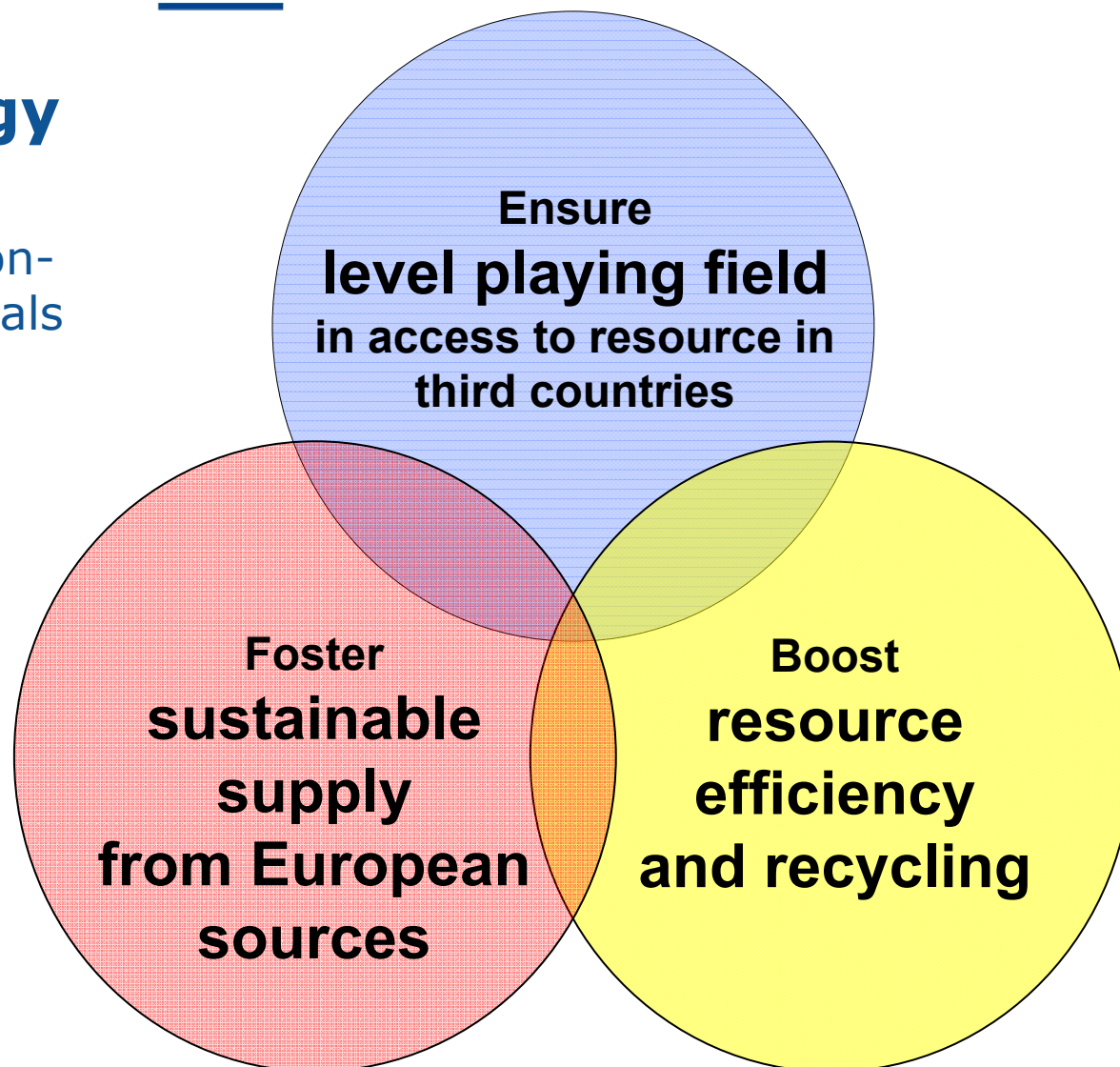


- **Pressure on demand for raw materials**
 - emerging countries
 - new technologies and materials
- **EU highly import dependent on technological crucial raw materials**
 - market distortions
 - commodity market speculations
- **Exploration, extraction and greenfield developments face on-going**
 - increasing competition for different land uses
 - time consuming and complex licensing / permitting processes



Integrated strategy

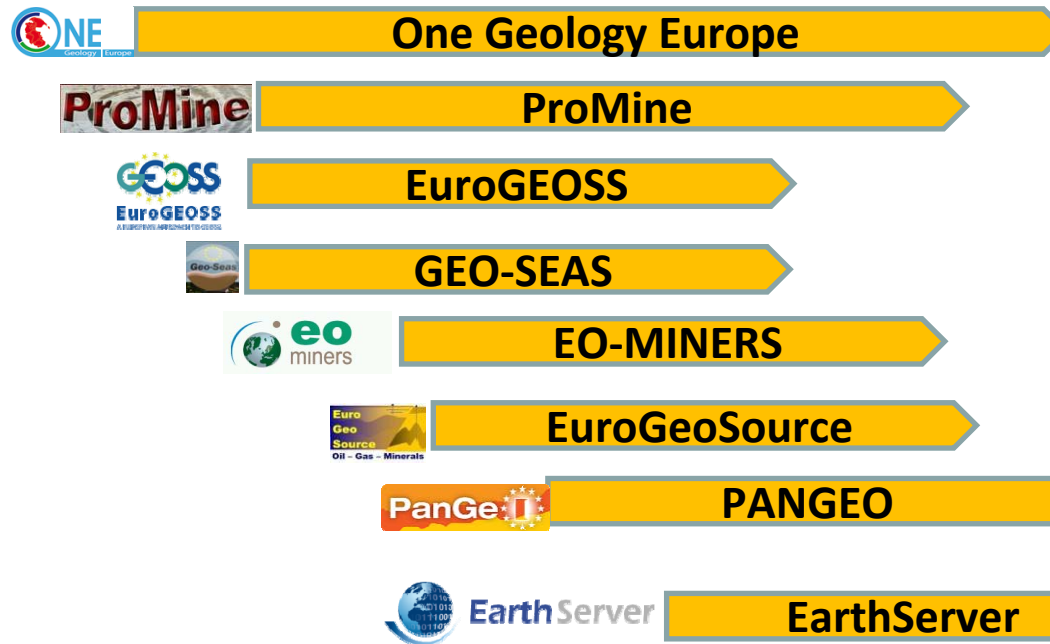
- based on three pillars
- area of non-energy, non-agricultural raw materials
- launched Nov. 2008
- Reinforced Feb. 2011
- Underpinned by R&D and Innovation



Research - examples -



2008 2009 2010 2011 2012 2013 2014 2015 2016

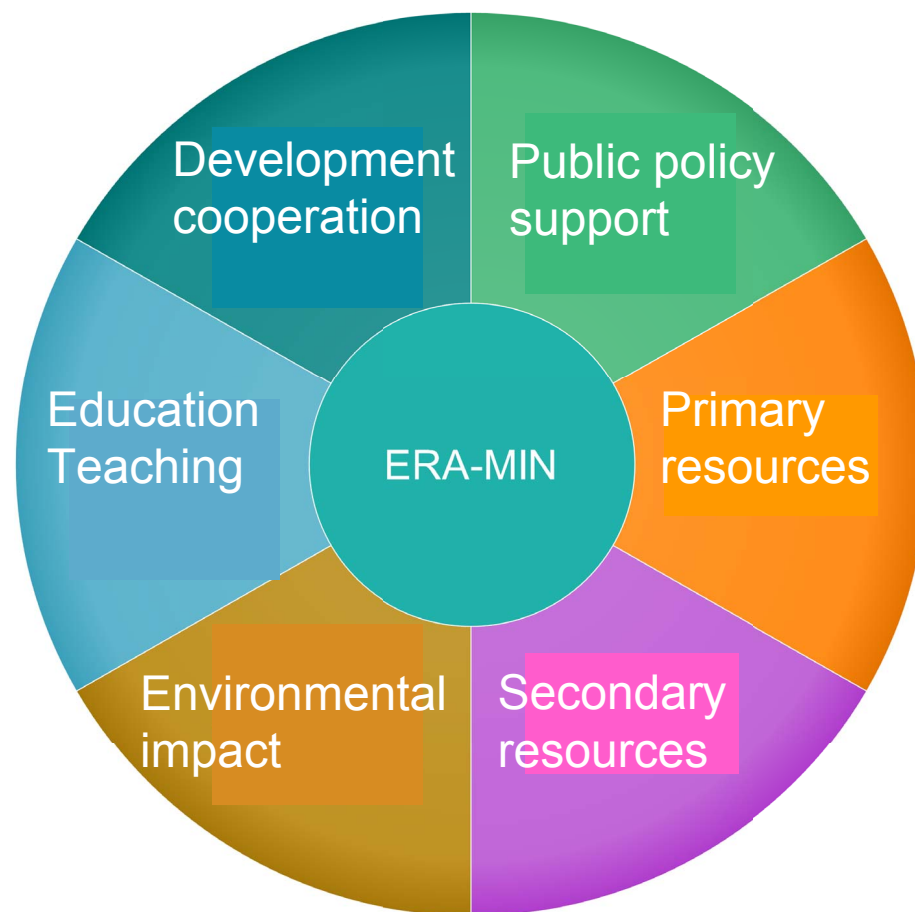


**“Horizon 2020”
Exploration,
extraction,
processing,
recycling and
substitution**

**Data capture and analysis
for exploration and
resource management**

**ERA-MIN
Network for Co-ordination**

- **2011-2015**
- **1,5 million €** (FP7)
- **11 Partners** from 9 Member States (increasing)
- ERA-NET on the **Industrial Handling of Raw Materials for European industries**
- Coordination of research programmes in the field of industrial production and supply of raw materials, in line with the “EU RMI”



Efficiency

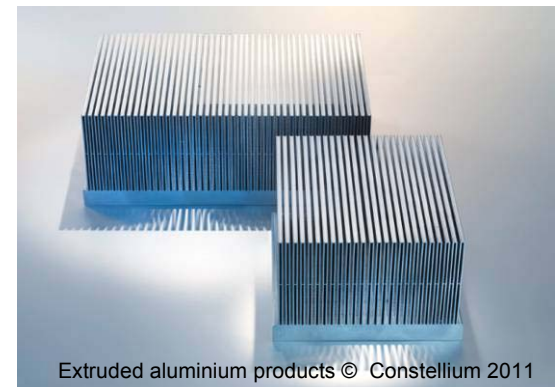


- **Increasing pressure on natural resources → need to be more efficient for**
 - **economic** and
 - **environmental** reasons
- **Recycling**
 - **Urban Mining**
 - **collecting, sorting, treatment** of key waste streams

 **Raw Materials**



Aluminium scrap © IEC 2012



Extruded aluminium products © Constellium 2011

4 Flagship Initiatives out of 7

→ **raw material strategy
synergies**

- An industrial policy for the globalisation era
- An agenda for new skills and jobs
- Resource Efficient Europe
- Innovation Union





- **Turning research into new and better services and products**
- **Crucial investment for our future**
 - e.g., achieving our target of investing 3% of EU GDP on R&D by 2020 could create 3.7 million jobs and increase annual GDP by €795 billion by 2025.

- **A matter of survival in a globalised world**

- **It is about**

- Technology
- Processes
- Best practices
- Standard codes
- Procurement ...



**Novel concept
European Innovation
Partnership (EIP)**

Innovation

- Term -



- **Innovation** is generally understood as the **commercial introduction** of a **new or significantly improved product or service**
- **Innovation** can also be for **non-commercial applications** such as for **better public services or for addressing social needs ('social innovation')**.



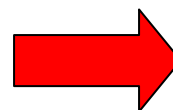
© Corbis 2009

- **Speed up breakthrough innovation**

- by pooling resources through a challenge-driven approach
- and acting across research and innovation cycle
- bringing together all relevant actors

N.B.: 'research and innovation activities' means the whole spectrum of activities of

- research,
- technological development,
- demonstration and
- innovation.



**Raw Materials
along the entire
value chain**

- **Innovation required for the entire value chain of raw materials – industrial approach**

- **Areas:** exploration, exploitation, processing, (re-)using, recycling, substitution, etc.
- **Sectors:** mining, engineering, pulp and paper, product design, robotics, etc.
- Commission proposal adopted on 29th February 2012

COM(2012)82 final documents

Next steps:

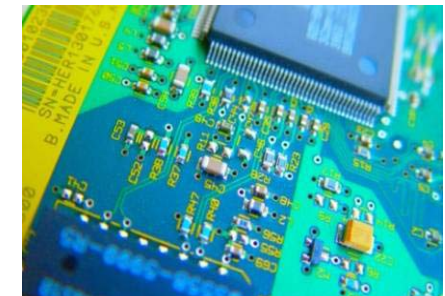
- Call for expression of interest
- Council conclusions
- Strategic Implementation Plan foreseen to be adopted by early 2013.



Key components



- **Technology-focused policy areas**
 - Exploration, extraction, processing, recycling ...
 - Substitution, alternative functionalities and materials
- **Non Technology policy areas**
 - Improving Europe's raw materials knowledge base and infrastructure
 - ▶ e.g. data interoperability and availability
 - Promotion of excellence
 - ▶ resource efficiency, recycling by e.g. public procurement, private initiatives
- **International cooperation**
 - Promoting appropriate international cooperation
 - ▶ various policy issues possible e.g. geology, research, trade, competitiveness and investment conditions

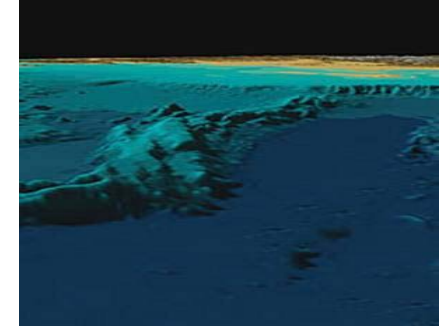


2020 targets



- **Standard codes and statistic**

- Resources and Reserves (continental und marine)
- 3-D- and 4-D geological maps
- dynamic modeling of trends – demand and supply
 - Economically viable resources – complete LCA



- **10 innovative pilot activities**

- Demonstrating pilot plants → mining, processing, production, recycling and collecting
- Substitutes for at least 3 applications of critical raw materials
- European Institute for training and education of sustainable raw materials management (M³)



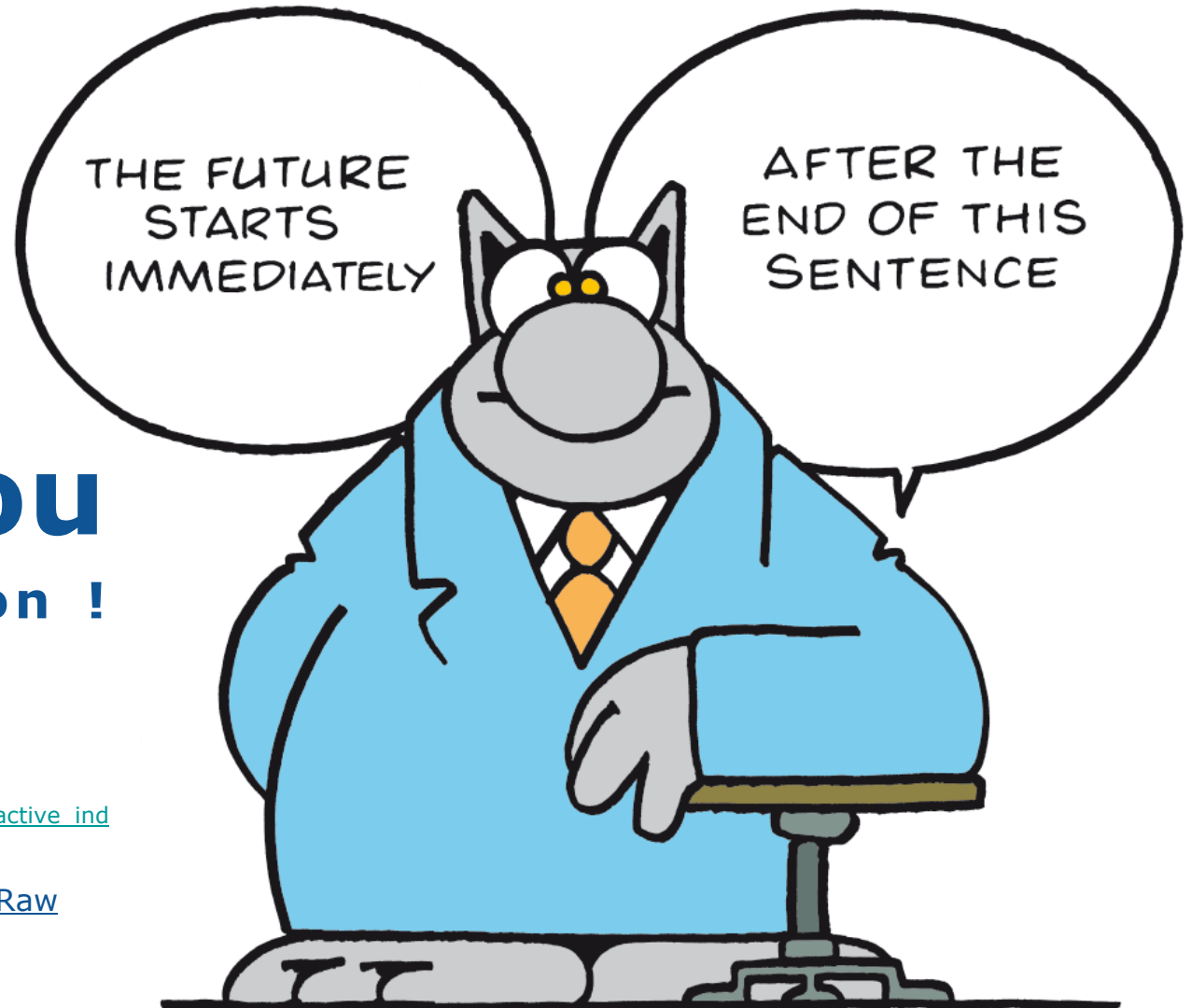
- **Establishment of international raw materials dialogue**



EIP – Who benefits



- Advantages for:
 - **Companies**, in particular **SMEs**, operating to high environmental and social standards
 - ▶ faster dissemination of innovations and more favourable investment conditions.
 - **European consumers** - indirectly through lower manufacturing costs as for example expensive, difficult to obtain raw materials are being replaced by alternative materials.
 - **Environment** - through reduced waste streams and people making better use of recycled products.
 - **Researchers** and **organisations** will be able to pull together their knowledge and benefit from the new network.
- Increased co-operation between enterprises, universities and public authorities.
- Early involvement of local, regional and national government organisations in the research and development process
 - ▶ new recycling and mining technologies, e.g. dealing with urban waste.
- Strengthen of the EU geopolitical role
 - ▶ increases its independence on imports of raw materials, while being able to export new technologies quicker.



Thank you
for your attention !

EU raw materials webpage:

http://ec.europa.eu/enterprise/non_energy_extractive_industries/raw_materials.htm

European Innovation Partnership on Raw Materials:

http://ec.europa.eu/enterprise/policies/raw-materials/innovation-partnership/index_en.htm