



Raw Materials part in Societal Challenge 5 Horizon 2020

Topics of Work Programme 2017

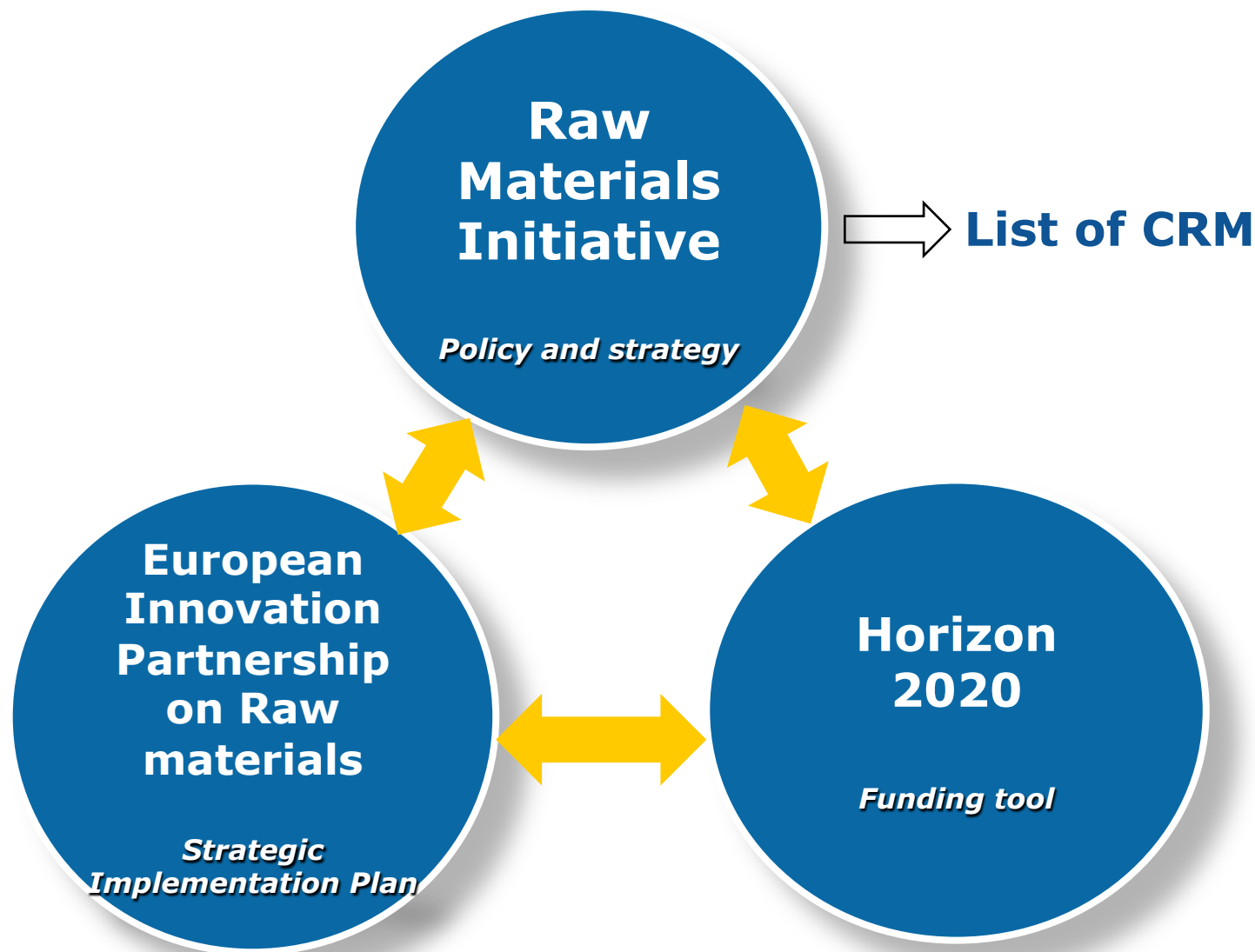
EU-Latin America Dialogue on Raw Materials: enhancing the co-operation



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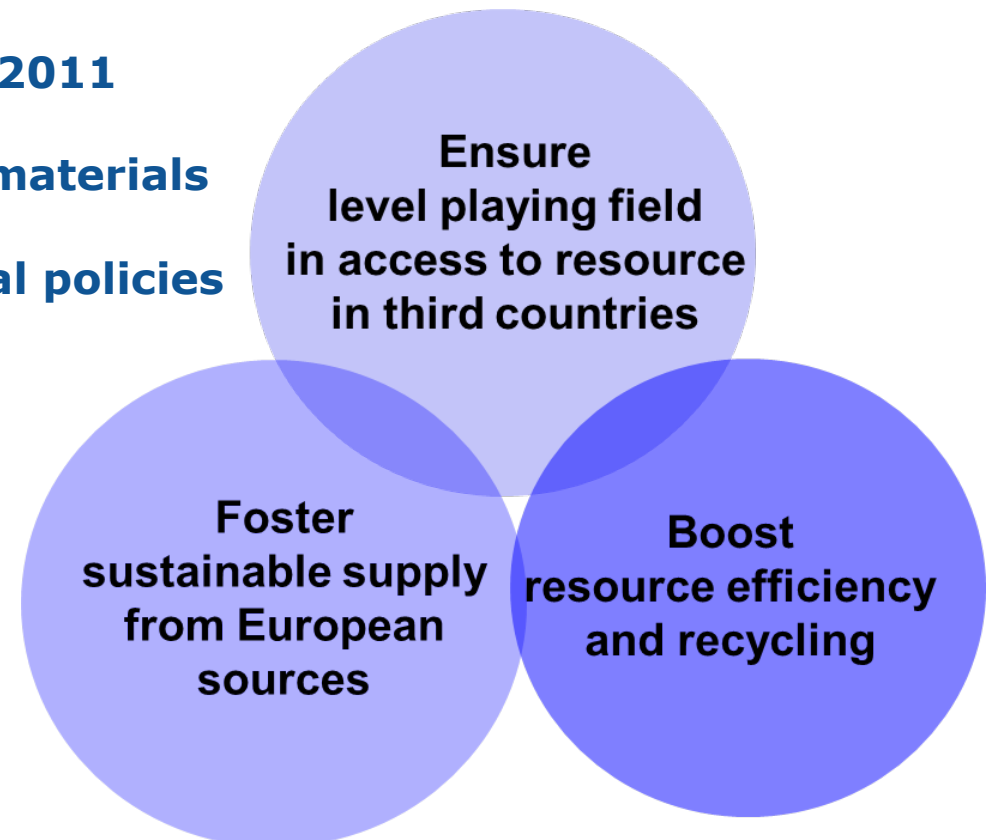
*Directorate-General for Internal Market, Industry,
Entrepreneurship and SME's. European Commission
Unit C2 - « Resource Efficiency and Raw Materials»*

25 April 2016



EU “Raw Materials Initiative”

- **Aim: securing sustainable supplies of raw materials**
- **Launched in 2008, consolidated in 2011**
- **Non-energy, non-agricultural raw materials**
- **Connecting EU external and internal policies**
- **Integrated strategy (3 pillars)**
- **Introduced list of Critical Raw Materials (CRM) in 2010, updated 20 CRMs in 2014**

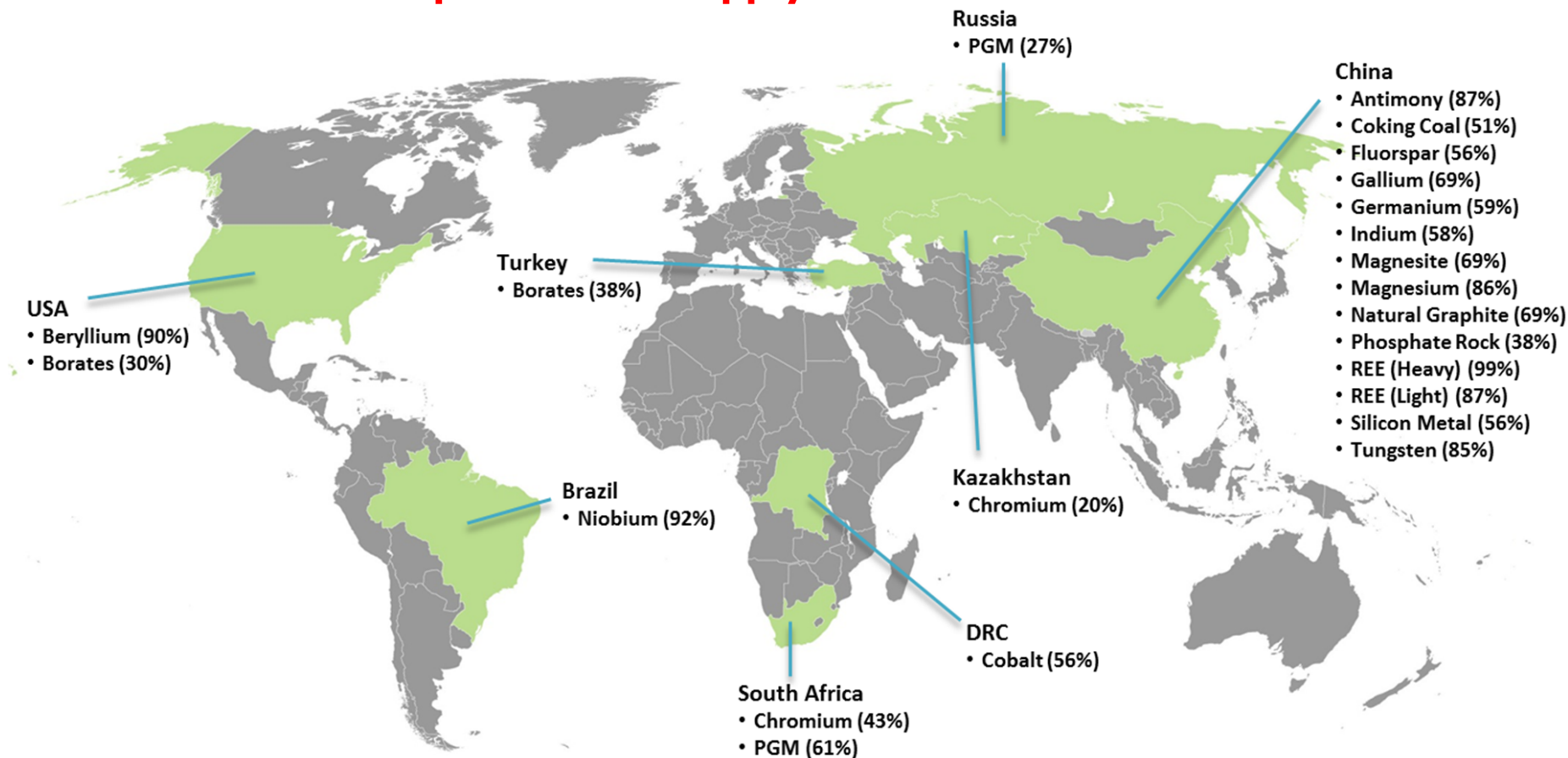


Critical raw materials



1. Raw Materials Initiative

CRM ⇔ Economic importance + Supply risk



* Communication on the review of the list of critical raw materials for the EU and the implementation of the Raw Materials Initiative - COM(2014) 297, 26.5.2014

EIP targets 2020



2. EIP on Raw Materials

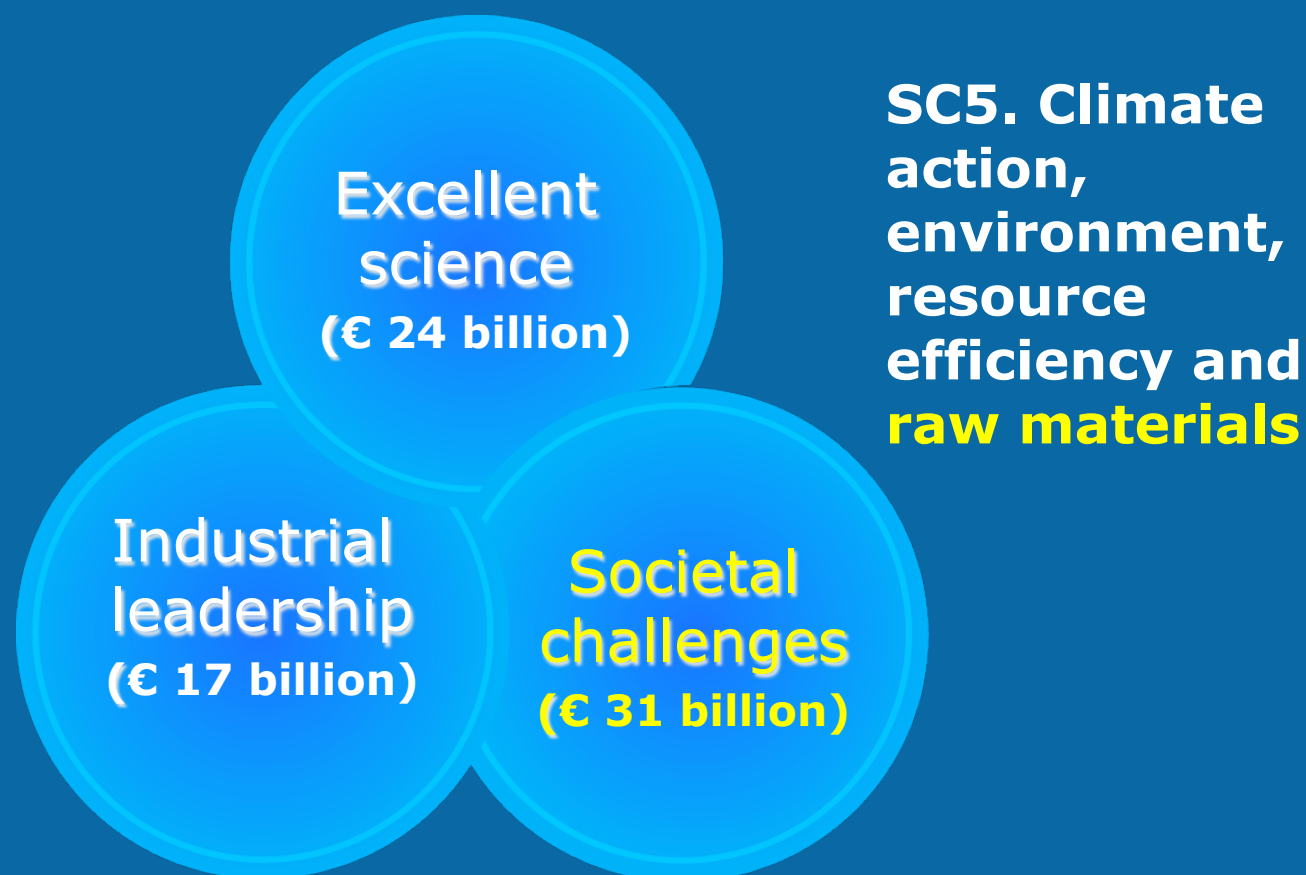
- Up to **10 innovative pilot actions** e.g. demonstration pilot plants for **exploration, mining, processing, collecting and recycling**
- **Substitutes for at least 3 applications** of critical raw materials
- **Regulatory framework for primary raw materials**
- **Regulatory framework for secondary 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



Horizon 2020

Context and overview

3. Raw Materials in Horizon 2020



Societal Challenge 5 Call 'Greening the economy'. **Topics in 2017 will open on 08 November 2016:**

Raw materials

- New solutions for sustainable production of raw materials (1 RIA)
 - ***International cooperation encouraged**
- Raw materials Innovation actions (2 IA)
 - ***International cooperation encouraged**
- Raw materials policy support actions (5 CSA)
- Raw materials international co-operation (1 CSA)
 - ***International cooperation required**

Budget

- 2017: €76 million

Deadlines:

- **7 Mar 2017** (RIA, CSA, and First stage of IA)
- **5 Sep 2017** (Second stage of IA)





SC5-13-2016-2017: New solutions for sustainable production of raw materials

RIA – €10 million in 2017

- Sustainable selective low impact mining (2016)
- New technologies for the enhanced recovery of by-products (2016)
- **New sensitive exploration technologies (2017)**

SC5-13 c) New sensitive exploration technologies [2017]

Scope:

- develop **new and more sensitive environmentally sound exploration technologies and solutions** (such as remote sensing technologies, innovative multi-method approaches to reprocess existing or new geophysical data) **able to identify targets for detailed exploration** on the land with lower costs, leading to finding **new deposits** and to **re-assessing** the mineral potential for the EU.
- Any of the **metallic, industrial and/or construction minerals could be targeted**. The **importance of the targeted raw materials for the EU economy** has to be duly **demonstrated** in the proposal.
- include the **participation of technology oriented SMEs**, as far as possible.
- Sea exploration is not targeted by this call.

Indicative size of proposals: EUR 3 to 7 million

Expected TRL: 4-5



SC5-14-2016-2017: Raw materials Innovation actions IA – €56 million in 2017

- Intelligent mining on land (2016)
- **Processing of lower grade and/or complex primary and/or secondary raw materials in the most sustainable ways (2017)**
- **Sustainable metallurgical processes (2017)**



SC5-14 b) Processing of lower grade and/or complex primary and/or secondary raw materials in the most sustainable ways [2017]

- demonstrate **new systems integrating relevant processing and refining technologies for better recovery of minerals and metals** from low grade and/or complex ores, industrial or mining wastes at **increased efficiency** in terms of better yield and process selectivity.
- The **importance of the targeted raw materials and their sources** for the EU has to be **demonstrated** in the proposal.
- The solution proposed should be **flexible enough to adapt to different ore grades** and should be supported by efficient and robust **process control**.

Indicative size of proposals: EUR 8-13 million
Expected TRL: 6-8



SC5-14 c) Sustainable metallurgical processes [2017]

- develop **innovative metallurgical systems** integrating pyro-, hydro-, bio-, and/or electro-metallurgical and/or electrochemical technologies, in order to **enhance the production efficiency, metal recovery and selectivity** from primary and/or secondary raw materials.

Indicative size of proposals: EUR 8-13 million
Expected TRL: 6-8



SC5-16-2016-2017: Raw materials international cooperation - CSA

- Demand-supply forecast and raw materials flows at global level (2016)
- Advancing the idea of a World Forum on Raw Materials (2016)
- **International network of raw materials training centres (2017)**



SC5-16 c) International network of raw materials training centres [2017]

Proposals should:

- create a **self-sustainable long-term lasting international network of training centres for professionals.**
 - involve **educational and research institutions in the EU and the leading counterparts in third countries**, based on specific country **expertise in the primary and secondary raw materials sectors.**
 - **map skills and knowledge in the EU and the third countries, identify key knowledge gaps and emerging needs**, develop **roadmap** for improving skills and knowledge,
 - **establish common training programmes** in the raw materials sectors.
 - **International collaboration is required.**
 - where appropriate, **synergies with the relevant EU Member States initiatives** are to be explored and fostered.
- Indicative size of proposals: EUR 1 million

Ongoing H2020 projects on international cooperation in raw materials

Project	Title	International Partners
INTRAW	International cooperation on Raw materials	<ul style="list-style-type: none">- Council for Scientific and Industrial Research (CSIR), South Africa- Australian Academy of Technological Sciences and Engineering (ATSE), Australia- American Geosciences Institute (AGI), USA
STRADE	Strategic Dialogue on Sustainable Raw Materials for Europe	<ul style="list-style-type: none">- University of the Witwatersrand Johannesburg (WITS), South Africa- DMT – Kai Batla (Pty) Ltd, South Africa

In the 28 running projects, there are partners from:

- 24 Member States
- **12 non-EU countries:** Australia, Bosnia, Switzerland, Japan, Montenegro, Namibia, Norway, Serbia, Ukraine, USA, British Virgin Islands, South Africa

THANK YOU!

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29 April 2016