

EU Raw materials policy and initiatives

REMIX Mining Conference
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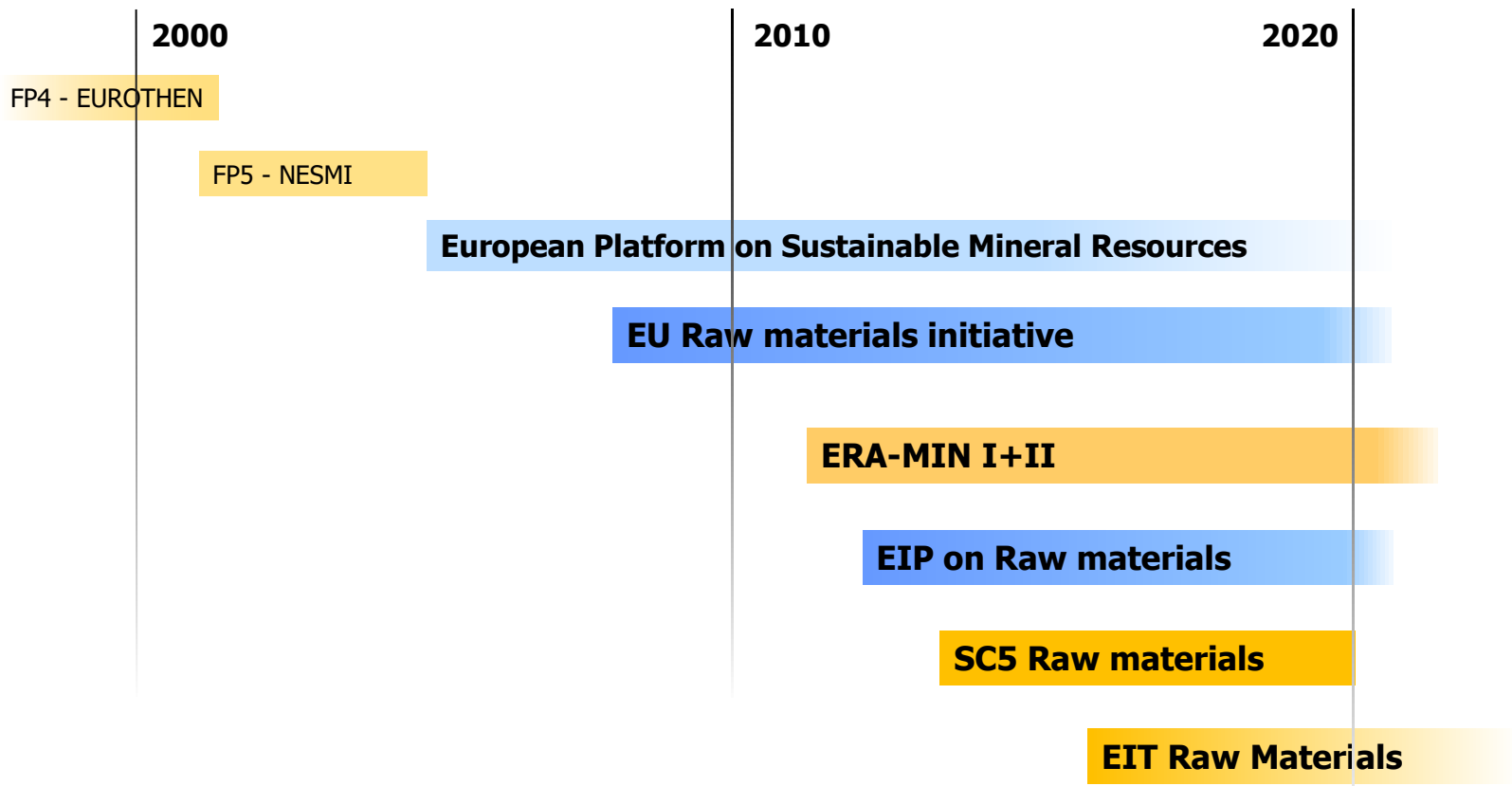
*European Commission. Directorate-General for
Internal Market, Industry, Entrepreneurship and
SME's (DG GROW).
Unit C2 - «Resource Efficiency and Raw Materials»*





2000-2010 Lisbon strategy - ERA **EU2020 strategy/Juncker priorities**

FP5 **FP6 2002-2006** **FP7 2006-2013** **Horizon 2020** **FP9**



Raw Materials Initiative

EU policy

✓ CRM list

EIP on Raw Materials
Strategic Implementation Plan

H2020-Raw Materials

Commission priorities 2015-19

- 1. Jobs, Growth and Investment**
- circular economy and green growth
- 2. Digital Single Market**
- 3. Energy Union**
*- transition to a low-carbon economy
(renewables, electricity market, transport...)*
- 4. Internal Market**
*- unlock the full potential of the single market
- a renewed EU Industrial Policy Strategy*
- 6. Trade policy to harness globalisation**
*- economic diplomacy
- raw materials chapters in FTAs*
- 9. A stronger global actor**
*- international cooperation
and development*

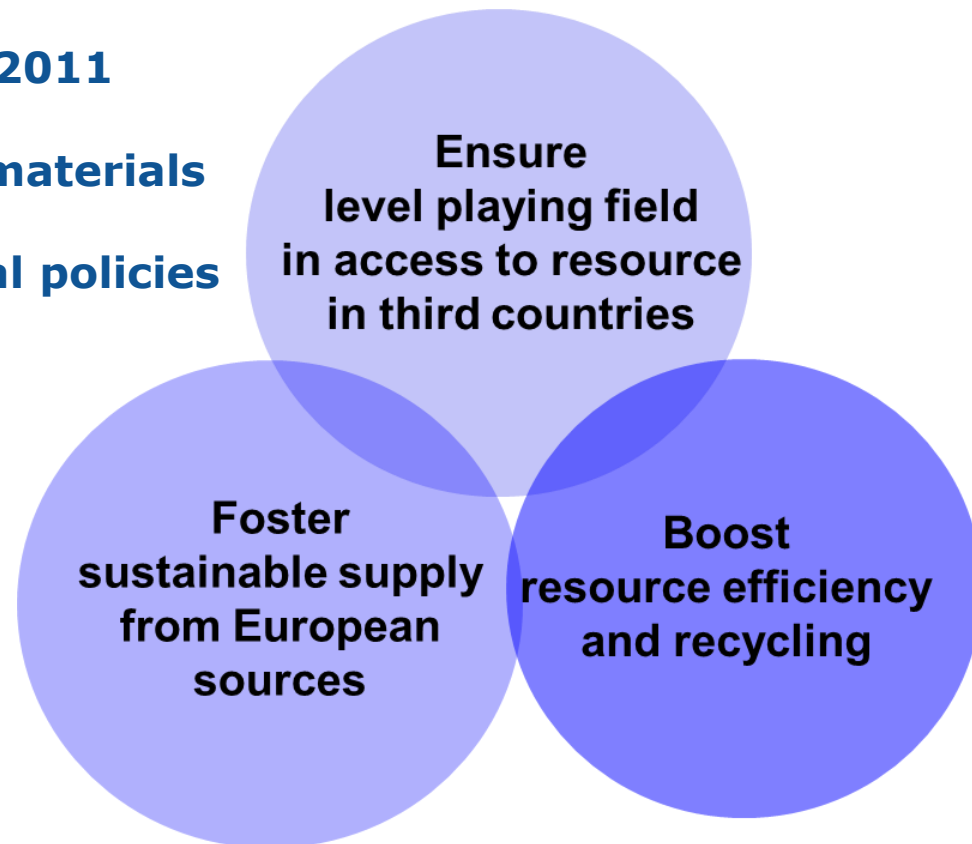
- **New Industrial strategy**
- **Raw Materials Initiative (including CRM)**
- **Circular economy**
- **Mobility/Energy packages**
- **Sustainable Development Goals**





EU “**Raw Materials Initiative**” = *EU raw materials policy*

- **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 a list of Critical Raw Materials (CRM) in 2011 and updated list in 2014 and 2017**
- **Policy strongly supported by EIP on Raw Materials**

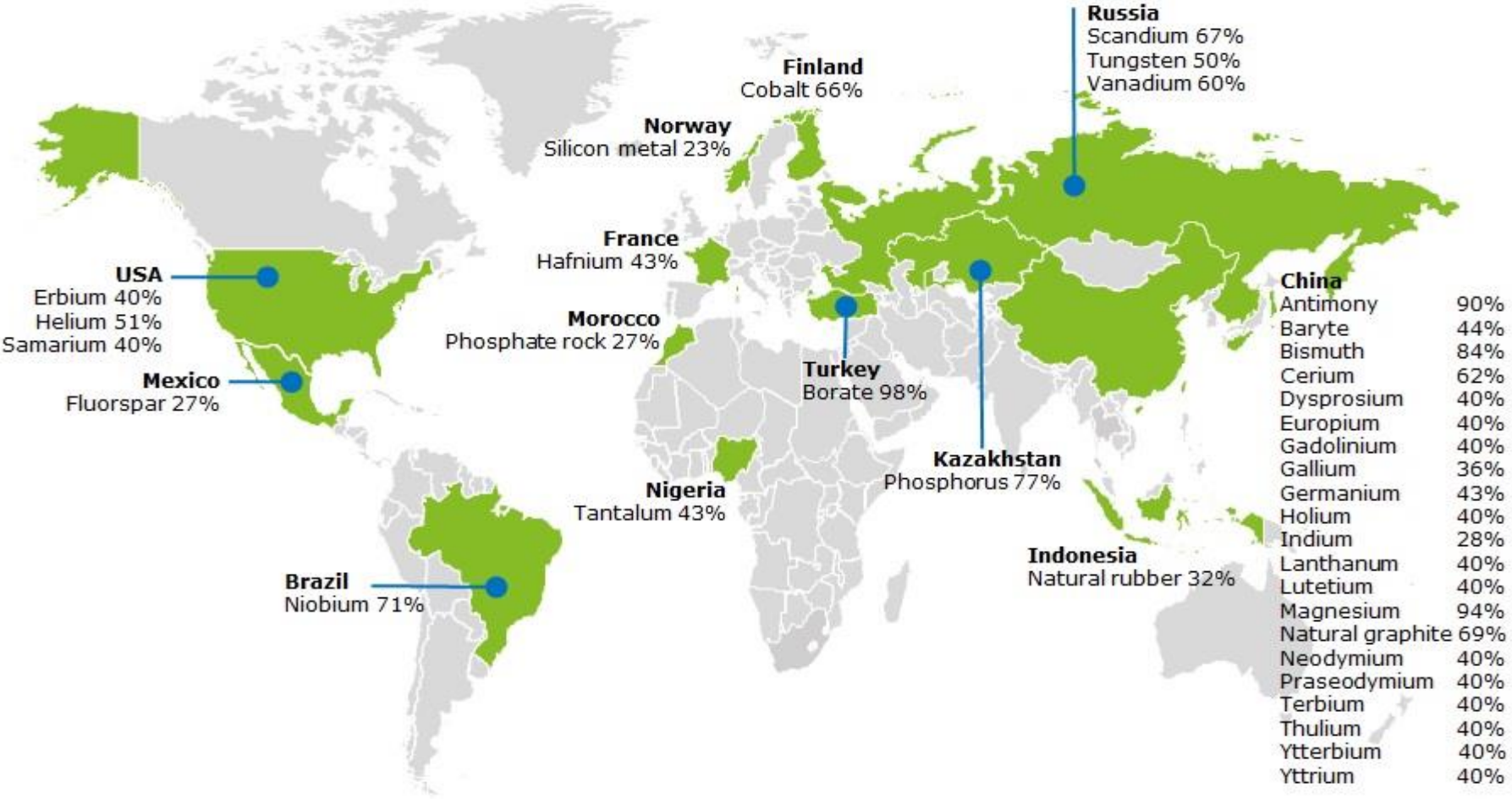


Biggest suppliers of CRM to the EU



EU Critical Raw Materials

CRM ⇔ Economic importance + Supply risk



Study on the review of the list of critical raw materials 2017: 78 raw materials evaluated, 27 CRMs

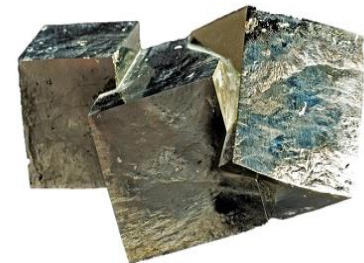
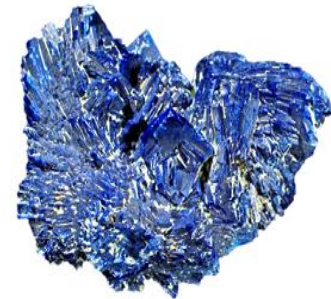
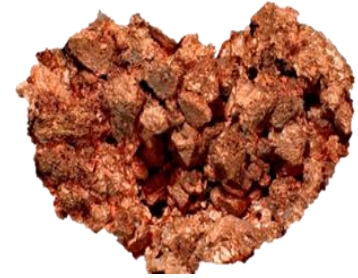
When: launched in 2013, based on Raw Materials Initiative, Industrial Policy, Innovation Union

Who: Industry, public sector, academia and NGOs in HLSG + Sherpa, Operational Groups
Groups renewed in 2017

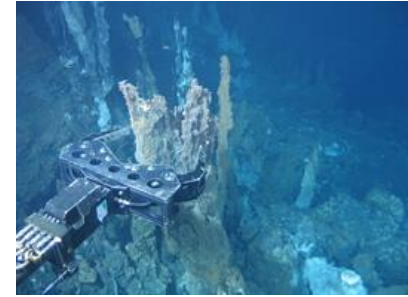
123 Raw Materials Commitments: 980 partners, indicative budget ± EUR 2 billion

Why: ...to ensure the sustainable supply of raw materials to the European economy...

What: **Strategic Implementation Plan** adopted in 2013
Achieving targets
Position paper on future orientations of the High-Level Steering Group of the EIP. 20 December 2017



- 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



SIP adopted on 25 September 2013

I. Technology Pillar

- I.A Raw materials research and innovation coordination
- I.B Technologies for primary and secondary **raw materials' production**
- I.C Substitution of raw materials

II. Non-Technology Policy Pillar

- **II.A Improving Europe's raw materials framework conditions**
- II.B Improving Europe's waste management framework conditions and excellence
- II.C Knowledge, skills and raw materials flows

III. International Cooperation Pillar

- III.1 Technology
- III.2 Global Raw Materials Governance and Dialogues
- III.3 Health, Safety and Environment
- III.4 Skills, Education and Knowledge
- III.5 Investment activities

The EIP plays a central role in the EU's raw materials policy framework

- It reinforces the **Raw Materials Initiative** by:
 - translating the strategic policy framework into **concrete actions**
 - **mobilising the stakeholder community** to implement them
- It has been instrumental in helping **securing R&I funding**: EUR 600 million under Horizon 2020 – Societal Challenge 5

Horizon 2020

Context and overview

Topics relevant to raw materials

SC5. Climate action, environment, resource efficiency and **raw materials**

SC5 - Raw materials (~€600 million for 7 years)

Circular Economy
SC2 - Bioeconomy
SC3 - Energy

+ ERA-MIN 2
+ EIT Raw Materials

Excellent science
(€ 24 billion)

Industrial leadership
(€ 17 billion)

Societal challenges
(€ 31 billion)

NMPB - Materials
SPIRE PPP
EEB PPP

SME Instrument
FTI-pilot



Societal Challenge 5

Call "Greening the economy in line with the Sustainable Development Goals (SDGs)" - Structure

- Connecting economic and environmental gains - the **circular economy**
- **Raw materials**
- **Water for our environment, economy and society**
- **Innovating cities for sustainability and resilience**
- **Protecting and leveraging the value of our natural and cultural assets: Earth observation; nature-based solutions, disaster risk reduction and natural capital accounting; heritage alive**

Call "Greening the economy in line with the Sustainable Development Goals (SDGs)"

Horizon 2020. WP 2018-2020. Raw Materials

- Near 240 million available under SC5 (plus FTI, SME Inst).
- Actions covering the entire EU raw materials value chain, following the logic of SIP and supporting the **targets and objectives of the EIP on Raw Materials**.
- 64% of the budget to Innovation Actions + 28% to RIAs
- Specific attention to CRMs, Circular economy, Production.
- Involving all relevant actors at EU level as well as strategic international partners (international cooperation is encouraged).
- Clustering with other relevant projects is encouraged.
- Pursuing collaboration and synergies with other parts of H2020.
- "Bridge" to Post-2020 "FP9".

SC5-Call "Greening the economy in line with the Sustainable Development Goals (SDGs)"

Raw materials WP2019

- **CE-SC5-07-2018-2019-2020: Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes (IA)**
 - a) Sustainable processing and refining of primary and/or secondary raw materials
 - b) Recycling of raw materials from end-of-life products
 - c) Recycling of raw materials from buildings
 - d) Advanced sorting systems for high-performance recycling of complex end-of-life products
- **CE-SC5-08-2018-2019-2020: Raw materials policy support actions for the circular economy (CSA)**
 - c) Responsible sourcing of raw materials in global value chains (2019)
- **SC5-09-2018-2019: New solutions for the sustainable production of raw materials (RIA)**
 - b) **Digital mine (2019)**
 - c) Recovery of metals and minerals from sea resources (2019)
- **SC5-10-2019-2020: Raw materials innovation actions: exploration and Earth observation in support of sustainable mining**
 - a) **Integrated exploration solutions (2019)**
 - b) **Services and products for the extractive industries life cycle (2019)**
- **Budget WP 2019**

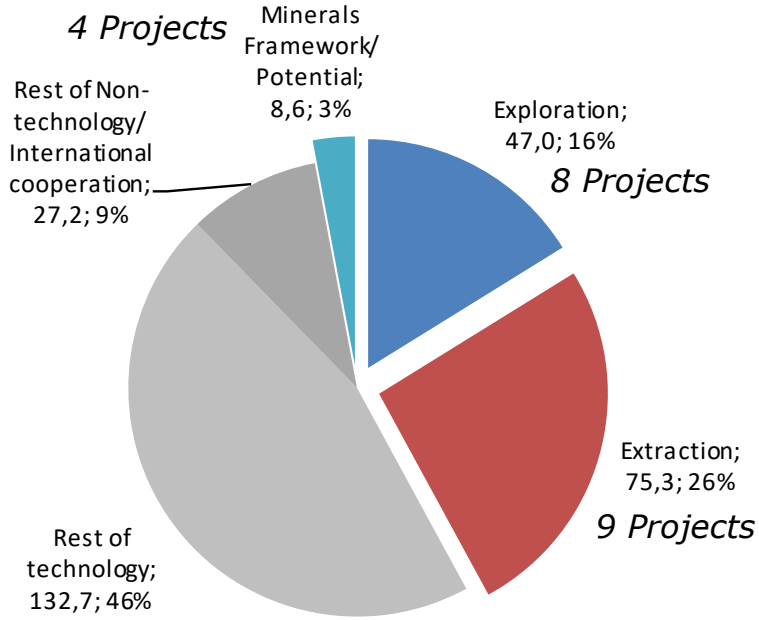
€83 million
- **Deadlines for WP 2018 (Open 14 November 2018)**

19 Febr 2019 (CSA and First stage of RIA, IA)
4 Sep 2019 (Second stage of RIA, IA)

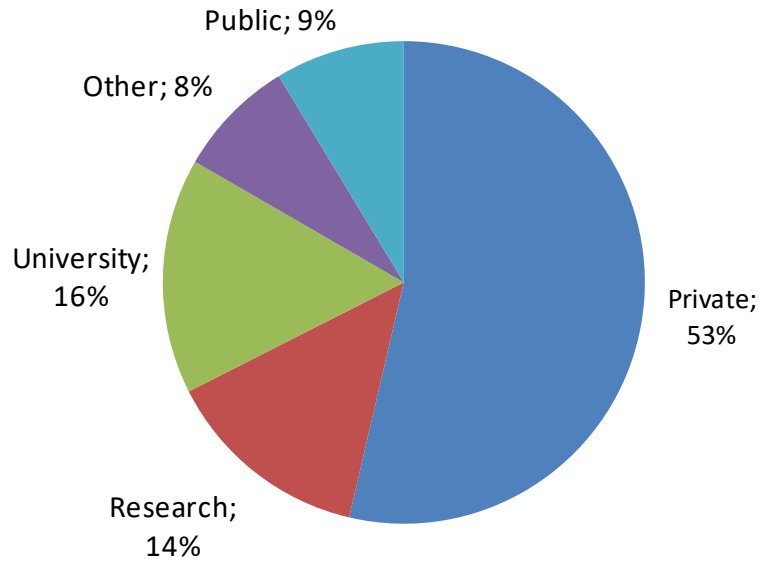


Building up the raw materials community. 2014-2017: €291 million, more than 560 distinct participants in 54 projects

EU Contribution per Area, €
(Total = 291 million €)



Participations per Participant type.
Distinct participants



Our future demand...

Sustainable Mining will be needed

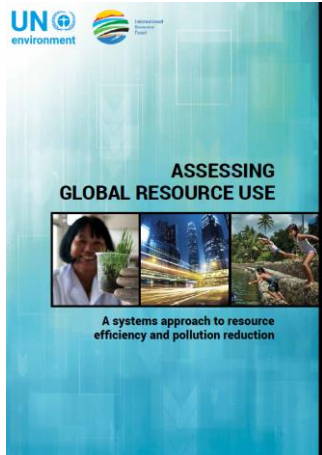
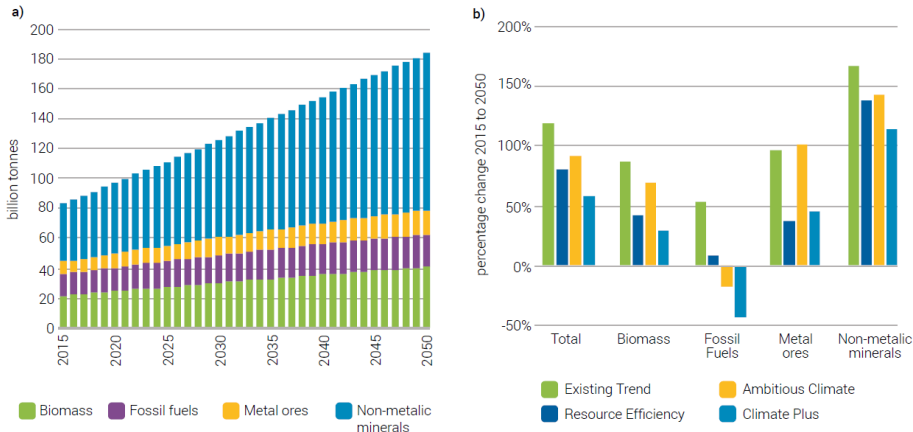


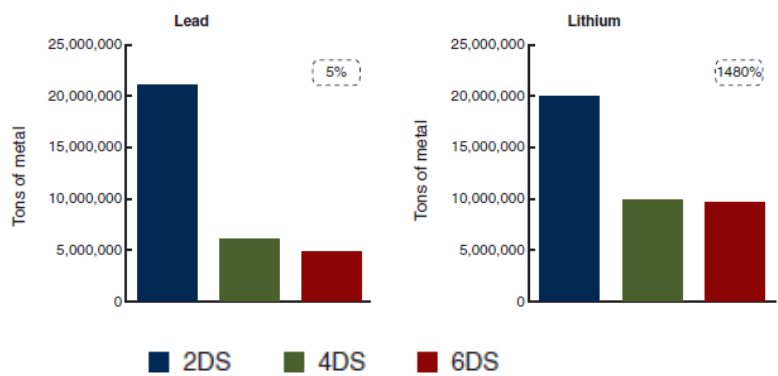
FIGURE 2.24 Global resource extractions (DE) by four categories (biomass, fossil fuels, metal ores and non-metallic minerals) (a) 2010–2050 for Existing Trends, and (b) change from 2015 to 2050 for four scenarios



Global material resource use is expected to reach nearly 90 billion tonnes in 2017 and may more than double from 2015 to 2050...

IRP (2017). Assessing global resource use: A systems approach to resource efficiency and pollution reduction. Bringezu, S. et al. A Report of the International Resource Panel. UNEP. Nairobi, Kenya

The Growing Role of Minerals and Metals for a Low Carbon Future



...technologies supporting a carbon-constrained future will cause demand for a wide range of base metals, as well as for rare earth metals, to increase...

...the technologies assumed to populate the clean energy shift are in fact significantly MORE material intensive than current traditional fossil-fuel-based energy supply systems...





EUROPEAN INNOVATION PARTNERSHIP ON RAW MATERIALS (EIP)
HIGH LEVEL STEERING GROUP (HLSG)
POSITION PAPER ON FUTURE ORIENTATIONS
20 December 2017

*The importance of raw materials, particularly critical raw materials, for the **competitiveness of all industrial value chains**, within both the EU and the global economy, will grow even more as the demand for sustainable products and circular consumption is expected to increase strongly...*

THE WAY FORWARD

- Improve framework conditions:

*Strengthen partnerships between the **EU, Member States and regions** to improve the framework for jobs, growth, innovation and sustainable development*



Minerals framework

Report "Evaluation and Exchange of Good Practice for the Sustainable Supply of Raw Materials" (2014)

MINLEX study (2017) - Legal framework and permitting procedures in the NEEI in EU28

MIN-GUIDE (2016-2018) developing a "Minerals Policy Guide"

MIREU - EU network of mining and metallurgy regions (2017-2020)

REMIX - Smart and Green Mining Regions of EU (2017+)

Access to mineral potential in the EU

MINATURA2020 (2015-2017)

To develop a concept and methodology for the definition and subsequent protection of "mineral deposits of public importance"

MINLAND (2017-2019) Mineral resources in sustainable land-use planning



Knowledge sources

Studies and projects

ORAMA (H2020, 2017-2019)

SCREEN expert network (H2020, 2016-2019)

CRM study (DG GROW, 2017)

Materials Systems Analysis (DG GROW study, 2014-2015 + **JRC**)

Minfuture (H2020, 2016-2018)

MICA (H2020, 2015-2018)

Minerals4EU (FP7, 2013-2015) + **GEO-ERA** (H2020, 2017-2021)

ProSUM (H2020, 2015-2017)

SmartGround (H2020, 2015-2018)

Minventory (DG GROW study, 2013-2015)

MINEA (COST action, ongoing)



Collaboration with key data providers

Eurostat

EuroGeoSurveys

National data providers

Next events



**EU-LA Mining & Exploration Convention and Trade Show
METS 2018. Madrid 10 – 12 April 2018.**

Registrations deadline 22 March 2018!!



3rd Raw Materials Week. Brussels, 12 - 16 November 2018
6th annual High level conference of the EIP on raw materials.
Many other events. More details soon!

Presentations of RM Week 2017 available on:
http://ec.europa.eu/growth/content/raw-materials-week-2017_en

Horizon 2020 - Raw materials webpage:

<http://ec.europa.eu/programmes/horizon2020/en/area/raw-materials>

H2020 Participant portal

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-climate_en.pdf

National NCP SC5 support and events:

http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

Horizon 2020 – EXPERTS:

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

H2020 Project abstracts and description of consortia:

http://ec.europa.eu/research/environment/pdf/research_and_innovation_sc5_projects_2014-2017a.pdf

EU raw materials:

http://ec.europa.eu/growth/sectors/raw-materials/index_en.htm

EIP on Raw materials:

<https://ec.europa.eu/growth/tools-databases/eip-raw-materials/en>

Raw materials Information System (RMIS):

<http://rmis.jrc.ec.europa.eu/>

EIT Raw materials:

www.eitrawmaterials.eu

iThanks for your attention!

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