

EU-AU vision for raw materials

How the EGS-OAGS co-operation on geological knowledge and skills can contribute



OAGS (Organisation of African Geological Surveys) – EGS (EuroGeoSurveys) Workshop
Cape Town, South Africa – 8-9 February 2015

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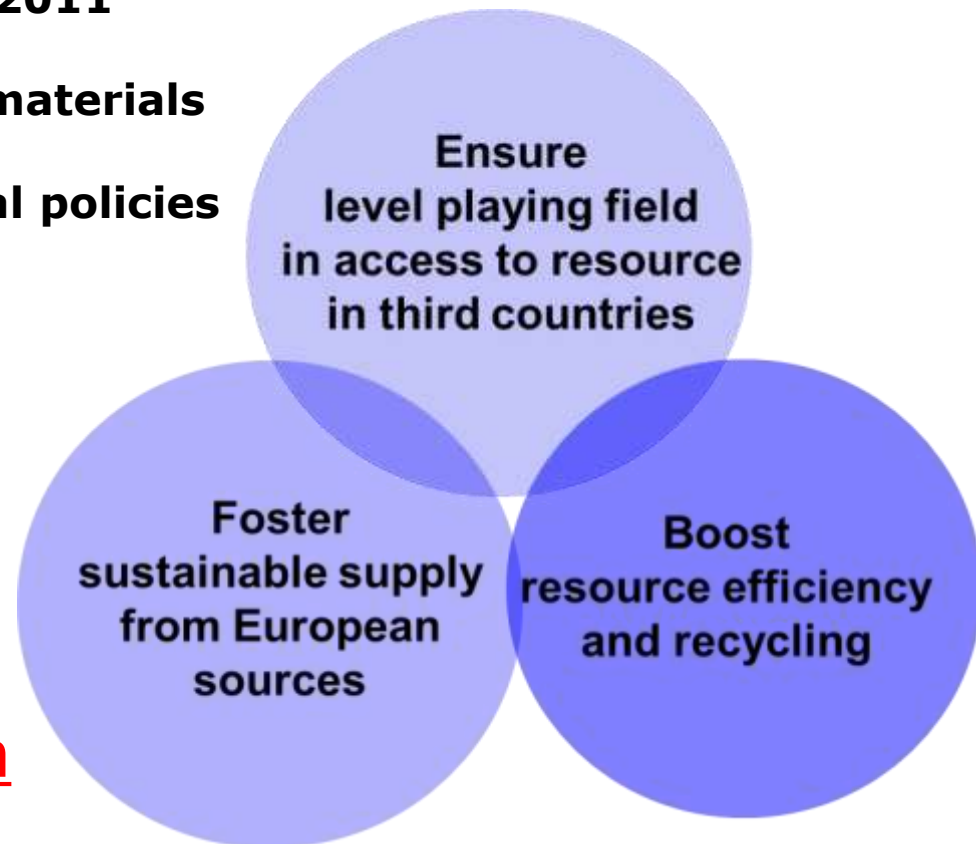
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Building blocks of the EU RMI



- **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 2011 and 2014**

A European counterpart
for the Africa Mining Vision





Joint Africa-EU Strategy

- Agreed upon during the Lisbon Summit (2007)
- Recently reinforced by the fourth EU-Africa Summit, Brussels, April 2014
- Declaration of EU and AU Heads of State and Government

JAES Action Plan 2011-13 and Road Map 2014-2017 include raw materials





Governance

Workshop on Mining Taxation

"Transforming mineral wealth into sustainable development", Addis Ababa on 9-10 December 2011

Investment and infrastructure

AU-EU joint event on infrastructure for extractive industries, Brussels, 19-20 March 2015

Geological knowledge and skills

Support for the EGS-OAGS scoping study on geological co-operation from the JAES support mechanism



AU-EU co-operation on raw materials – past political events

- **High-Level Conference EU-Africa Partnership on Raw Materials** Translating Mineral Resource Wealth into Real Development for Africa , 26 January 2012, Brussels
- **Joint Technical Working Session on EU-Africa Cooperation in Mineral Resources** between the European Commission and the African Union Commission, 22 November 2014, on the side of the Extraordinary Session of the Conference of African Ministers Responsible for Mineral Resource Development (CAMRMRD), Victoria Falls



Aim:

- **First attempt to map infrastructure needs of the raw materials and its waste sector in African countries**
- **Identify ways in which those can find support in the broader context of existing and planned infrastructure projects and networks, including transport, ICT, water and energy as well as all other types of infrastructure necessary for the sector to function.**



- Project proposal is based on the outcomes of an identification study by EGS in consultation with OAGS and European and African Geological Surveys
- Proposal for funding from the Pan-African Programme Multi-Annual Indicative Program
- **Objective:**
To increase African-owned geological knowledge and skills needed for sustainable use of mineral resources.



Main results

- Staff of African geological surveys and other relevant institutions are trained on:
 - Geoscientific mapping and use of geo data
 - Managing challenges related to Artisanal and Small-Scale Mining (ASM)
 - Managing environmental problems and issues (air and water pollution, waste, etc.)
 - Geohazards and geoheritage
 - Sustainable use of geological and mining heritage
- African Geological Surveys benefit from an increased access to geoscience information infrastructure through the development and implementation of a regional spatial data infrastructure (SDI) for geological knowledge management.
- Dialogue on mineral resources in place between the OAGS, the EGS, African Geological Surveys and other relevant stakeholders such as civil society and the private sector



International co-operation in the European Innovation Partnership on Raw Materials

EIP target:

Creating a “pro-active international co-operation strategy of the EU at bilateral and multilateral level, promoting synergies with countries such as the US, Japan, Australia, Canada, Latin America and the African Union across the different areas covered by the EIP

EIP Strategic Implementation Plan (SIP) - International Cooperation pillar

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



AELPK. "Africa-EU-Latin America Raw Materials Platform Kandandu"

- (i) Stimulate and enhance the cooperation between researchers from the EU, Africa and Latin America,
- (ii) promote the opportunities offered by the EU to international partners,
- (iii) divulge on a EU level and internationally the best practices of the European mining industry and the European companies, products and services,
- (iv) identify investment areas in Europe,
- (v) offer training and education related to the mining activity to students and professionals from the EU, Africa and Latin America,
- (vi) prepare a memorandum to promote cooperation with regard to research between the EU and African and Latin American countries and
- (vii) use existing networks, common language and heritage to promote Europe as a gateway to Africa and Latin America.

Lead partner institution: ANIET – Associação Nacional da Indústria Extractiva e Transformadora



E3M. "Moanda School of Mining and Metallurgy"

The objective of the commitment is to support concrete EU-Africa co-operation on a non-technological subject via the construction of the Moanda School of Mining and Metallurgy (E3M) in Gabon.

This commitment includes four partners:

- *Eramet Comilog Manganèse (ECM), a French miner, with established operations in Gabon,
- *the Gabonese State,
- *Lorraine University, France (expert academic institution in the fields of geology and metallurgy),
- *and a fourth partner with expertise in pyro-metallurgy (still to be identified).

The creation of the E3M School should increase the employability of Gabonese mining and metallurgy graduates, as well as the employability of other Francophone Africans, who have already received a more theoretical education in mining and metallurgy from the Masuku Science and Technology University. The courses offered by the E3M School will train engineers and technicians up in the sector's best technologies, including environmental protection technologies.

Lead partner institution: ERAMET Comilog Manganèse



EWIT. " EWIT: Developing a e-waste implementation toolkit to support the recycling and the secondary raw material recovery strategies in metropolitan areas in Africa"

Create a Partnership across Africa and Europe focused on delivering advancements in recycling as a key component of metropolitan areas' waste management strategy, using e-waste as a pilot to build up a modern and effective reference model. We will maximize recycling opportunities in Africa to generate economic value, increase environment and health protection and protect current jobs while improving their effectiveness and working conditions. We will generate synergies between Africa and Europe related to technology transfer and e-waste flows monitoring and control, to minimize illegal export from Europe exploit the available data on waste generated; define and develop the conditions and actions necessary to implement effective waste recycling systems in metropolitan areas; develop standards and benchmarks to improve e-waste collection and materials recycling.

Lead partner institution: International Solid Waste Association

IMAGINE. " Industrial Minerals Associations' Global Innovative Network"

IMA-Europe and in North America (IMA-NA) will initiate the creation of an international platform on industrial minerals (IM) to facilitate dialogue between the relevant global stakeholders in parallel with the creation of a network of IM focal points in the Asia-Pacific region - with support of the global IM companies partnering up under this initiative.

Objectives:

1. Facilitate international dialogue on RM Policy, in particular between Europe, North America and the Asia-Pacific region in view of improving the framework conditions for IM supply and creating a fair level playing field for the IM sector and its downstream industries;
2. Address global regulatory aspects via a strong network of IM producers represented by IMA-Europe and IMA-NA, and a network of focal points in the Asia-Pacific region (to be created with the help of the partnering European and North-American based companies with operations worldwide);
3. Share and promote good practices in the IM Sector (health & safety, environment);
4. Raise the profile of the sector worldwide and gain public acceptance of mining and production operations.

Lead partner institution: Industrial Minerals Association-Europe



Metallica. " De Re Metallica International Chair"

This project aims at building an operational task force (the De Re Metallica International Chair) able to drive projects dealing with higher education in raw materials. The basic idea is that a target country, which wants to set up its own higher education system for raw materials science, technology, and industry can benefit from EU expertise to do that. The target countries will be areas lacking experts in raw materials with specific efforts in Africa and Latin America. This project is based on the consortium which operates the Erasmus Mundus Master "Emerald" dedicated to georesources engineering, associated with Madrid Polytechnic University. The De Re Metallica International Chair will be a part of the European contribution to the African Mineral Development Center, with special emphasis of results area 6 (building human and institutional capacities), and 3 (Governance and Participation). In addition, this project will create triangular cooperations between the EU, target countries, and nations of high raw materials expertise.

Lead partner institution: Université de Lorraine



PLATINUM. " The Platinum Consortium: promoting research and innovation on platinum and related metals"

Platinum, a noble metal, lends its name to our consortium. The platinum-group metals (PGE) are widely used in high-technology industry, most notably in catalytic converters. They are the most critical of elements because >70% of global production (ca. 160 t) comes from South Africa and Russia, countries whose long-term stability is not assured. Only ca. 25% is recycled. Production in Europe is insignificant but chances of finding new deposits are high, both in Europe (Nordic and Baltic countries) and elsewhere (Greenland and Africa) Our consortium has a balanced membership from universities (7 partners), government surveys (4) and industry (6).

Objectives, all applied to the PGE and related metals (Ni, Cr, Co and V) are to:

- promote innovative research on ore formation, mineral exploration, refining and recycling
- foster exploration and mining in selected regions in Europe and Africa - help assure a reliable supply of metals for European industry
- promote innovative teaching, training of future professionals and dissemination of information to the general public.

Lead partner institution: ISTERre, Université Grenoble Alpes



SC5 11 - New solutions for sustainable production of raw materials – RIA - €48 million

- New exploration technologies and geomodels (2015)
- Deep mining on continent and in sea-bed (2015)
- New metallurgical systems (2015)

SC5 12 - Innovative and sustainable solutions leading to substitution of raw materials – RIA - €10 million

- Materials under extreme conditions (2015)

Waste 4 - Towards near-zero waste at European and global level – CSA - €4 million

- Raw materials partnerships (2015)

* Work programme 2015 updated on 22 July 2014.



SC5 13 - Coordinating and supporting raw materials research and innovation - CSA - €8 million

- Raw materials intelligence capacity (2015)
- Innovation friendly minerals policy framework (2015)
- Raw materials research and innovation coordination (2015)
- **Strategic international dialogues and cooperation with raw materials producing countries and industry (2015)**

Cross-challenge topics (specific deadlines)

- SME Instrument - Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials (€260 million, of which €19 million from SC5)
- Fast track to innovation pilot - Part 18 of this Work Programme (€100 million)



Horizon 2020 is open to participants from third countries in any of the calls (also geological surveys)

Programming of Work Programme 2016-17 just started:

- **Intention to further develop expert networks on critical raw materials based on the success of ERECON Network**
- **International network of training centers in the area of raw materials**
- **Continue with strategic international dialogues with raw materials producing countries**