



Responsible and Sustainable Mining, a review of international and local initiatives

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TWO WORDS ON BRGM SEVERAL INITIATIVE IN ADVANCED MINING COUNTRIES

- CANADA
- FINLAND
- AUSTRALIA

A RESTART IN EUROPE? AND IN DEVELOPING COUNTRIES?



Geoscience for a sustainable Earth

brgm

THE FRENCH GEOLOGICAL SURVEY

**THE BRGM IS FRANCE'S LEADING
PUBLIC INSTITUTION WORKING IN
EARTH SCIENCE APPLICATIONS
FOR THE MANAGEMENT OF SURFACE
AND SUBSURFACE RESOURCES
AND RISKS.**

**ITS ACTIVITIES ARE GEARED
TO SCIENTIFIC RESEARCH, SUPPORT
TO PUBLIC POLICY DEVELOPMENT
AND INTERNATIONAL COOPERATION.**

UNDERSTANDING

*geological phenomena
and associated risks.*

DEVELOPING

new methodologies and techniques.

PRODUCING

*and disseminating data to support
the management of soils, subsoils
and their resources.*

DELIVERING

*the necessary tools for managing soils,
subsoils and their resources, preventing risks
and pollution and developing
climate change policies.*

Over

1000 staff

including more than 700 engineers and researchers



**BUILDING ON
GEOLOGY AS ITS
CORE COMPETENCE,
BRGM DEVELOPS
EXPERT KNOWLEDGE
IN RESOURCE
MANAGEMENT,
RISK MANAGEMENT
AND INNOVATIVE
ECOTECHNOLOGIES.**

**THESE ACTIVITIES
ARE ORGANISED INTO
10 MAIN TOPIC AREAS
THAT ADDRESS
DIFFERENT
INDUSTRIAL AND
SOCIAL CHALLENGES.**



GEOLOGY



MINERAL RESOURCES



GEO THERMAL ENERGY



**GEOLOGICAL STORAGE
OF CO₂**



POST-MINING



RISKS



WATER



**ENVIRONMENT
AND ECOTECHNOLOGIES**



**LABORATORIES
AND EXPERIMENTATION**



INFORMATION SYSTEMS



FRANCE – RESPONSIBLE MINING PROJECT



- A complete study published in March 2017: “La mine en France”.
- The target is to feed with objectivity and liability the discussions around the mining projects in France metropolitan area and in French Guyana.
- 13 books available on mineralinfo.fr in... French and especially one on the comparison of the international initiatives.





CANADA - GREEN MINING INITIATIVE

Enhancing mine productivity
managing water in the mining cycle
minimizing and managing mine waste
Energy efficiency in mining
green mining initiative video



BRGM THE FRENCH GEOLOGICAL SURVEY WWW.BRGM.FR





FINLAND'S GREEN MINING CONCEPT

→ Promotes materials and energy efficiency

→ Ensures availability of mineral resources for future needs

→ Minimizes adverse environmental and social impacts

→ Improves work and organisational practices

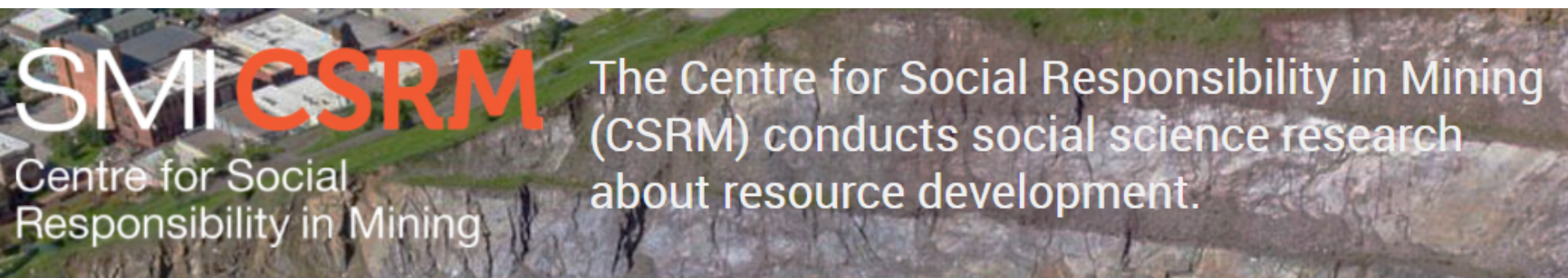
→ Ensures sustainable land use following mine closure

Social license to operate



AUSTRALIA SOCIAL RESPONSIBILITY IN MINING

- CSRM is a leading research centre committed to improving the social performance of the industry globally.
- The focus is on the **social, cultural, economic and political challenges** that occur when change is brought about by mineral resource extraction. CSRM contributes to industry change through independent research, teaching and by convening and participating in multi-stakeholder dialogue processes.





EUROPE GREEN MINING RESEARCH PROJECT

- Green mining is a set of methods to reduce the impacts associated with the ore extraction and processing.
- The aim of the “Green Mining” task included in I²MINE project is **to list, classify and describe the potential impacts of mining activities and the mitigation methods already existing, ready to be implemented or still in draft form.**
- Focus is here on gas emission, mine water, waste, subsidence and environment.



Green Mining: Decision support
system for environmental impacts

INERIS

controlling risks
for sustainable development

AN EXAMPLE IN AUSTRIA: MITTERSILL

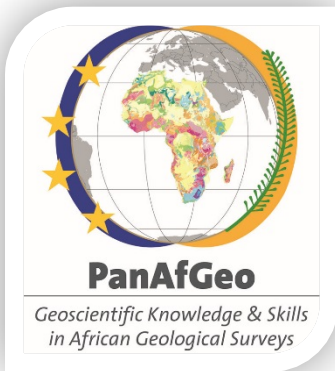


AND USA OR CHINA...



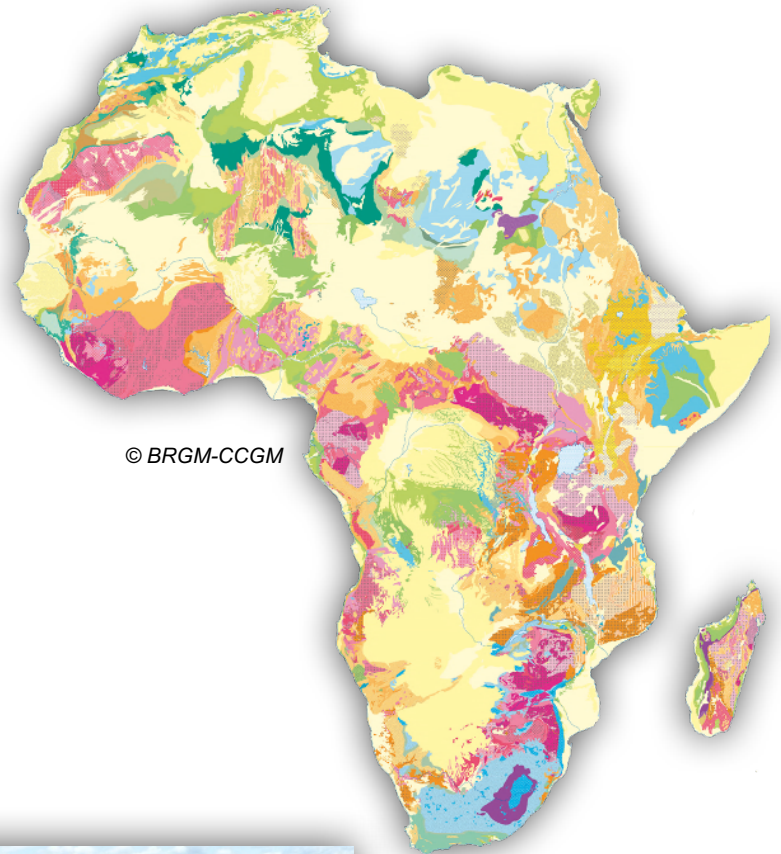
AND IN AFRICA?



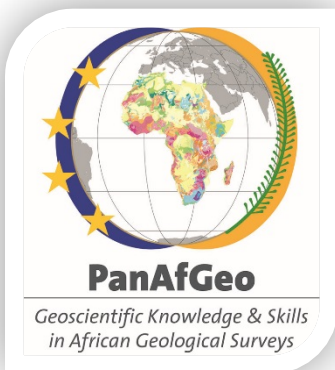


GEOSCIENTIFIC SKILLS IN PANAFGEO

- WP1: Geoscientific mapping
- WP2: Mineral resources assessment
- WP3: Artisanal and small-scale mining
- WP4: Environmental management of mines
- WP5: Geohazards
- WP6: Geoheritage
- WP7: Geoinformation management
- WP8: Communication and Promotion

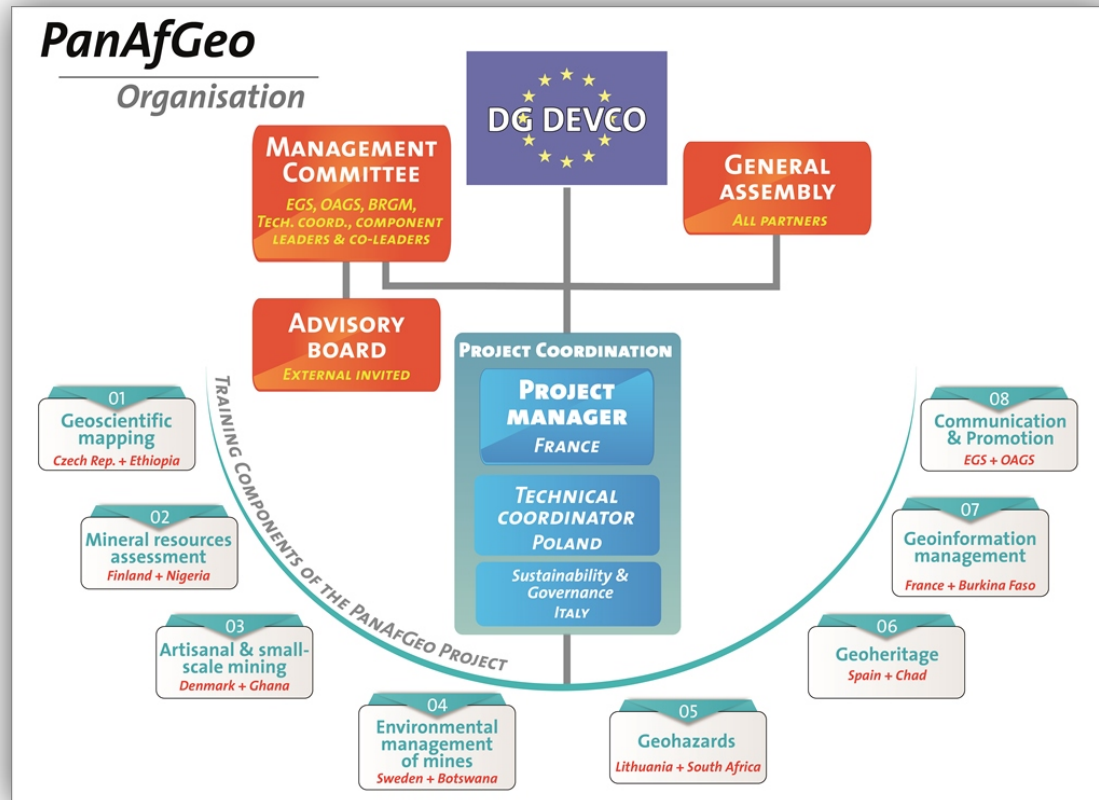


Co-funded by the
European Union



A TRAINING PROJECT IN AFRICA: PanAfGeo

- **Coordination team**
- **8 European WP Leaders**
- **8 African WP Co-Leaders**
- **8 African WP Deputy Co-Leaders**
- General Assembly
- Advisory Board
- Management Committee



Co-funded by the
European Union





TO CONCLUDE

Responsible Mining: a reality which is highly variable from one country to another.

An social and economical challenge in the mining countries with several technological researches.

A question mainly ecological and social in the (re)starting countries.

In the developing countries, in addition, there is an important question of training and of development of geological infrastructures.



THANK YOU