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Activities of EuroGeoSurveys on mineral resource data harmonization projects, examples

Zoltán Horváth Dr. MBFSZ and EGS



Application of UNFC to minerals and anthropogenic
resources: Sustainable management of raw material
resources, 26 August 2020

EGS activity in general

Need of data harmonization



UNEP

- Secretary General: Slavko Solar, Chair of the MREG: Daniel Oliveira

Establishing a Geological Service for Europe

I Pillar: Research

II Pillar: Infrastructure

III Pillar: Outreach



Sharing Knowledge & Infrastructure
Communication



Data harmonization in and by the EGS

Application of UNFC is supported



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- UNFC codes can be indicated in the EGDI



<http://www.europe-geology.eu>

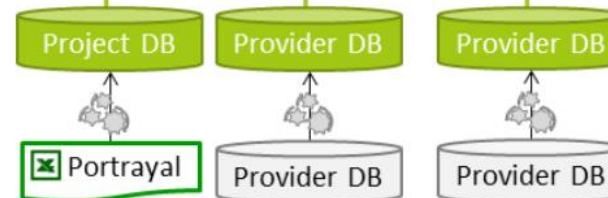
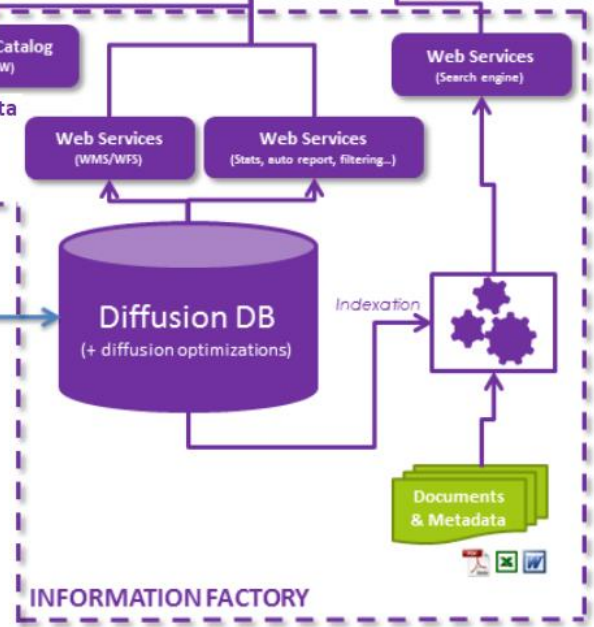


DB SYNCHRONIZATION



Harvesting mechanism (ETL process)

Deegree 3

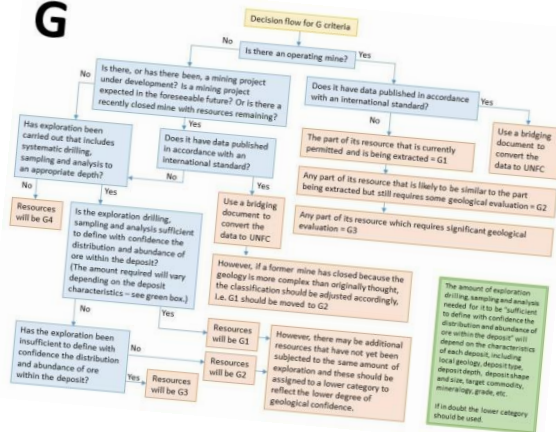


Standardized data

ETL process

Provider's own format

G



BGS



Data optimization

ORAMA project



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orama-h2020.eu/downloads/

Public ORAMA deliverables and dissemination material such as flyers, printouts of each embedded window and downloaded by clicking the Download link

Deliverables Led by GTK

WP1 Primary raw materials

WP2 Secondary Raw Materials

WP3 Demonstration

D1.1 Initial analysis for the improvement of

[DOWNLOAD / OPEN FILE](#)

D1.2 Final analysis and recommendations raw materials

[DOWNLOAD / OPEN FILE](#)

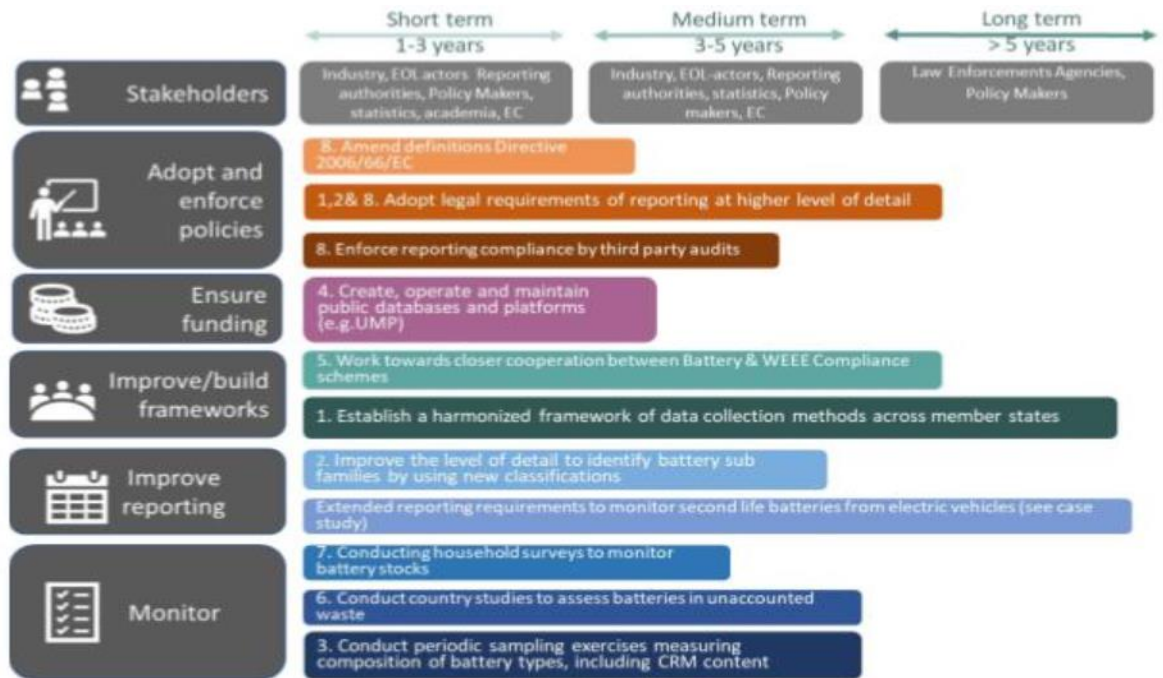
D1.3 Report on the datasets available related to

[DOWNLOAD / OPEN FILE](#)

D1.4 Draft good practice guidelines

[DOWNLOAD / OPEN FILE](#)

Flyers



DOWNLOAD THE TRAINING MATERIALS

Agenda

Morning Session (11 MB)

[Primary Raw Materials Session](#) (21 MB)

[Secondary Raw Materials Session](#) (34 MB)

NOTE: Final version of the training materials can be found in Deliverable 4.2 (21 MB)

Examples and training materials for Hungary, Norway, UK

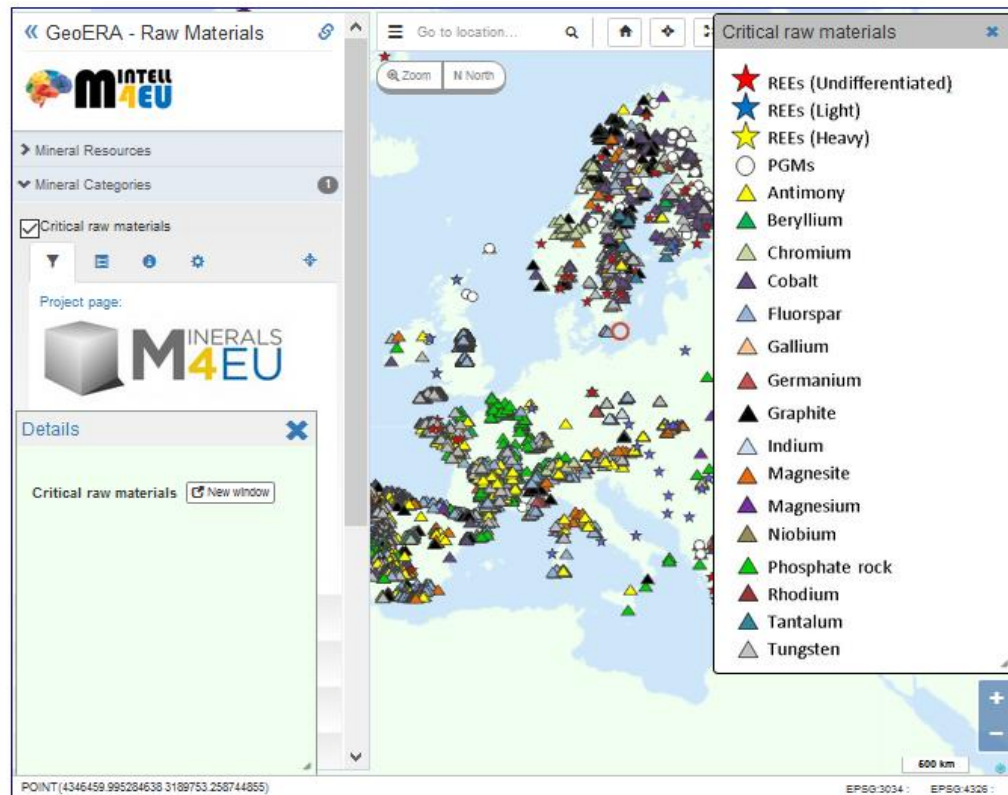
GEOERA: MINTELL4EU and FRAME

Developing minerals intelligence for Europe



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Co-ordinator: Geological Survey of Denmark and Greenland (GEUS)



MINTELL4EU

- Improving the quality and spatial coverage of the Minerals Inventory,
- Testing the application of the UNFC classification system as a tool to obtain more accurate pan-European mineral inventories;
- Recommendations of communication and interaction between already existing databases and data portals, and the Raw Materials Information System (RMIS);



- Critical and Strategic Raw Materials Map of Europe
- Critical Raw Materials in phosphate deposits, and associated black shales
- Energy Critical Elements
- Conflict free Nb-Ta for the EU
- Consideration of UNFC application and serving data to other GEOERA projects (synergy between MINTELL4EU and IT Platform projects)

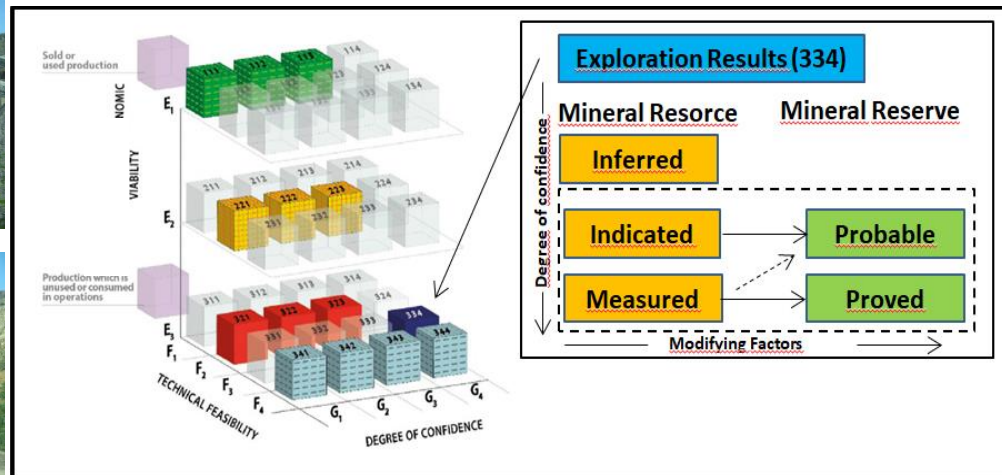
Some examples

Inventory



Data and photo are illustrations

Site ID	Raw material	Status of the mine	Complexity group	Original national classification			After conversion			
				A+B	C1	C2	Proved Reserves 111	Probable Reserves 112	Measured Resources 221	Indicated Resources 222
● Site 1	Gravel	active	1	2 350 000	3 620 000	4 742 500	5 970 000	4 742 500	0	0
☺ Site 2	Rhyolite	suspended	1	0	777 638	0	0	0	777 638	0
★ Site 3	Dacite	closed	1	0	142 000	219 900	0	0	142 000	219 900
▲ Site 4	Sand	expl. area	1	0	0	85 000 100	0	0	0	85 000 100



Some examples

For mine waste heaps



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Need of feasibility studies on potential, socio-economic and environmental viability



A mine waste heap of an ore mine (Google Earth image)

Total material quantity initially in place	Past sourcing		Sales Production			
	Future sourcing		Non-sales Production			
			Class	Categories		
				E	F	G
Known Anthropogenic Material source	Future sourcing by commercial development projects or ongoing sourcing operations.		Commercial Projects	1	1	1, 2, 3
	Potential future sourcing by contingent development projects or ongoing sourcing operations.		Potentially Commercial Projects	2	2	1,2, 3
			Non-Commercial Projects	3	2	1, 2, 3
	Additional quantities in place associated with known <u>Anthropogenic Material Sources.</u>			3	4	1, 2, 3
Potential Anthropogenic Material Source	Potential future sourcing by successful exploration activities from potential Anthropogenic Material Sources.		Exploration Projects	3	3	4
	Additional quantities in place associated with potential <u>Anthropogenic Material Sources.</u>			3	4	4

e.g. depending on preliminary analysis

Specifications for the application of the United Nations Framework Classification for Resources to Anthropogenic Resources (MINEA and UNECE EGRM)

Thank you

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Inventory

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