

Bridging from different International and National Systems to UNFC

Hungarian Case

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Hungary



RESOURCE MANAGEMENT WEEK

2024

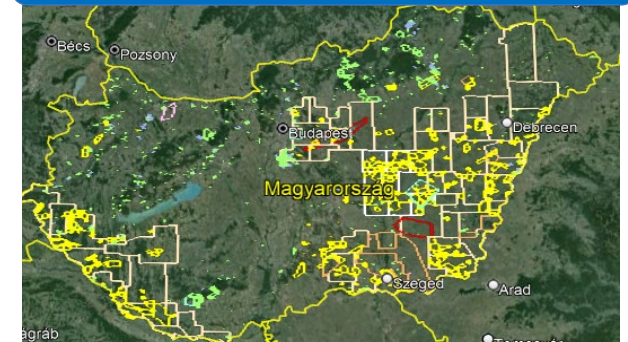


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Resource management in Hungary

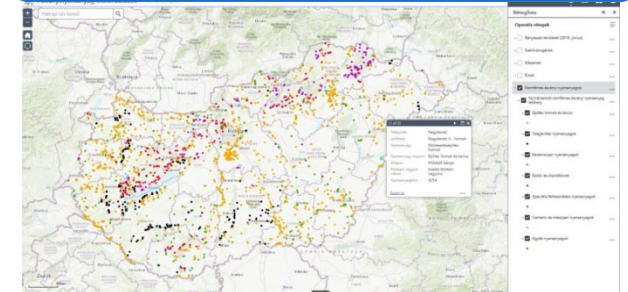
- The Directorate of the Mining Supervision with its regional Mining Supervision Departments performs the authority procedures of mining activity.
- Act XLVIII of 1993 on Mining is a pillar for resource management.
- 20/2022 (I.31.) SARA Decree on certain rules for the implementation of the Mining Act provides more details e.g. for resource inventory.
- Other selected specific regulations: 13/2022 SARA Decree on mining wastes and Act CL (2016) on general administrative regulations
- SARA maintains the State Register of Mineral Resources and Geothermal Energy (since maintained 1953) and the inventory of mining areas (since 1995).
- In Hungary, mineral resources and geothermal energy are state-owned at their natural location.

Inventory of mining areas



<https://sztfh.hu/nyilvantartasok/banyaszati-teruletek-nyilvantartasa/>

Inventory of mineral resources and geothermal energy

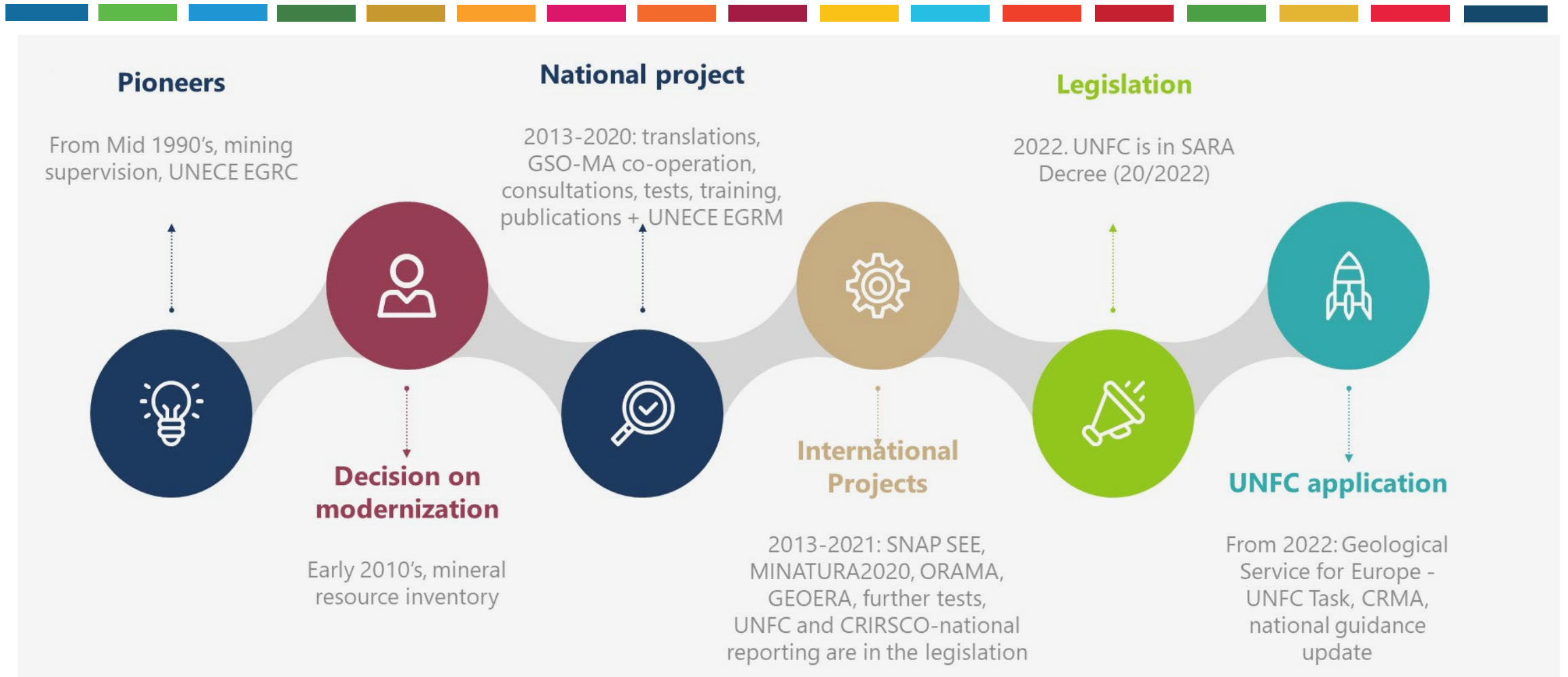


https://map.mbfisz.gov.hu/asvanyvagyon_kataszter/



UNFC activity in Hungary

Brief history



Selected legislative aspects

Including reporting and UNFC

- 20/2022. (I. 31.) SARA Decree on certain rules of law enforcement XLVIII of 1993 on mining



Bridging option to UNFC

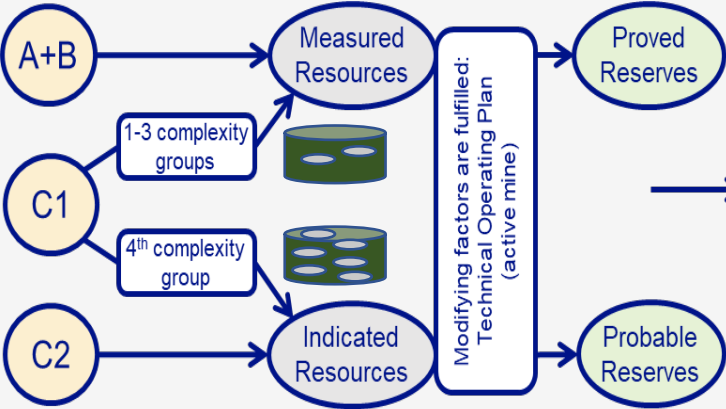
With CRIRSCO

National classification and reporting

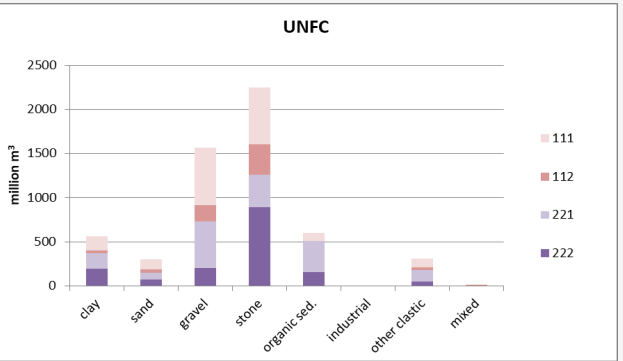
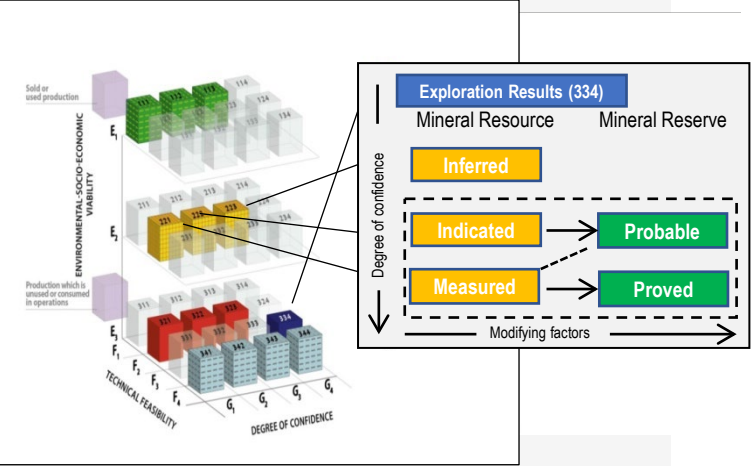
Category	General knowledge	Knowledge on additional parameters	Sampling, recovery
A	Extrapolation is forbidden	Groundwater Tectonics	Min. 80 % full logging Boreholes
B	Extrapolation is allowed		Min. 80 %, in bore-holes more than half with logging
C₁	Extrapolation based on similarities		Sampling: less than in category B
C₂	Extrapolation single observations		Minimum

Example for a regional level data management (North Eastern Hungary)

National to CRIRSCO



From CRIRSCO to UNFC



National reporting system to UNFC

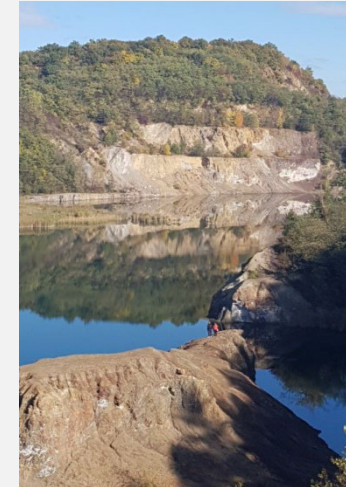
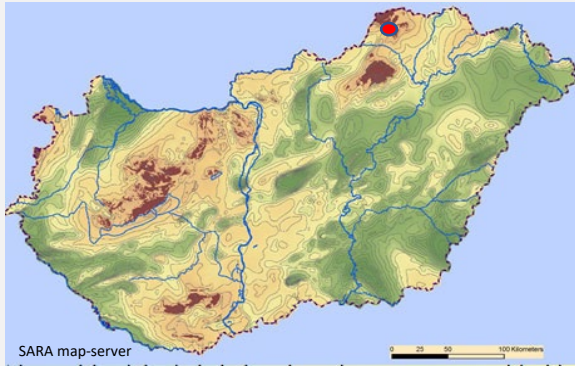
With UNECE UNFC Guidance for Europe (2020)

	UNFC code	Description of cases with valid licences (TOP)	UNFC name	
1.	E1.1., F1.1., G1+G2	Mining plot with extraction TOP (Technical Operation Plan).	viable project	<p>G category: A,B,C1 + C2 (L/M complex): G1; C2 (High complex): G2 (D: G3)</p> <p>Acces data to „E” category: TOP, Co-authorities Internet</p> <p>Benefits: Most E,F,G related data is in the SARA</p> <p>Resource- management</p>
2.	E1.1., F2., G1+G2	A newly established mining plot that does not have a TOP yet. Within 5 years from the date when the authority decision on establishing the mine becomes final, the licensee must submit the extraction TOP.	viable project	
3.	E2., F2.2., G1+G2	Mine that currently has no TOP, but neither tendering, nor new licensee, nor mine closure are not the case. In this case, the mining authority obliges the licensee to submit a TOP.	potentially viable project	
4.	E2, F2.1., G1+G2	Mine or mineral deposit that has TOP for development or mine for which tendering is in progress. After cancellation of the mining right by the authority the mining right can be obtained again through a tender.	potentially viable project	
5.	E2, F2.2., G1+G2	Mine that has TOP for suspending mining activity. After suspending the activity, extraction can be restarted at any time.	potentially viable project	
6.	E3.3, F4, G1+G2	Mine that has TOP for mine closure and mine where mining activity has been permanently stopped. E.g. the landscaping and reclamation tasks are carried out; or mine where implementation of the mine closure TOP has already been approved by the mining authority.	non-viable project	
7.	E3.1, F2.3, G1+G2	Mine without licensee, after failed tendering. The mining right was tendered on two occasions but both were unsuccessful.	non-viable project	



Case study

Rudabánya



- Stratiform Pb-Zn
- Metasomatic Fe-carbonate
- Tectonically fragmented ore bodies
- Barite zone with sulphides (Pb, Zn, Ag, Sb, Cu)
- Epithermal systems (Hg, Ag, Sb, As enrichments).
- Historical mining area from 1487 (Ag)
- 1880's-1985: iron ore mining.
- New researches and explorations

- Detailed surface and underground exploration results
- 2600 deep boreholes (deepest: ~ 1000 m)
- Drillings analysis database of 32,000 samples (Földessy 2020)
- Documentations are at the University of Miskolc and at the SARA



Case study

UNFC classification

	Data source	Description	UNFC
E category	Inventory of mining areas, and internet	First exploration report approved with resource data, detailed EIA is in progress, new extended exploration is in progress, public hearing in the frame of EIA is planned later. Establishment of new mine plot has not yet initiated. No information on feasibility study (general business plan on the internet).	3.2
F category	Inventory of mining areas	Technical Operation Plan for the new exploration is approved. The technical feasibility for mining and processing is solved due to existing practices.	2.2
G category	Mineral resource and mining area inventories	Approved exploration report is available (2022) with proper identification of Measured and Indicated Resources. Reserve is not defined.	1,2 (3)



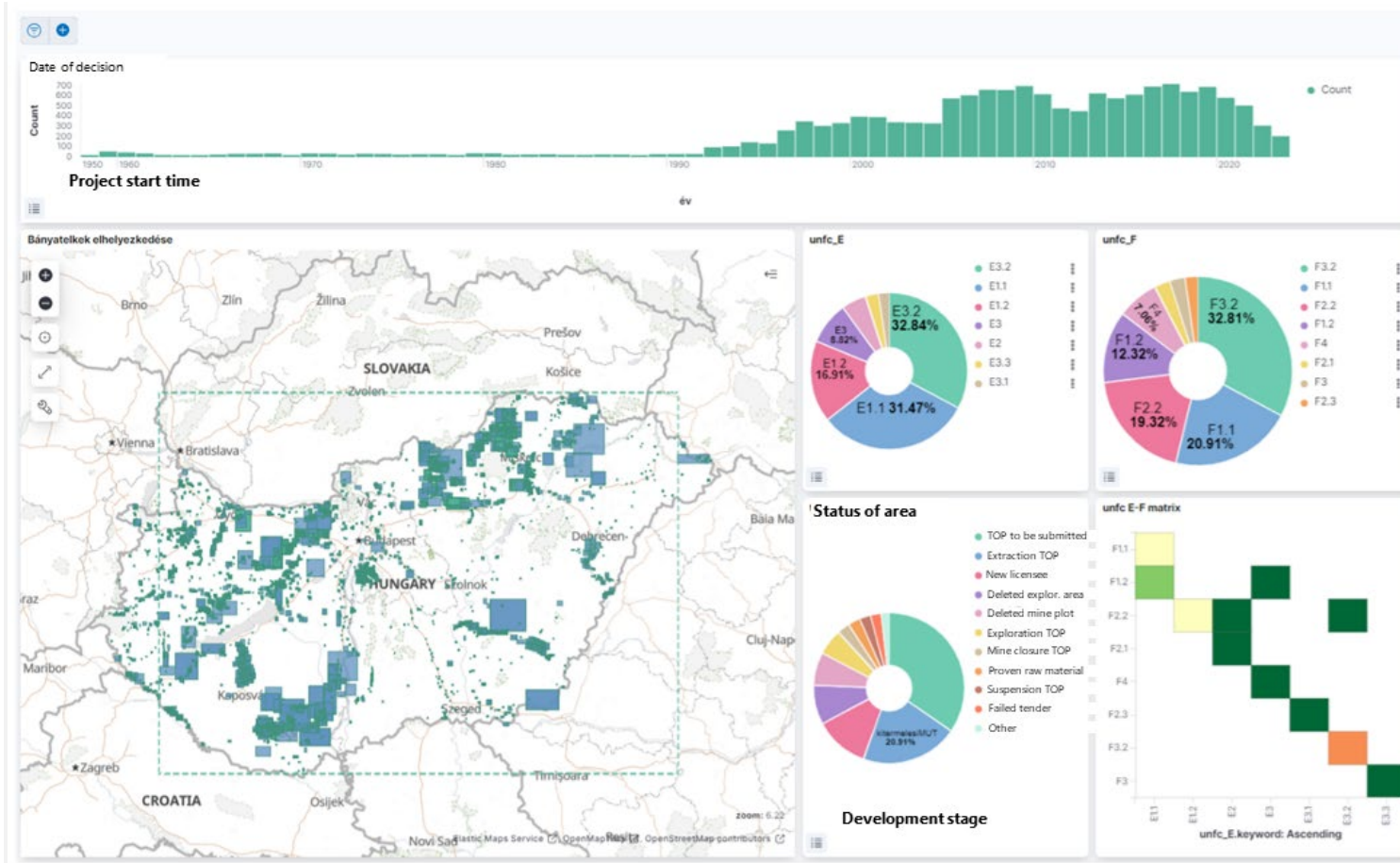
UNFC Classes Defined by Categories and Sub-categories						INSPIRE Code List		
Produced	Sold or used production							
	Production which is unused or consumed in operations Future production that is either unused or consumed in the Project operations is categorized as E3.1. These can exist for all Classes of recoverable quantities *							
Known Sources	Class	Sub-class	Categories					
			E	F	G#			
Total Products	Known Sources	Viable Projects <i>Estimates associated with Viable Projects are defined in many classification systems as Reserves, but there are some material differences between the specific definitions that are applied within different industries and hence the term is not used here. *</i>						
		On Production		1	1.1	1, 2, (3)	operating continuously operating intermittently	
		Approved for Development		1	1.2	1, 2, 3	under development	
		Justified for Development		1	1.3	1, 2, 3	pending approval	
		Potentially Viable Projects <i>Not all Potentially Viable Projects will be developed</i>	Development Pending		2 ^b	2.1	1, 2, 3	feasibility evaluation of the ore deposit
			Development On Hold		2	2.2	1, 2, 3	care and maintenance retention
		Non-Viable Projects <i>Non-Viable Projects include those that are at an early stage of evaluation in addition to those that are considered unlikely to become Viable developments within the Foreseeable Future. *</i>	Development Unclarified		3.2	2.2	1, 2, 3	resource assessment (geological interpretation, approximate calculation of the resource)
			Development Not Viable		3.3	2.3	1, 2, 3	closed abandoned historic
		Remaining Products not developed from identified Projects <i>Remaining Products not developed from identified Projects or Prospective Projects may become developable in the future as technological or environmental-socio-economic conditions change. Some or all these estimates may never be developed due to physical and/or environmental-socio-economic constraints. *</i>			3.3	4	1, 2, 3	
		Potential Sources	Prospective Projects		3.2	3.1	4	subsurface exploration
			3.2	3.2	4	detailed surface exploration		
			3.2	3.3	4	regional reconnaissance		
Remaining Products not developed from Prospective Projects			3.3	4.1	4			
			3.3	4.2	4			
		3.3	4.3	4				

From UNFC Guidance for Europe (2022)



UNFC data management

Kibana visualization - project result



Fuctionality

- Selection by Project start time, by UNFC Category, by project name
- Spatial selection by bounding polygon
- Detailed attribute list and external link to repository

Benefits

- Clear up to date resource management information based on inventories
- Supporting maintenance of project status with visualization



Involvement in the GSEU project

Professional and technical support



UNECE

UNFC Coordination Team:
UNECE, EC DG GROW, GSEU, FutuRaM

Co-operation with GSEU WP2 T.3. (ICE-SRM) on trainings, training materials, promotion



WP2, T2.4.
UNFC

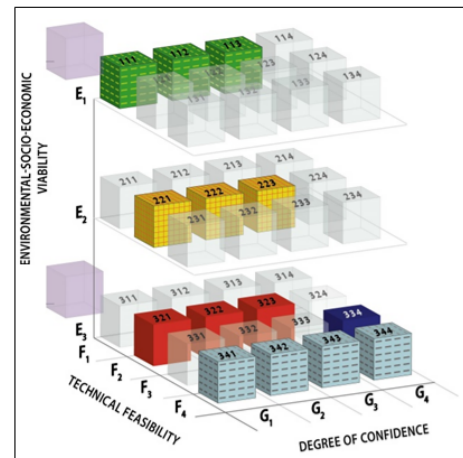
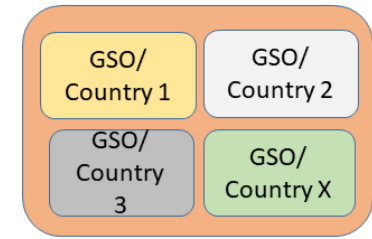
EGDI, UNFC
modul (WP7)



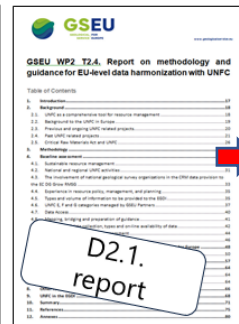
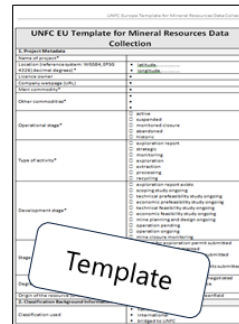
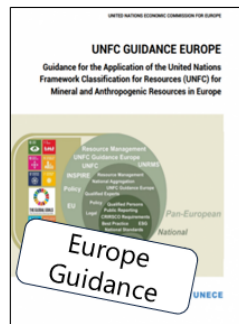
EC DG GROW
CRMA
Database

EGDI
F.A.I.R. data

Regular
CRM data
service



Ground-water (WP4)



UNFC Classes Defined by Categories and Sub-categories (NATIONAL GUIDE)				INSPIRE Code List
Class	Sub-class	Category	Sub-category	
1.1.1	1.1.1.1	1.1	1.1.1	1.1.1.1.1
1.1.2	1.1.2.1	1.1	1.1.2	
1.1.3	1.1.3.1	1.1	1.1.3	
1.1.4	1.1.4.1	1.1	1.1.4	
1.2.1	1.2.1.1	1.2	1.2.1	1.2.1.1.1
1.2.2	1.2.2.1	1.2	1.2.2	
1.2.3	1.2.3.1	1.2	1.2.3	
1.2.4	1.2.4.1	1.2	1.2.4	
1.3.1	1.3.1.1	1.3	1.3.1	1.3.1.1.1
1.3.2	1.3.2.1	1.3	1.3.2	
1.3.3	1.3.3.1	1.3	1.3.3	
1.3.4	1.3.4.1	1.3	1.3.4	
1.4.1	1.4.1.1	1.4	1.4.1	1.4.1.1.1
1.4.2	1.4.2.1	1.4	1.4.2	
1.4.3	1.4.3.1	1.4	1.4.3	
1.4.4	1.4.4.1	1.4	1.4.4	



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Summary

- **Mandatory data collection** for primary raw materials (addressing CRMs) and for mining wastes, in addition to decades of experience with UNFC support resource-management and the fulfillment of the CRMA (Art. 21).
- **National project on modernization** of mineral resource inventory considering international reporting codes and UNFC with bridging to national reporting terms helps to prepare UNFC guidance on national level.
- **Presentations** on national and international forums, and **stakeholder consultations** including ministries, geological survey, authorities, professional society, mining association and universities effectively contribute to the deployment of the UNFC to support sustainable resource management. This, with **trainings** on national level also helps to stakeholders to be familiar with UNFC and **to build capacity** (including education).
- **Integration of bridging** between national reporting and international reporting and the UNFC **to legislative document** makes easier the data management, and supports the fulfillment of the CRMA (Art. 6.) as well.
- **Specific visualization** of UNFC linked to official inventories can support decision making on regional and national levels.
- **The Geological Service for Europe (GSEU) project** with considerations of updated UNECE documents facilitates the update on UNFC guidance on national level.



THE VIEWS EXPRESSED ARE THOSE OF PRESENTERS AND DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED NATIONS.

Thank you!

Dr. Zoltán Horváth
Mining officer

UNECE

Date 22 | 04 | 2024, Geneva



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