



GSEU

GEOLOGICAL SERVICE | FOR EUROPE

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GSEU WP2 TRAIN-THE-TRAINER COURSE

Recap of Level 1

Level 2

Ljubljana , 14-15 May 2024



Funded by
the European Union



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09h10 – 09h20

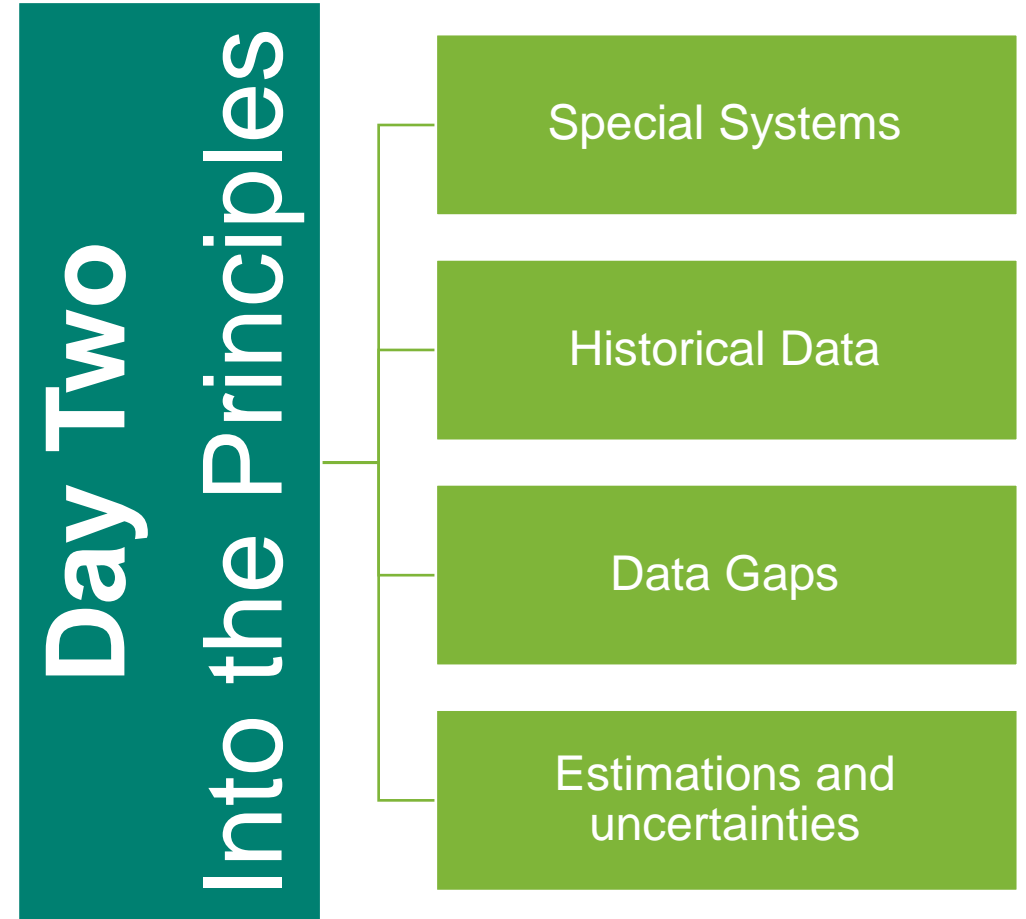
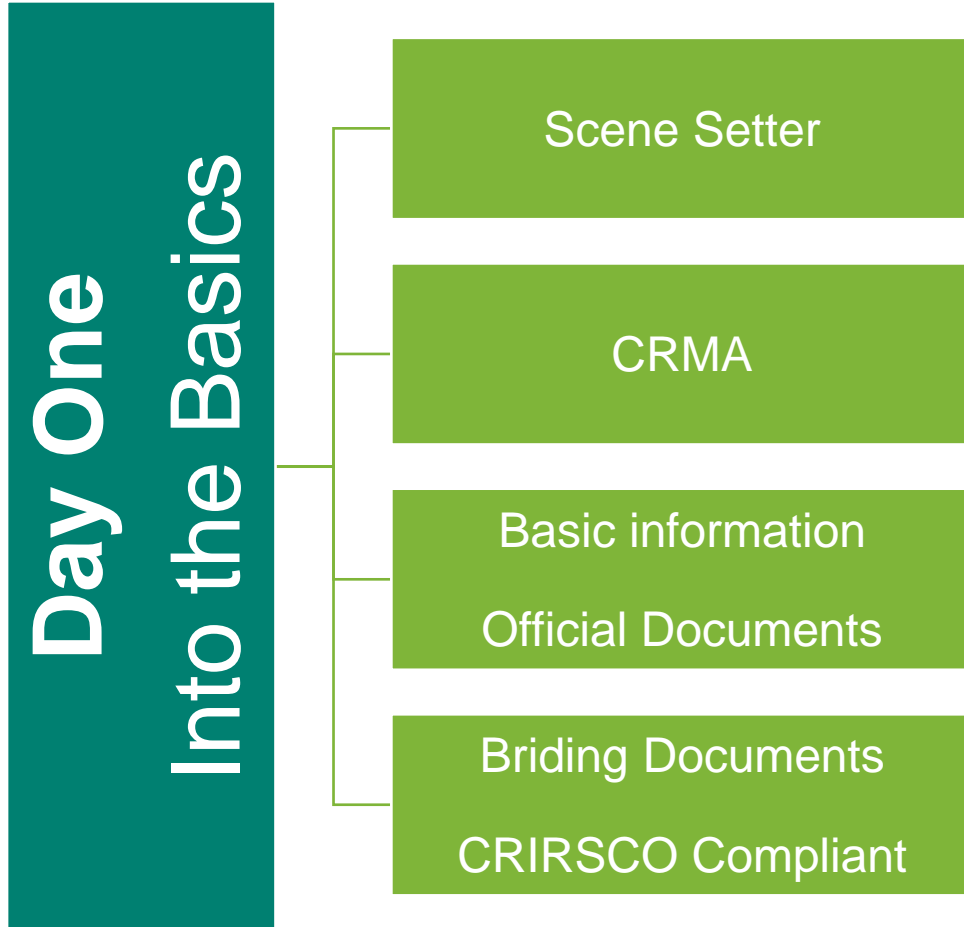
Recap of Level 1

- Recall of Level 1
- Concluding remarks



Recall of Level 1

Content

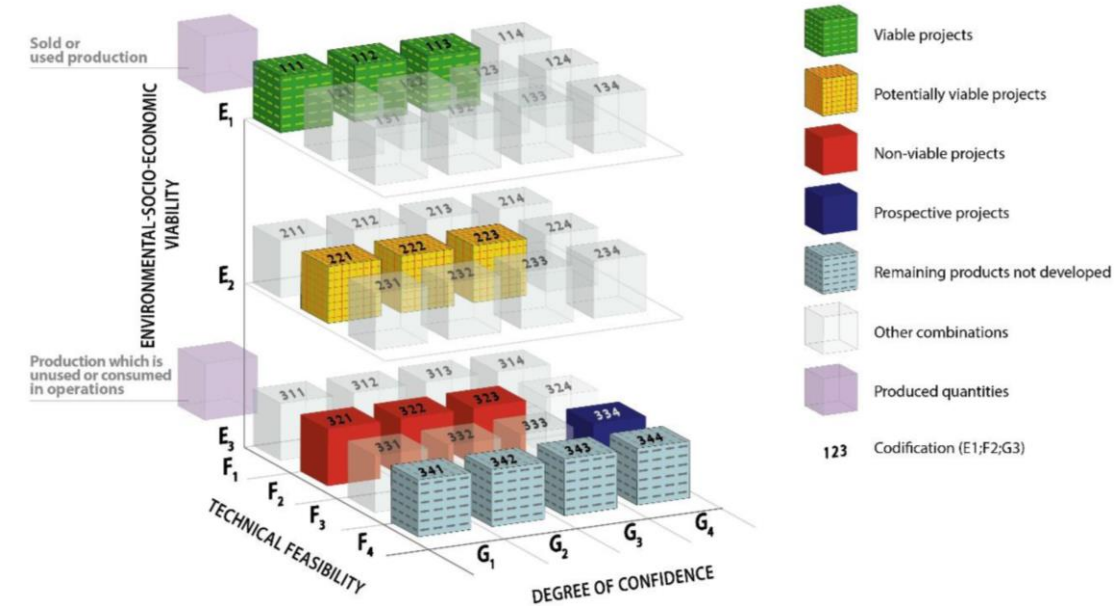




Concluding remarks

Basic information and Official documents

- **UNFC** is a tool to communicate the availability of resources and the maturity level of Projects by applying generic principles and harmonized terminology for classifying.
- **Several documents** are conducted to support users, to ensure harmonized terminology and to provide guidance for bridging existing mineral data inventories to UNFC.
- When applying UNFC, the legal framework followed by binding documents shall be respected.
- UNFC is a resource **classification system** while resource **estimation** is with the Competent Person.
- UNFC has its **limits** as for example it is currently **not a legally mandated standard** for financial reporting or for minerals inventory reporting within the vast majority of countries.

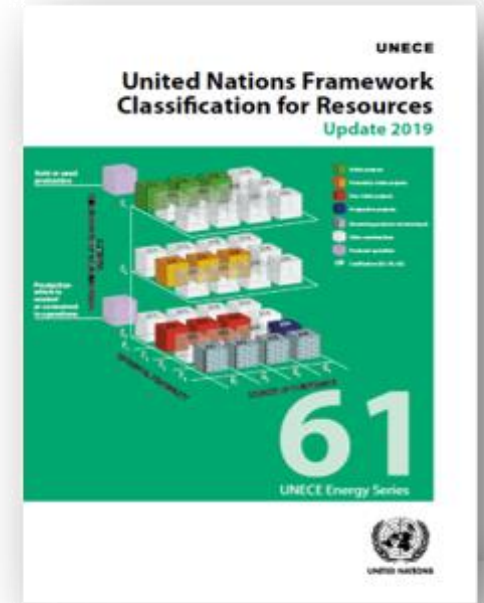




Concluding remarks

UNFC Basics: UNFC-2019 and Mineral Specifications

- The **category definitions** are the building blocks of the UNFC system and are combined (E, F, G) to form **classes**.
- A **Minerals Project** produces mineral products from a mineral source with defined frame conditions, which provide the basis for environmental-socio-economic evaluation and decision-making.
- **An Identified Project is a project associated with a known source, indicating that a mineral estimation has been conducted.**
- **Project Lifetime** is the remaining period of time that a project is expected to operate, constrained by technical, economic, regulatory or other permit/licence cut-offs.
- UNFC categories/E,F,G-axes do not move independently from each other but are connected throughout the development of a project and reflect the **project maturity**.





Concluding remarks

UNFC Guidance Europe

- Guidance for the Application of the United Nations Framework Classification for Resources (UNFC) for Mineral and Anthropogenic Resources in Europe



UNFC Classification Table

UNFC Classes defined by Categories and Sub-categories with Mapping of INSPIRE Codes.

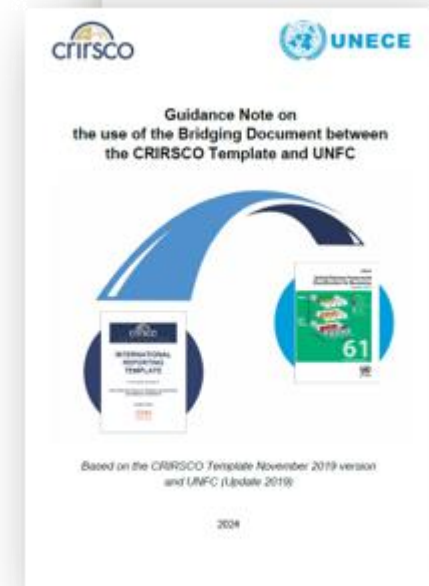
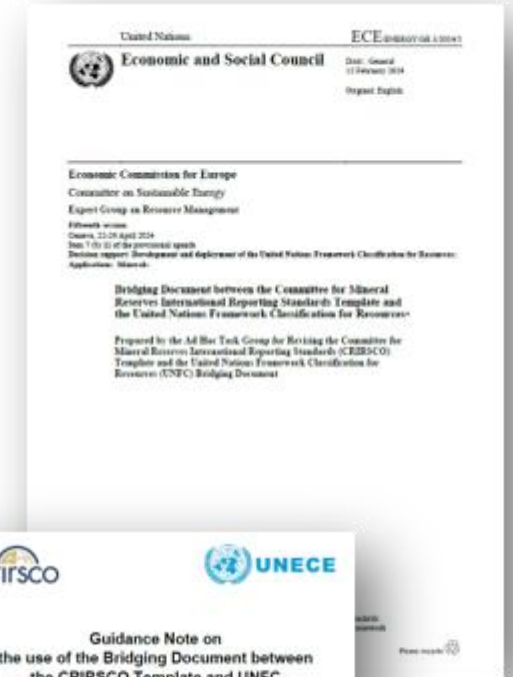
UNFC Classes Defined by Categories and Sub-categories						INSPIRE Code List	
Produced	Sold or used production						
	Production which is unused or consumed in operations <i>Future production that is either unused or consumed in the Project operations is categorized as E3.1. These can exist for all Classes of recoverable quantities</i>						
Total Products	Class	Sub-class	Categories				
			E	F	G		
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	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 Unclassified	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					



Concluding remarks

CRIRSCO-UNFC Bridging Document

- The CRIRSCO-UNFC Bridging Document is used when either **Exploration targets, Mineral Resources** or **Mineral Reserves** have been reported in accordance with CRIRSCO-aligned reporting standards and codes.
- When mapping estimates from the CRIRSCO Template to UNFC, it is **mandatory** to adhere to **competency requirements**.
- Only the estimates for Mineral Resources reported exclusive of Mineral Reserves should be used to avoid double counting of the estimated volumes.
- Technical studies (**Scoping, Pre-Feasibility** and **Feasibility**) should be mostly viewed as projects where project's environmental-socio-economic viability and/or technical feasibility has yet to be confirmed (UNFC: **E2;F2**)





Concluding remarks

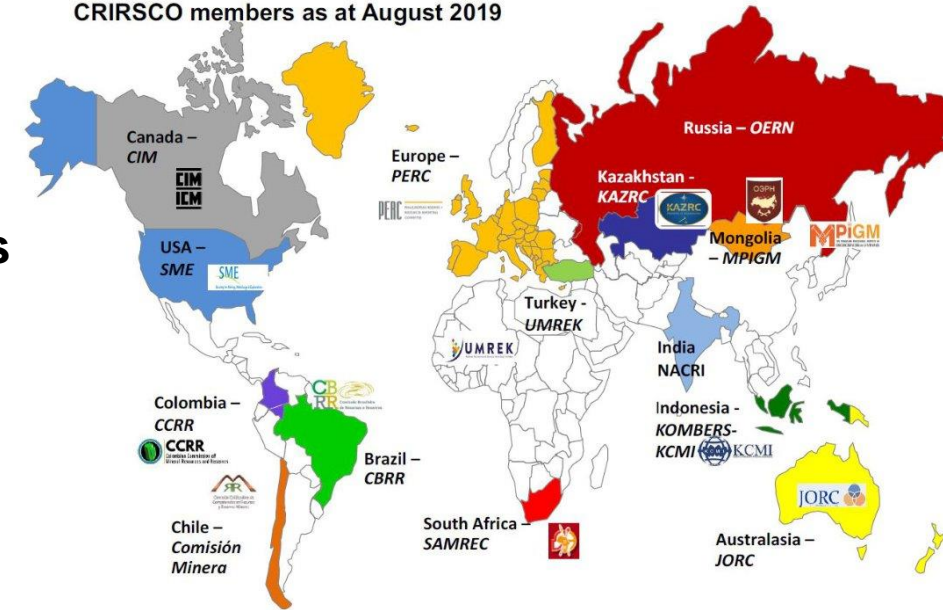
Estimation and uncertainty

- Resource estimation is a complex process including **numerous steps and decisions**, inherently encompassing uncertainties arising from **complex geology and sparse sampling**.
Therefore, estimation is not a precise calculation!
- CRIRSCO - aligned **standards and codes** sets the minimum standards for public reporting of Exploration Results, Mineral Resources and Mineral Reserves.

They are standards for reporting, not estimating!

CRIRSCO: International reporting standards

CRIRSCO members as at August 2019

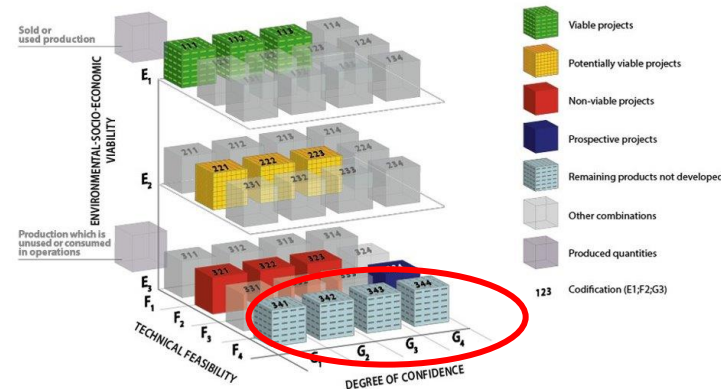




Concluding remarks

Historical data principles

- **Historic estimates** include a wide variety of projects including abandoned projects, closed mines, projects where there has been an ownership change, estimates for commodities which have been dropped from company reporting etc.
- Historic estimates are mapped into **non-viable, remaining products not developed, and prospective projects classes.**
- Data quality issues with historic estimates means that G-axis should usually only be classified as **G3 or G4.**





Concluding remarks

Data gaps principles

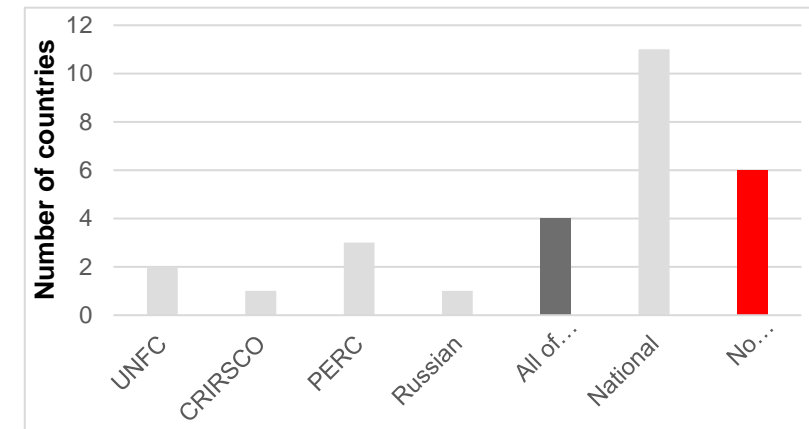
- Data gaps in the context of UNFC means situations when all the information needed for detailed UNFC mapping is not available.
- Data gap issues vary for each GSO depending on **national legislations** and **information availability and confidentiality.**
- Evidence for E- and F-axis classification for when there are data gaps can be found from e.g. permit applications, EIAs.
- Double counting of resources must be avoided, therefore **when reserves are included in resources, only the reserves should be mapped to UNFC.**



Concluding remarks

Country Specific Systems to UNFC

- EU/Europe – countries have different reporting systems in place
- [Bridging/Translating from other reporting systems can be performed:](#) overview of Slovenian, Czech and Hungarian national systems
- **Slovenian:** National reserves classification (economic, potential economic and non-economic reserves, categories: A, B, C₁ (C₂), modified into UNFC by “bridging doc”.
- **Czech:** Since 1991 has specific national classification system, non-compatible with CRIRSCO. **Mapping document** was elaborated during 2023 and is based on finding the best fit between national system category wording and UNFC document wording.
- **Hungarian:** Reporting of resources and changes in resources traditionally (A,B,C1, C2) is mandatory. The legislation contains an Appendix for **harmonization between the national and international** reporting/classification system (CRIRSCO) and for UNFC application. Detailed **updated guidance** will be developed in the frame GSEU project.



Applied reporting standards and different classification systems among project partners representing European countries (GSEU WP2 T2.4. Report on methodology and guidance for EU-level data harmonization with UNFC)



Concluding remarks

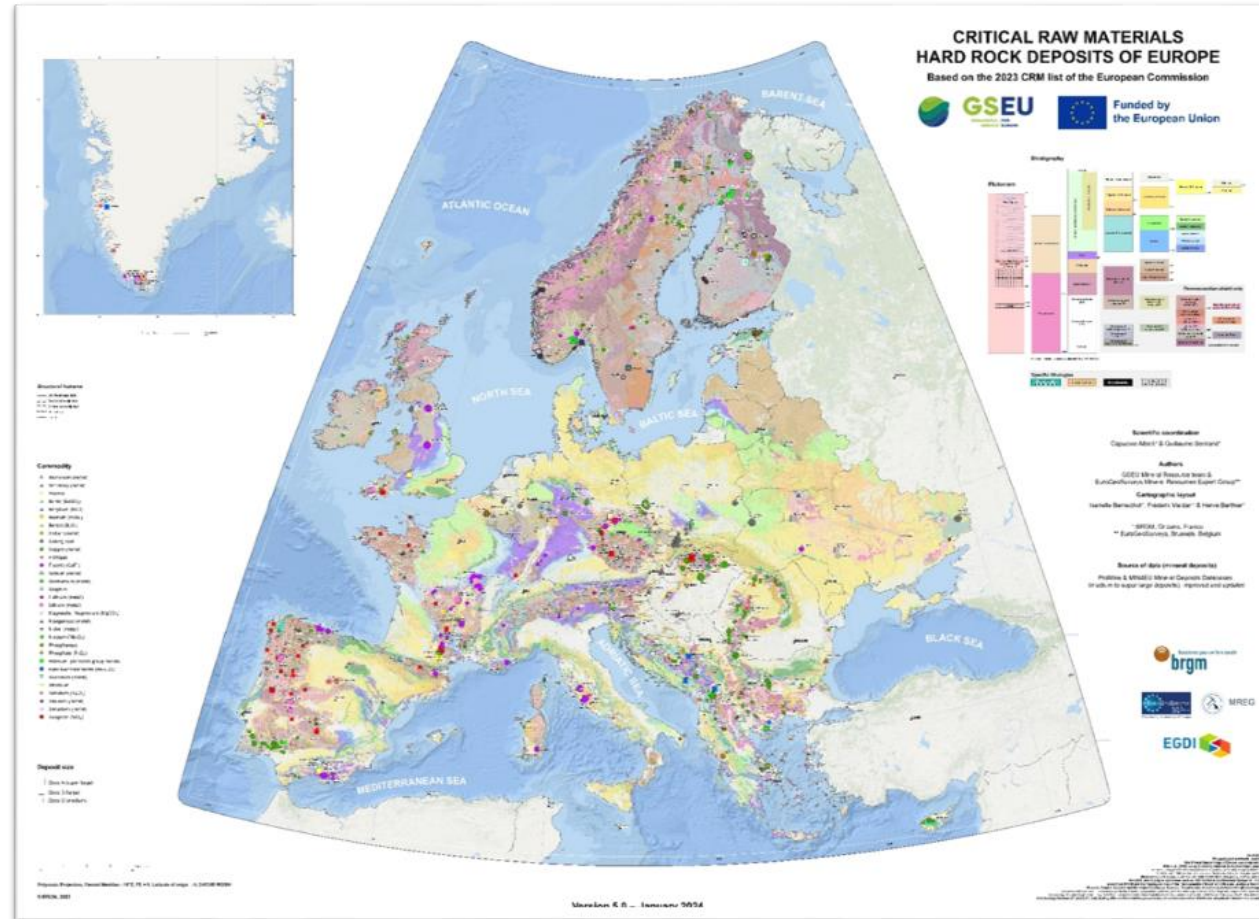
CRMA/UNFC

- **CRMA** (Critical Raw Material Act) aim to ensure a secure and sustainable supply of CRM for the EU
- CRMA open the possibility to apply to become a **Strategic Project**
- A strategic project get a **“fast track”** through the chain of permits

27 months for Strategic Projects involving *extraction*;

12 months for Strategic Projects only involving *processing or recycling*.

- A strategic project is obliged to **report** using UNFC
- UNFC is a resource project-based and principles-based **classification system**
- UNFC is tool for **policy formulation, government resource management, industry business process management and capital allocation**.



Critical raw material deposits in Europe (Source: [GSEU, 2024](#))



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Thank you for your attention

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