

Advances in the Implementation of UNFC in EU

6th Event on the United Nations Framework Classification for
Resources and the United Nations Resource Management
System:

*“UNFC to support harmonizing European raw materials
information for resilient supply chains”*

Co-organized by
UNECE, DG GROW, EuroGeoSurveys, HE projects “Geological Service
for Europe” and “FutuRam”

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Raw Materials Week
13-17 November 2023

UNECE-led UNFC Initiatives



Network of Practitioners - NoPE

- First Established by **UNECE**
- Since the second half of 2022, NoPE is Co-Chaired between **UNECE & GSEU**
- Established to facilitate appropriate application of **UNFC** to primary and secondary raw materials projects
- **NoPE** is a source for **UNFC** users with members as contact points for stakeholders seeking assistance
- **NoPE** is foreseen to cooperate immensely with the **EU SRM ICE**



Aim

UNFC EU Experts Community working together on 1ry and 2dry RMs



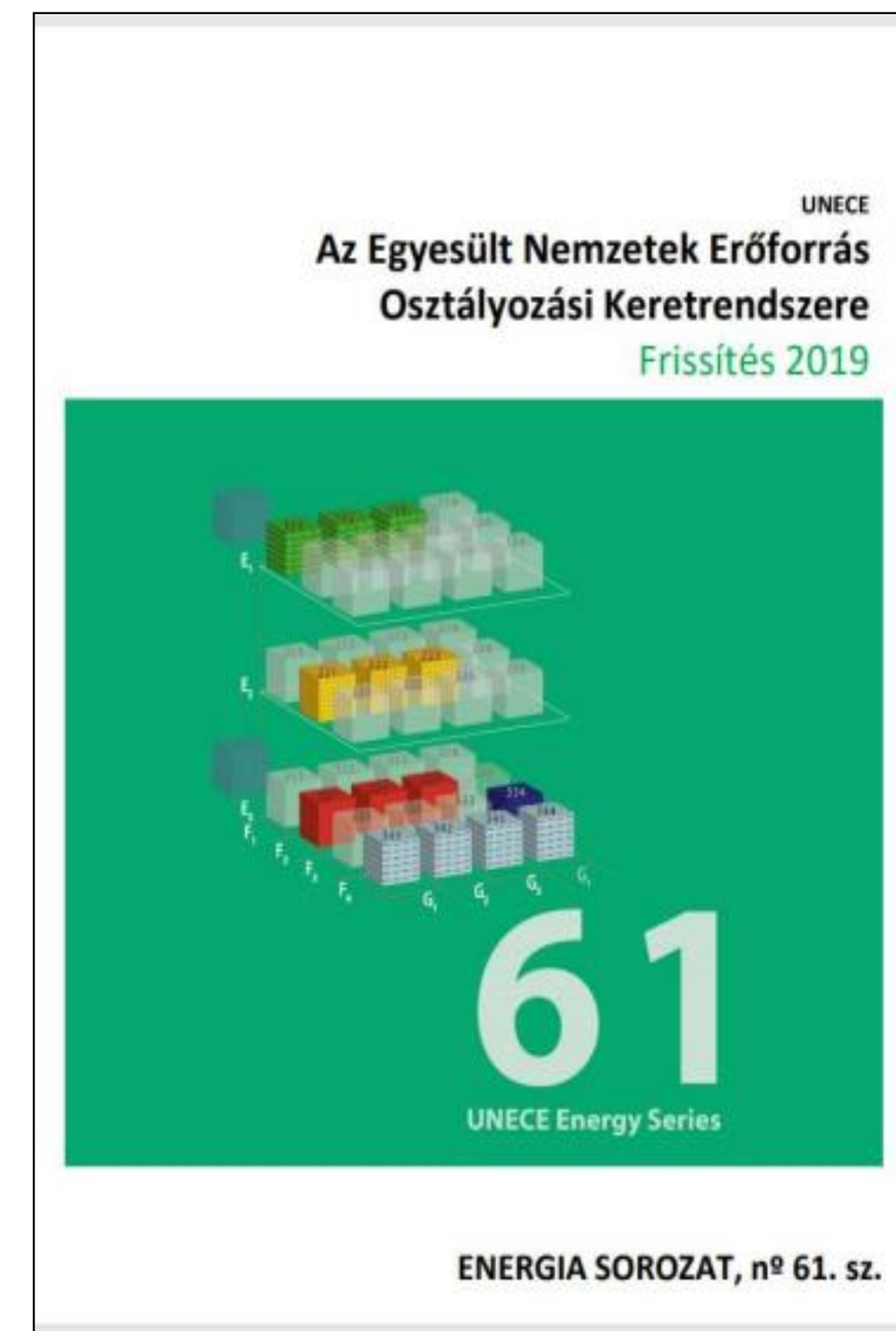
Focus Areas

- Translation of UNFC into EU languages
- UNFC training – exchange of practice
- UNFC Guidance for Europe



Membership Network

- National Contact Points



Review Team Activities

The Review Team was established as a technical group of **UNFC** experts focusing on **UNFC** implementation in Europe, supported and moderated by the **UNECE's EGRM** Secretariat.

The members of the Review Team previously successfully worked on development of the **UNFC Guidance Europe** document.

Activities:

- **UNFC** Guidance Europe document
- **UNFC** plan of action for the Critical Raw Materials Act
- **UNFC** coordination in Europe
- Bridging documents (**CRIRSCO** and **UNFC**)
- “The Potential Role of **UNFC** in National Raw Materials Inventories” document review
- National **UNFC** Guidance Documents for each EU Member State.
- The **UNFC** Seminar at the **UNECE** Resource Management Week

Future steps:

- Linking with **EGRM**
- **UNFC** compliance monitoring body



Initial Review Team members:

- **Janne Hokka**, GTK, Finland
- **Hendrik Falck**, CIMM, Geoscientists, Canada
- **Alistair Jones**, Imperial College London, United Kingdom
- **Pasi Eilu**, GTK, Finland
- **Sigurd Heiberg**, Petronavit a.s, Norway
- **Ulrich Kral**, Environment Agency Austria



Current Review Team members:

- **Hendrik Falck**, Canadian Institute of Mining Metallurgy, Geoscientists, Canada & Chair of Minerals WG
- **Sigurd Heiberg**, Petronavit a.s, Norway & Chair of Commercial Applications WG
- **Ulrich Kral**, Environment Agency Austria & Chair of Anthropogenic Resources WG

Coordination Team Activities

At the forefront of UNFC-related activities in Europe by steering the work on the templates with regards to the CRM Act proposal

The Coordination Team is comprised of representatives from **DG GROW, GSEU, FutuRaM, and UNECE,**

Established in December 2022, as an EU-focal group for cooperation and alignment of **UNFC** activities in **EU** Member States. The CT is supported and moderated by the **EGRM** Secretariat.

Activities:

- Unite and coordinate **UNFC** activities across the EU.
- Planning of the **UNFC**-related events.
- Capacity-building, developing an expert community, engagement with Member States, and promotional activities.

Trainings / Workshops:

1. March 2023: **UNFC** webinar for **EU** Member States
2. April 2023: **EU MS UNFC** Closed-meeting
3. June 2023: 1st EU Raw Materials Template **Workshop**
4. September 2023: 2nd EU Raw Materials Template **Workshop**

Main focus:

- **CRM-Act UNFC**-related activities
- **EU** Raw Materials Template
- Template Principles and Guidelines

EU Raw Materials Template



EU Raw Materials Template Rationale



Purpose

- **EU** Raw Material project counterparties to report to the Commission.
- No Administrative Workload & Compliance Burden -> **EU** Template for **RM**
- Data collection in a reliable, valid, and useful way.
- **MS** to use the Template on **SRM** projects, Exploration, and monitoring/strategic stocks.

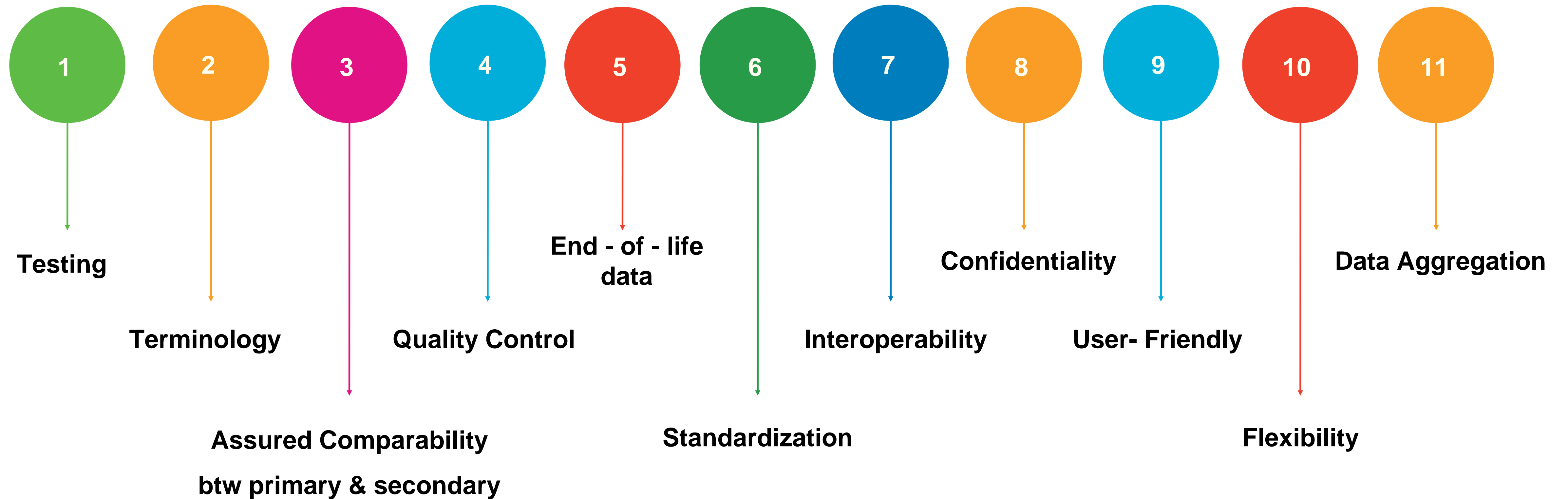
Why UNFC

- **UNFC** for Strategic projects, Exploration results, Risk Monitoring, and Recycling projects.
- **UNFC** classification -> ensure reliable and valid data on the status of the **EU** strategic raw materials projects.

Approach

- **EGRM** -> Thematic approach for the **EU** Template on Raw Materials
- Aligned with **CRM-Act**, **EU CRM** database, and **UNFC** Guidance for Europe.
- Thematic Template composed of different modules with respect to the reporting activity
- Each module providing a different set of data.
- Modules do not change, the Template does according to the reporting purpose.

Template Challenges



EU Raw Materials Template Principles



- Template Format – Modules, Project-oriented, Thematic
- Simple / Easy / User-friendly
- Collection of Metadata
- Module Flexibility
- CRM-Act Compliant
- UNFC Compliant (E, F, G axes)
- Additional Information in the specific modules are data that do not impact the classification, but are necessary
- Color Coded (**Green**, **Red**, **Grey**)
- Drop down and Multiple Choices except for numbers and unique information
- Needed rather than useful
- Project is the carrier of Information
- One Commodity per Template
- In-depth information held at National-level – unless requested
- Confidentiality levels: 1) Project, 2) National, 3) EU
- One time submission per requested period
- Reliable and quality reporting
- Evidence vs Additional Relevant Information

MODULES

1. Basic Information
2. Specific Modules: Strategic, Exploration, Risk monitoring, Recycling
3. UNFC

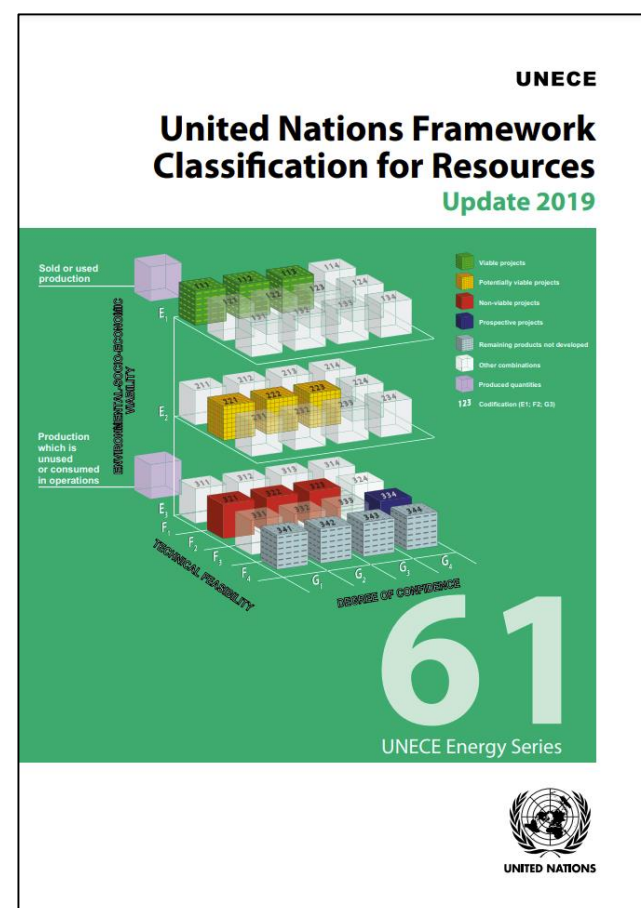
EU Raw Materials Template Essence



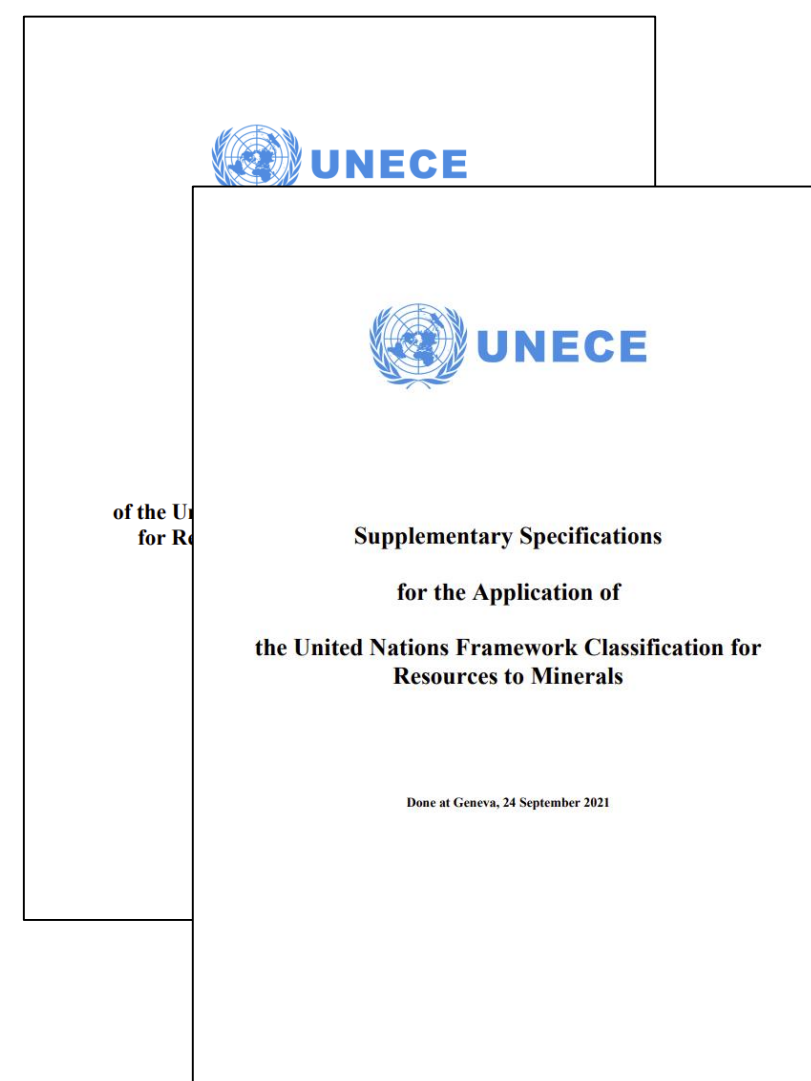
Building on Experience

- EU CRM Database
- ERMA Activities
- UNFC documents (UNFC2019, Specifications, Guidance ...)
- Bridging documents, national systems
- Promotion and capacity building

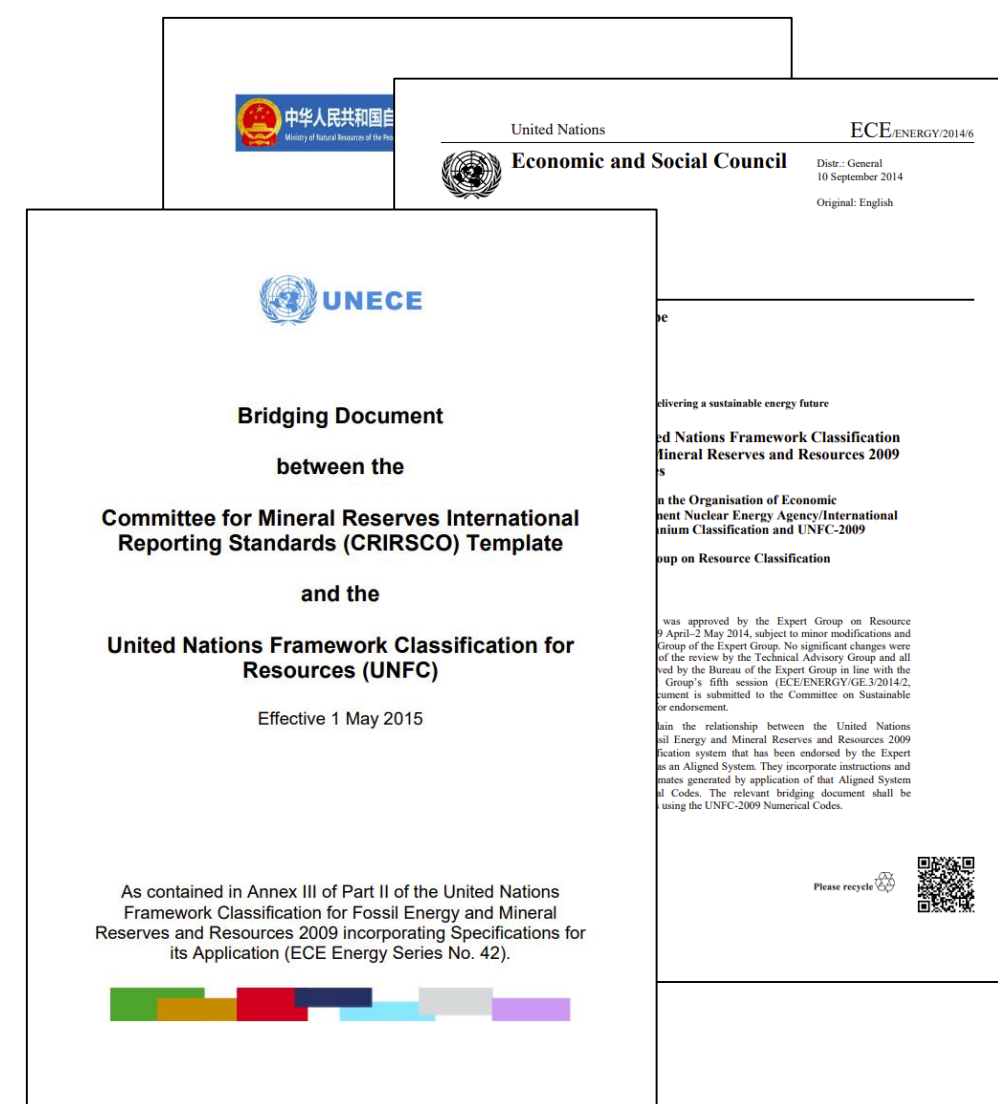
Generic



Specifications



Bridging



Guidance



Examples Bridging Documents

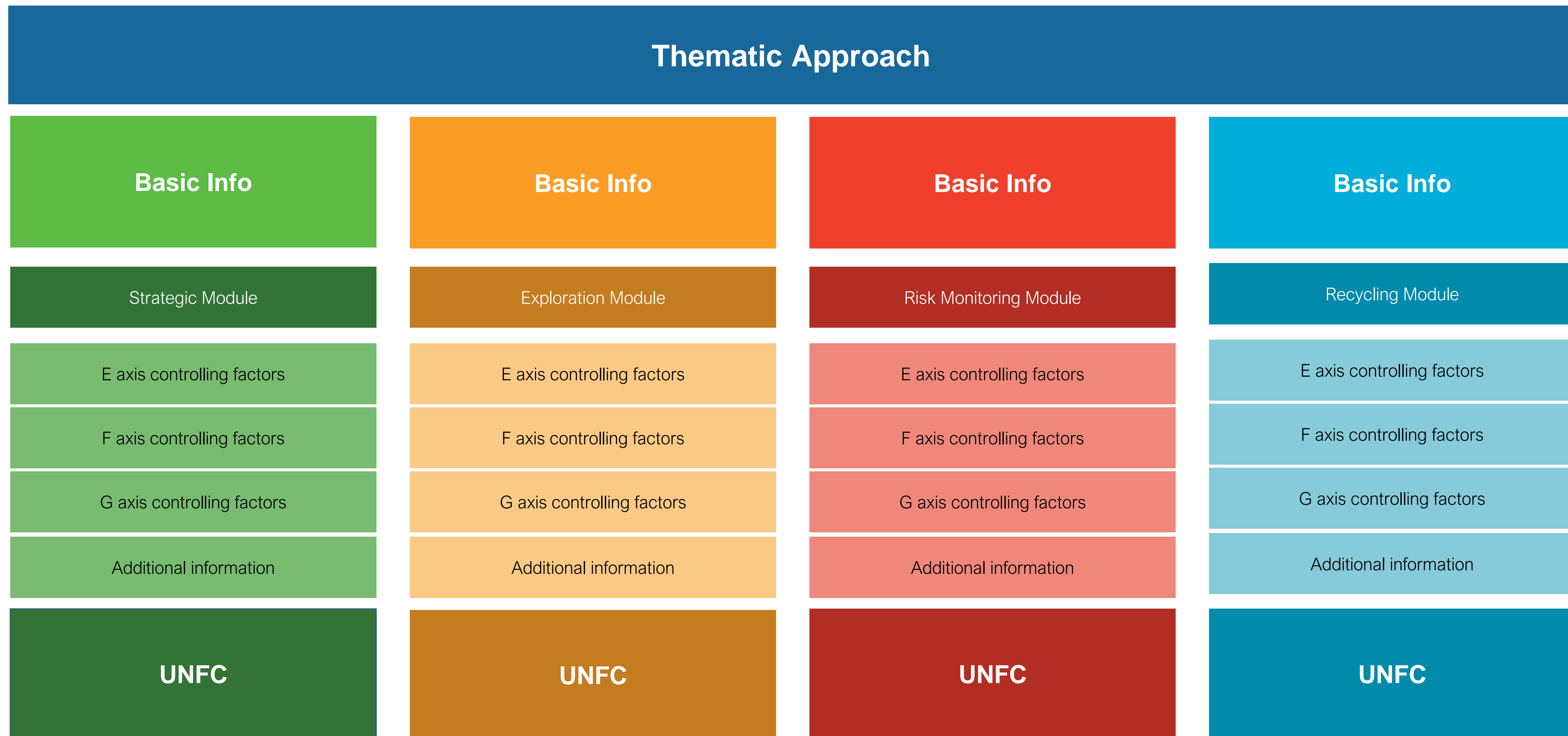
Law (2015) and Proposed New Book of Regulations for Solid Mineral Raw Materials	Results of Geological Exploration	Mineral Resources			Mineral Reserves	
		Inferred	Indicated	Measured	Probable	Proved
Official Book of Regulations for Solid Mineral Raw Materials (1979)	Mineral Reserves					
	Potential	Potential	Established (in situ – Geological: Out-of-Balance and Balance)		Exploitation (inclusive of dilutions and losses during mining)	
	D ₂ , D ₁	C ₂	C ₁	B, A	C ₁	B, A
UNFC			Mineral Resources		Mineral Reserves	
	334	223	222	221	112	111

UNFC-2009 Classification					CRIRSCO Template		NEA/IAEA Classification	
UNFC Classes and Sub-classes		UNFC Categories			CRIRSCO Classes and Sub-classes		IAEA-NEA Categories	
Class	Sub-Class	E	F	G	Class	Sub-Class	IAEA-NEA Categories	Status
Commercial Projects	On Production	1	1.1	1	Mineral Reserves	Proved	Reasonably Assured Resources (RAR)	Existing
	Approved for Development	1	1.2	1		Probable		Committed
				2		Proved		Planned
Justified for Development	1	1.3	1	Probable		Proved		
			2	Proved				
Potentially Commercial Projects	Development Pending	2	2.1	1		Mineral Resources		Measured
				2	Indicated			
				3	Inferred			
	Development On Hold	2	2.2	1	Measured		RAR	
				2	Indicated			
				3	Inferred			
Non-commercial Projects	Development Unclearified	3.2	2.2	1,2,3	Inventory (not defined in Template)	Development Unclearified (not defined in Template)	Identified Resources RAR IR*	Unclearified
	Development Not Viable	3.3	2.3	1,2,3		Not Viable (not defined in Template)		Not Viable
Exploration Projects		3.2	3.1	4	Exploration Target		Undiscovered Resources	Prognosticated Resources
		3.2	3.2, 3.3	4				Speculative Resources

GB/T 17766-1999	UNFC			经济和社会活力
	级	亚级		
经济意义	1	E1	E1.1	项目状态和技术可行性
	2M	E2	E1.2	
			2S	
	3	E3	E3.1	
	3		E3.2	
	3		E3.3	
可行性评价阶段	1	F1/F2		地质认知程度
	2			
	3	F2		
		F3		
地质可靠程度		F4		
	1		G1	
	2	G2		
	3	G3		
	4	G4		

CRIRSCO Template		UNFC-2009 "minimum" Categories			UNFC-2009 Class
Mineral Reserve	Proved	E1	F1	G1	Commercial Projects
	Probable			G2	
Mineral Resource	Measured	E2	F2	G1	Potentially Commercial Projects
	Indicated			G2	
	Inferred			G3	
Exploration Results		E3	F3	G4	Exploration Projects

EU Raw Materials Template Structure



Template with Modules Example

Project Basic Information						
Project Name			Project Location	Country	Select	
	Ownership Type:	Select		Location		
	Owner / Company Name:			Spatial Coordinates	Coordinate System	Select
Risk Monitoring Module						
Reserve Content (t) of Raw Material		Availability of Production Data	Select	(a*b) Product quantity (t)		
Resource Content (t) of Raw Material		Production of Raw Material (t/yr)		Primary raw material content produced from extraction site (t)		
				Primary raw material content produced outside		
UNFC Module						
E axis	Category	Select	Evidence		Additional Relevant Information	
	Sub-category	Select				
F axis	Category	Select	Evidence		Additional Relevant Information	
	Sub-category	Select				
G axis	Category	Select	Evidence		Additional Relevant Information	
	Sub-category	Select				
UNFC Project Classification	Class	Select	INSPRE CODE	Select	Additional Relevant Information	
	Sub-class	Select				
	UNFC Code					



THANK YOU



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