

UNECE – EGS/GSEU Joined Webinar

United Nations Framework Classification for Resources (UNFC)

12 December 2023
Online



What is UNFC ?

Slavko Solar

Economic Affairs Officer
Sustainable Energy Division
UNECE

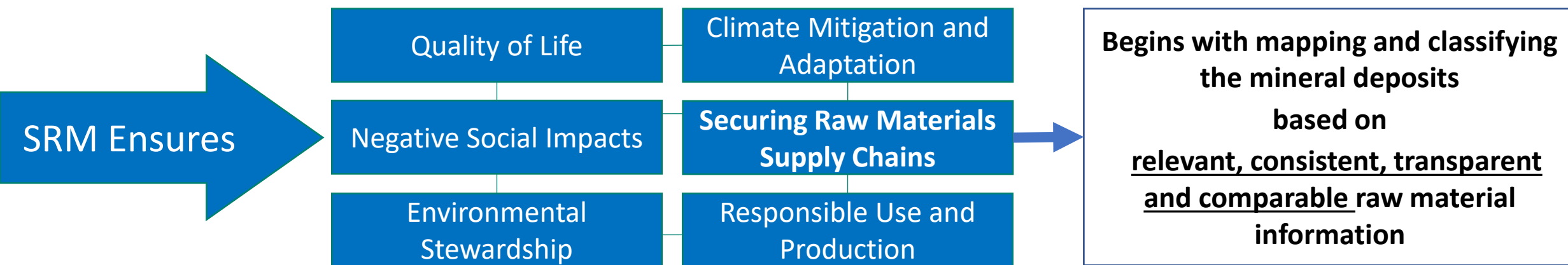
Need for Sustainable Resource Management



Sustainable resource management (SRM) is a holistic practice of using natural resources in a way that meets the present needs without compromising the ability of future generations to meet their own needs,

It involves **efficient utilization, conservation, and restoration of resources** to ensure their long-term availability and minimize negative **environmental, social, and economic impacts**.

SRM is critical to deliver the UN Agenda 2030 and its Sustainable Development Goals



The Challenge of Classification

How to Classify?



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3

How to
Classify?

By genre

By artist

By composer

By instruments

By tempo

By date recorded

By date purchased

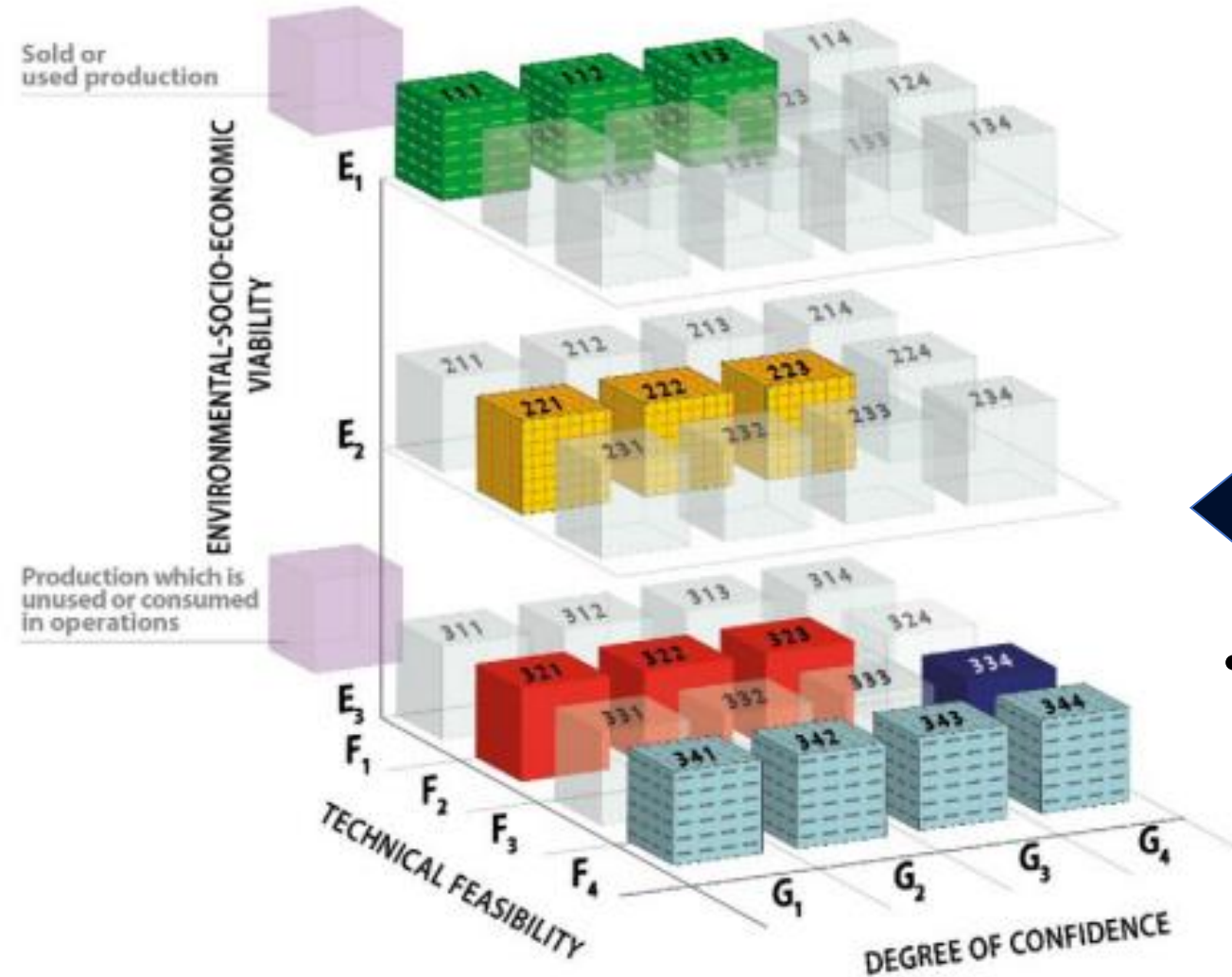


UNFC Overview



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4



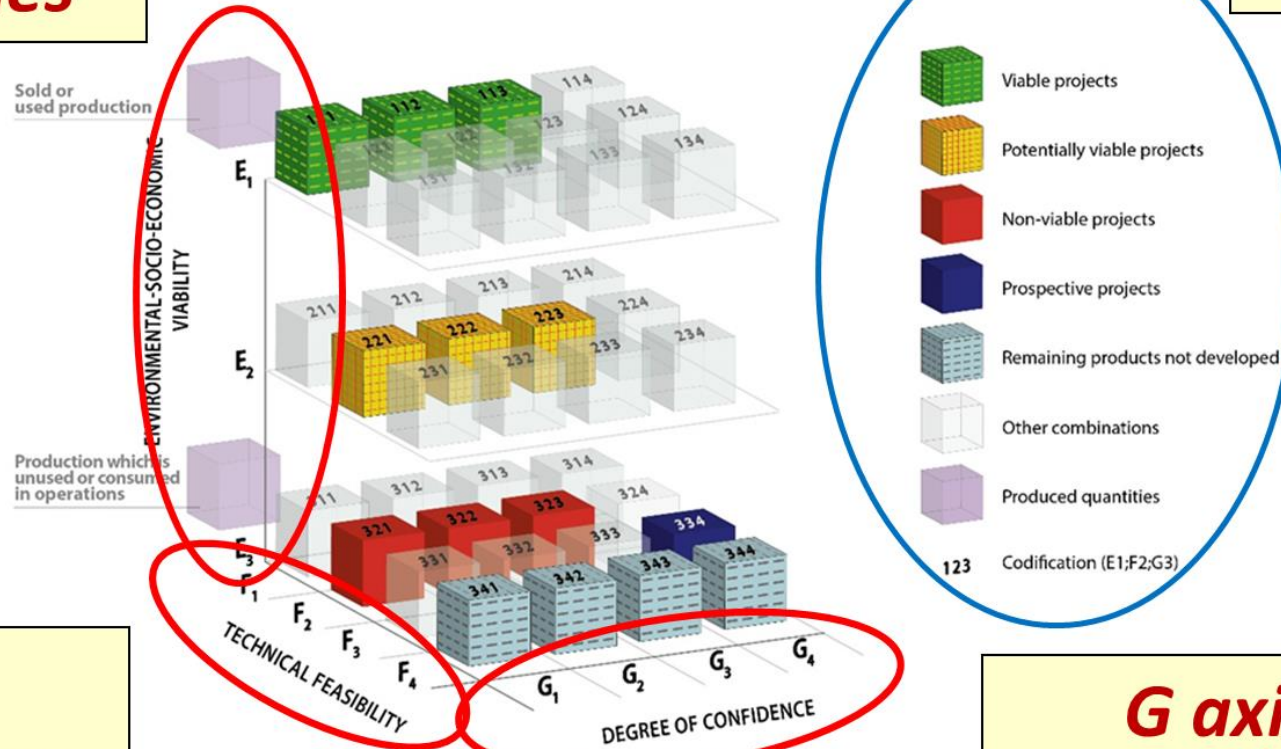
- **UNFC** is an international scheme for the classification, management and reporting of energy and raw material resources



- **UNFC** is based on 3 fundamental criteria
 - **E axis:** Environmental-socio-economic viability
 - **F axis:** Technical Feasibility
 - **G axis:** Degree of Confidence

E axis categories

Classes



F axis categories

G axis categories



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Sub-Categories and Classes provide more resolution

https://unece.org/DAM/energy/se/pdfs/UNFC/publ/UNFC_ES61_Update_2019.pdf

UNFC Classes Defined by Categories and Sub-categories

	Produced	Sold or used production					
		Production which is unused or consumed in operations					
	Class	Sub-class	Categories				
E			F	G			
Total Products	Known Sources	Viable Projects	On Production	1	1.1	1, 2, 3	
			Approved for Development	1	1.2	1, 2, 3	
			Justified for Development	1	1.3	1, 2, 3	
		Potentially Viable Projects	Development Pending	2 ^b	2.1	1, 2, 3	
			Development On Hold	2	2.2	1, 2, 3	
		Non-Viable Projects	Development Unclassified	3.2	2.2	1, 2, 3	
			Development Not Viable	3.3	2.3	1, 2, 3	
		Remaining products not developed from identified projects		3.3	4	1, 2, 3	
		Potential Sources	Prospective Projects	[No sub-classes defined]	3.2	3	4
			Remaining products not developed from prospective projects		3.3	4	4



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7

UNFC Documents

Principles

Rules

Guidelines

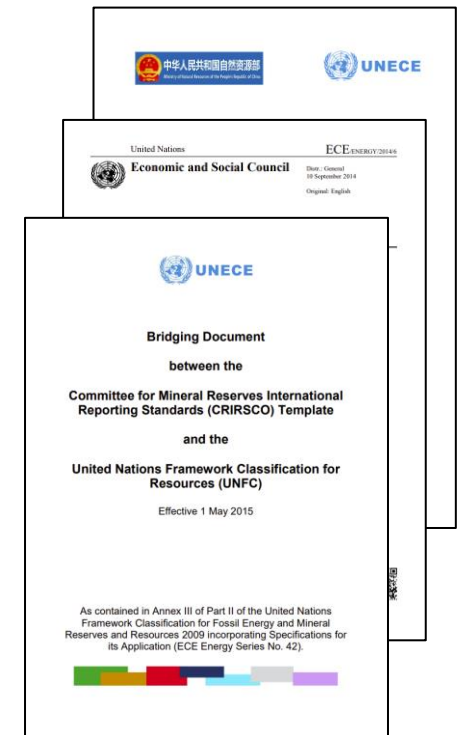
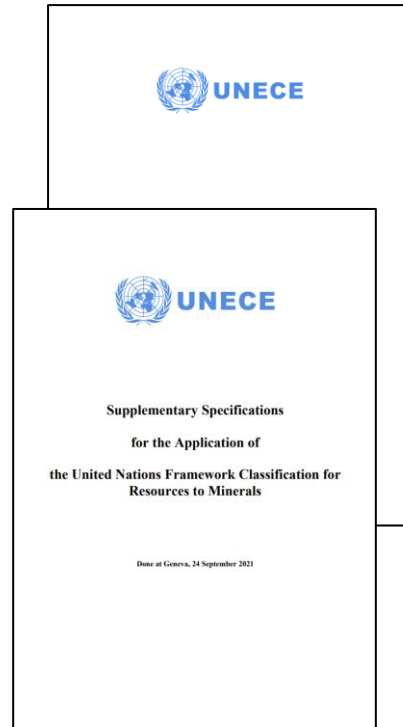
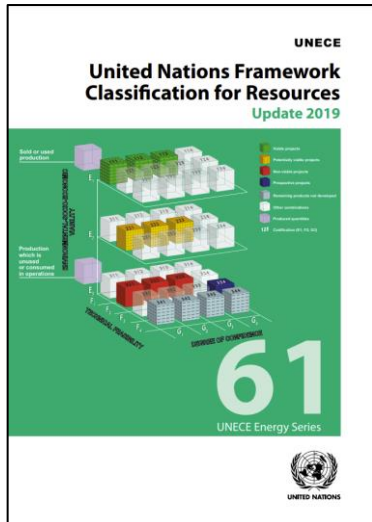
- 1. Definitions: Classification framework
- 2. Specifications: Application rules
- 3. Guidelines: Non-mandatory guidance

Generic

Specifications

Guidance

Bridging Documents



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

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	334	223	Mineral Resources		Mineral Reserves	
			222	221	112	111

UNFC-2009 Classification					CRIRSCO Template		NEA/IAEA Classification	
UNFC Classes and Sub-classes		UNFC Categories			CRIRSCO Classes and Sub-classes			
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
				2		Probable		
	Approved for Development	1	1.2	1		Proved		Committed
				2		Probable		
	Justified for Development	1	1.3	1		Proved		Planned
				2		Probable		
Potentially Commercial Projects	Development Pending	2	2.1	1	Mineral Resources	Measured	Identified Resources	RAR
				2		Indicated		
				3		Inferred		IR*
	Development On Hold	2	2.2	1		Measured		
				2		Indicated		IR*
				3		Inferred		
					Development Unclarified			

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

Resource Classification Stakeholders



Thank you !

Slavko Solar

Economic Affairs Officer

Sustainable Energy Division

UNECE

reserves.energy@un.org

<https://unece.org/sustainable-energy/sustainable-resource-management>

Invitation to attend:



UNECE RESOURCE MANAGEMENT WEEK 2024

ASSURING SUSTAINABILITY IN RESOURCE MANAGEMENT

22 - 26 APRIL 2024 | PALAIS DES NATIONS | GENEVA

<https://unece.org/info/Sustainable-Energy/events/384762>

Date 12 | 12 | 2023

