



United Nations Framework Classification for Resources

Sustainable management of all resources



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Workshop on UNFC Mexico Petroleum Pilot Project

Mexico City, 14 June 2019

The Problem of Classification

- How to Classify?
- By genre
- By artist
- By composer
- By instruments
- By tempo
- By date recorded
- By date purchased



Consistent classification and management of all resources



UNECE



Minerals



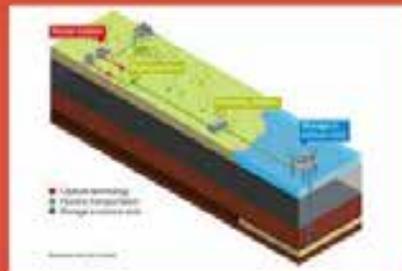
Petroleum



Renewables



Uranium



Injection



Anthropogenic

UNFC Stakeholders



UNECE



Governments

management of national resources



Creators of energy & mineral studies

to facilitate formulation of consistent and far-sighted policies



Industry

to provide data and information necessary to deploy technology, management and finance to serve host countries, shareholders and stakeholders



Financial community

to provide information necessary to allocate capital appropriately so reducing costs

Expert Group on Resource Management

A global community representing all users



Academia



Governments (UNECE and non-UNECE)



Industry



International organizations



Professional Societies & Associations



Financial Sector Incl. standard setters

UNFC and ECOSOC

A call for global application



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The Economic and Social Council (ECOSOC) is at the heart of the United Nations system to advance the three dimensions of sustainable development – economic, social and environmental.

ECOSOC Decision 2004/233

A light green world map showing the continents of North America, South America, Europe, Africa, Asia, and Australia.

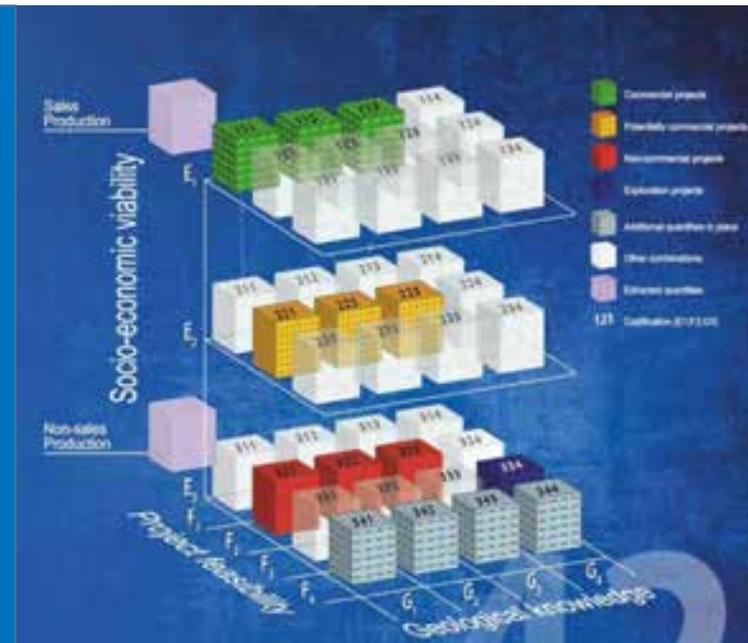
Member States of the United Nations, international organizations and regional commissions to consider taking appropriate measures for ensuring worldwide application of the Framework Classification.

Why UNFC?



- The structure to understand and manage all resources in alignment to the SDGs.
- Applicable horizontally and vertically to all sectors
- Embeds all project risks and opportunities

UNFC promotes clear thinking and a shared vision

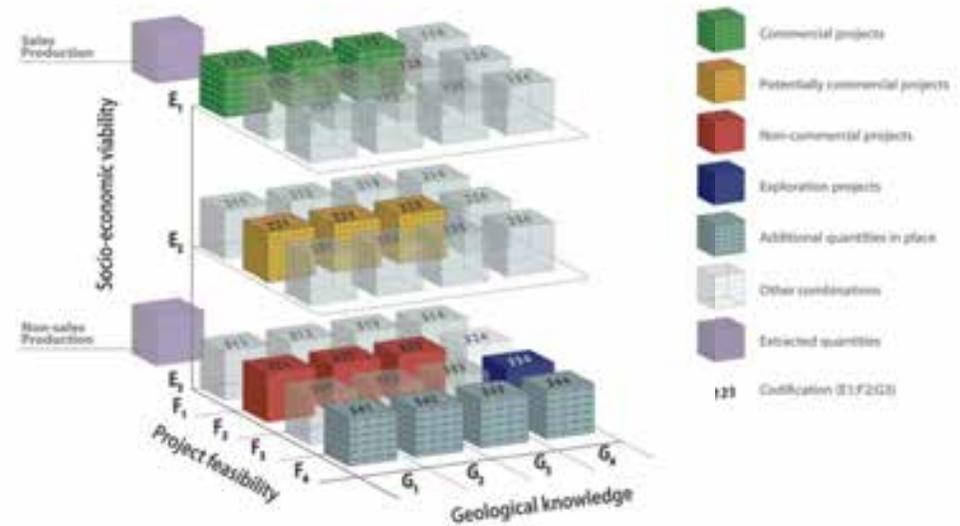


Resources Redefined

Resource progression is critical



- UNFC is a project maturity-based, resource-progression oriented tool for the management resources.
- UNFC provides a balanced view of socio-economic factors, technology and uncertainties involved in the classification of resources and provides a progression pathway for projects.
- UNFC puts emphasis on figuring in social and environmental considerations at the centre of resource management.

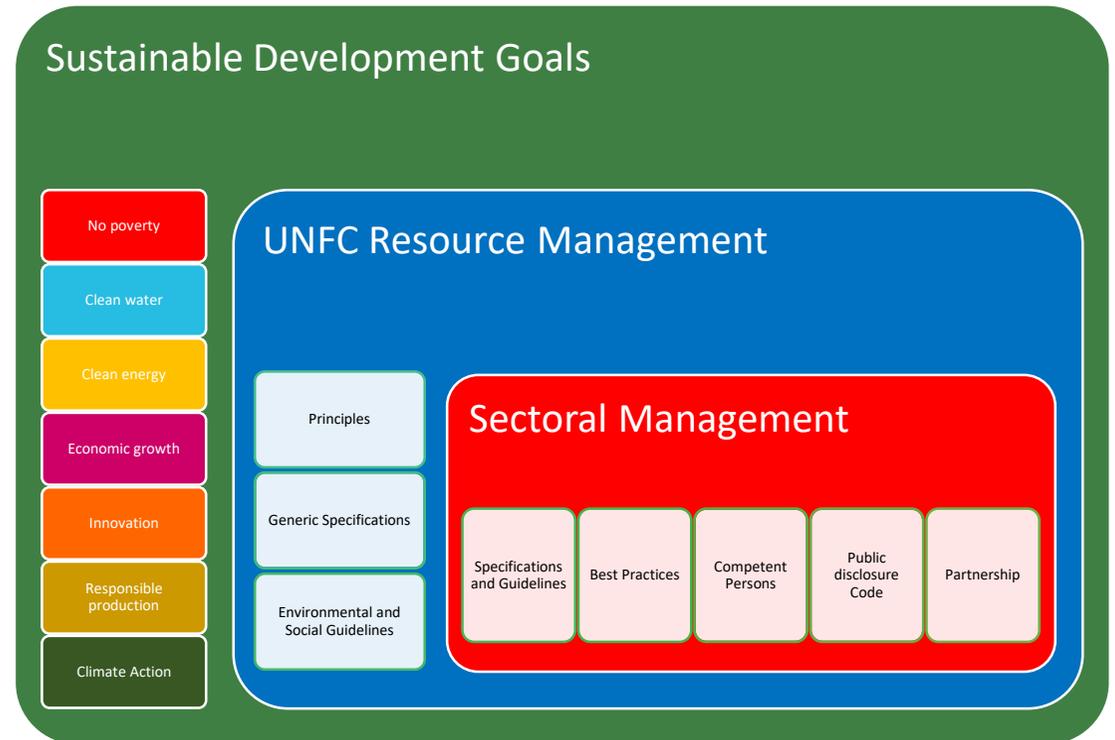


UNFC is different from other resource classification and management tools in being responsive to requirements of the Global Agenda 2030, the aspirations of the society and the modern outlook of the industry.

UNFC approach



- Structured within overarching SDG framework
- Long-term policy making and planning
- Shorter-term actions - Make resource projects competitive through innovative approaches
- Efficient financial capital allocation
- Reduce environmental burden, carbon foot-print and negative public perception
- Increase collaboration globally

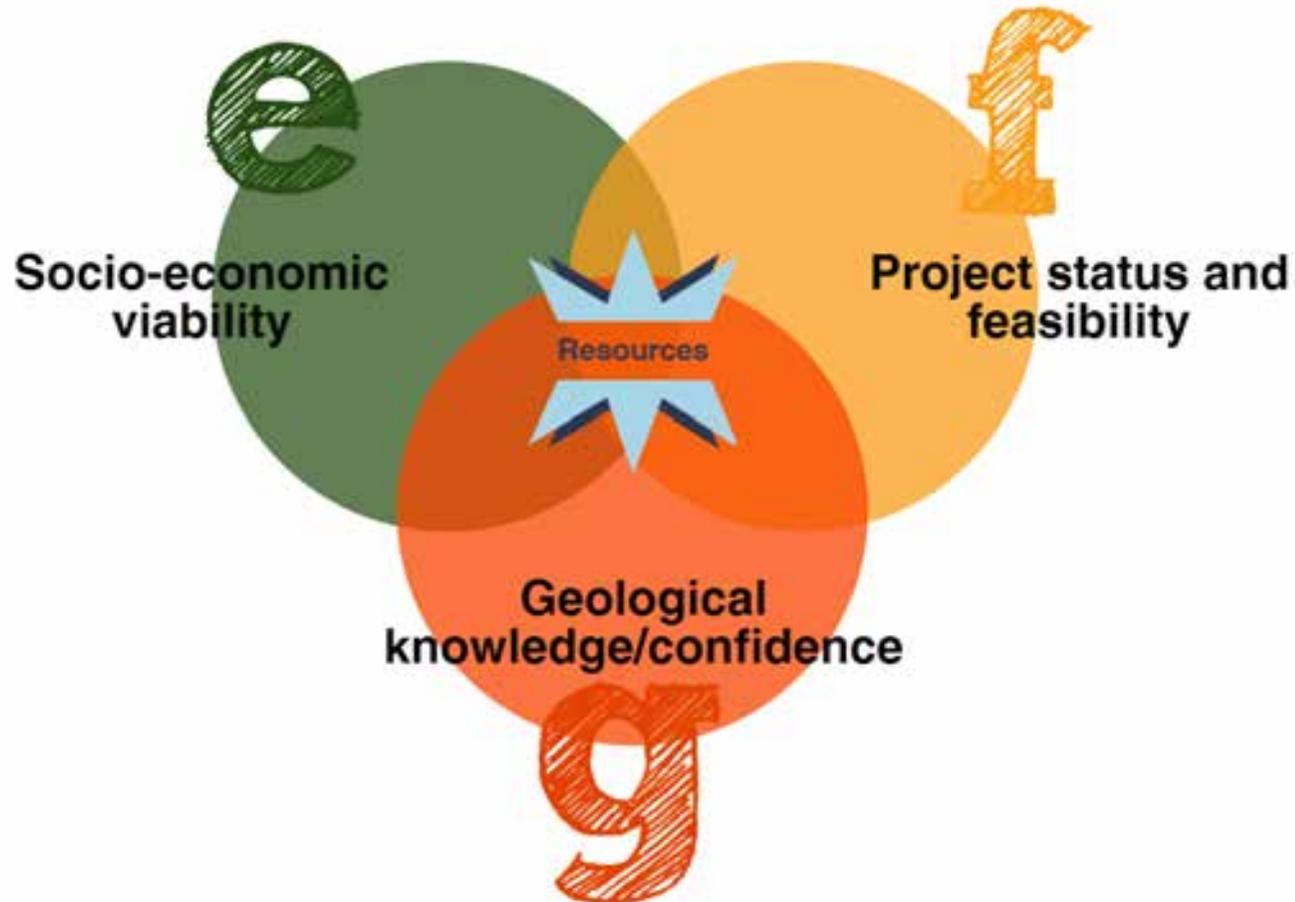


Growing applications of UNFC



Defining resources with UNFC

The 3 Criteria

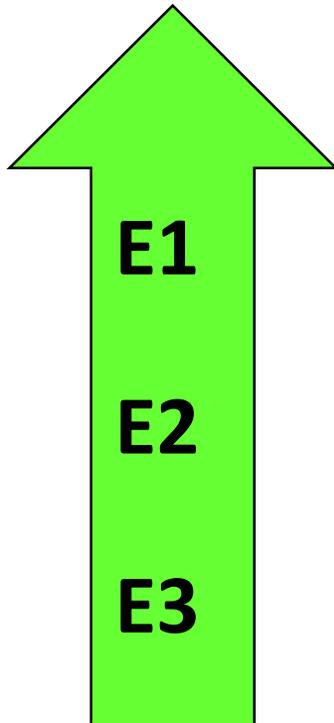


Criteria and Categories

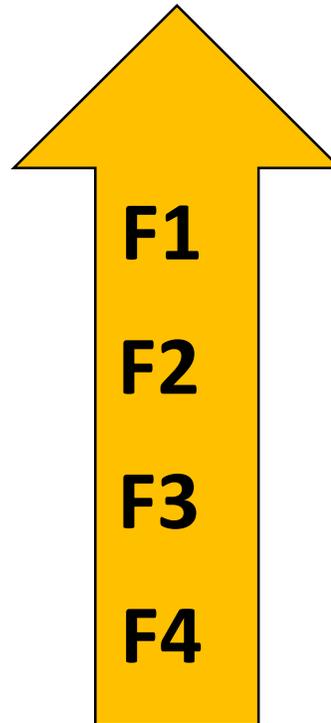


Numerical coding system based on the three criteria, sub-divided by categories:

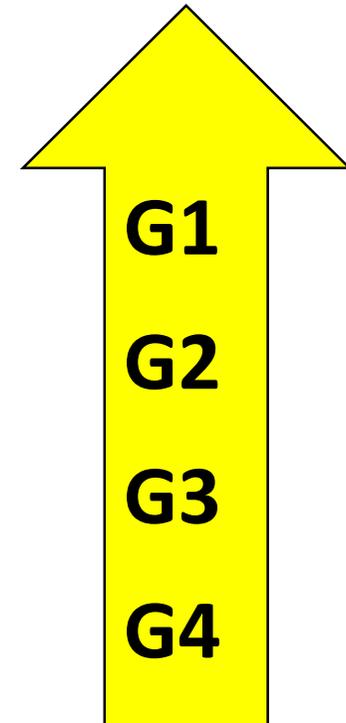
**Economic and
social viability**



**Field project status
and feasibility**



**Geological
knowledge**



UNFC – E Axis



UNECE

- Degree of favourability of social and economic conditions in establishing the commercial viability of the project
- Includes consideration of market prices and relevant legal, regulatory, environmental and contractual conditions
- E1, E2 and E3 categories
- E1 is “best”
- Definitions should always be read in conjunction with supporting explanation

E axis category definitions



Category	Definition
E1	Extraction and sale has been confirmed to be economically viable.
E2	Extraction and sale is expected to become economically viable in the foreseeable future.
E3	Extraction and sale is not expected to become economically viable in the foreseeable future or evaluation is at too early a stage to determine economic viability.

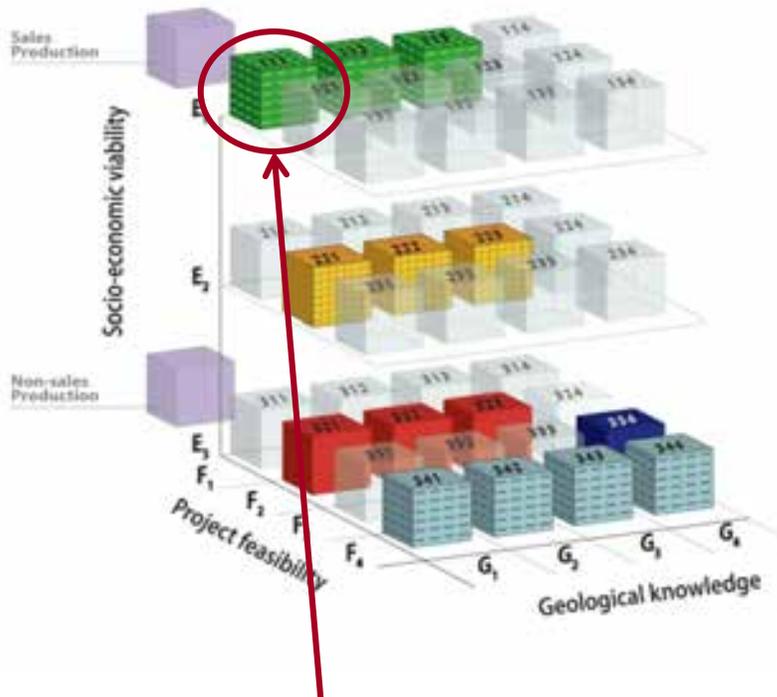
The phrase “economically viable” encompasses economic (in the narrow sense) plus other relevant “market conditions”, and includes consideration of prices, costs, legal/fiscal framework, environmental, social and all other non-technical factors that could directly impact the viability of a development project.

UNFC – How it works



- The category definitions are the building blocks of the system:
 - Select the correct category for each of the three criteria
- These are combined (E, F, G) in the form of classes
- Class **111** means that the reported quantities have satisfied the definitions for:
 - **E1, F1 and G1**
- There are no constraints on combinations, but not all will be meaningful

UNFC – How it works



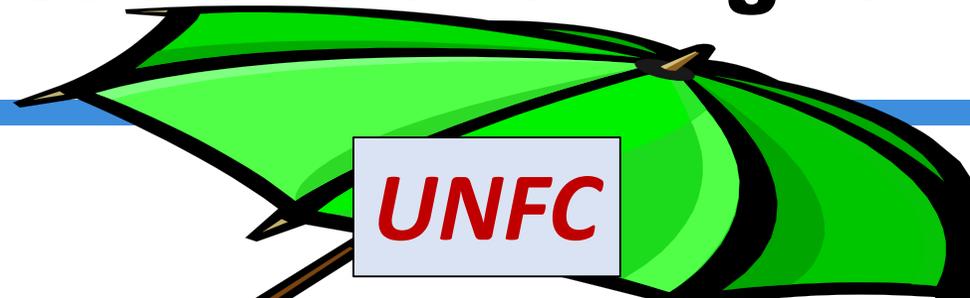
UNFC Class: 111

Category	Definition
E1	Extraction and sale has been confirmed to be economically viable.
Category	Definition
F1	Feasibility of extraction by a defined development project or mining operation has been confirmed.
Category	Definition
G1	Quantities associated with a known deposit that can be estimated with a high level of confidence.

UNFC using all sub-categories

UNFC Classes defined by categories and sub-categories						
Total commodity initially in place	Extracted	Sales Production				
		Non-sales Production				
	Class	Sub-class	Categories			
			E	F	G	
Known Deposit	Commercial 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 Commercial Projects	Development Pending	2	2.1	1, 2, 3
			Development On Hold	2	2.2	1, 2, 3
		Non-Commercial Projects	Development Unclarified	3.2	2.2	1, 2, 3
	Development Not Viable		3.3	2.3	1, 2, 3	
	Additional quantities in place		3.3	4	1, 2, 3	
Potential Deposit	Exploration Projects	[No sub-classes defined]	3.2	3	4	
	Additional quantities in place		3.3	4	4	

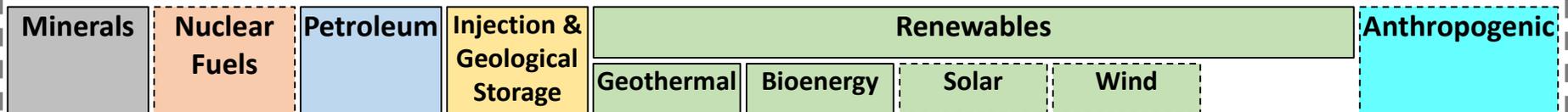
Specifications and Aligned Systems



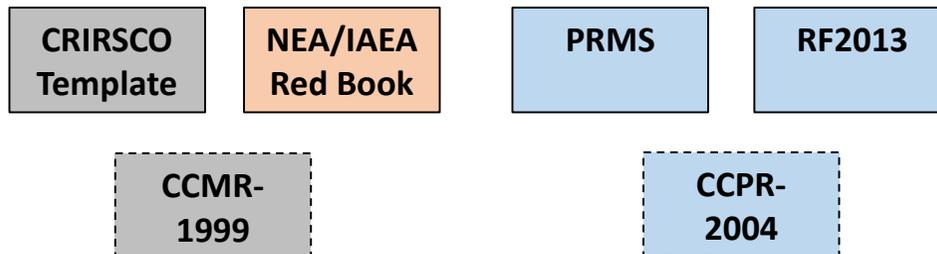
Classification Framework and Category Definitions

Generic Specifications (UNFC 2009)

Commodity-Specific Specifications



Aligned Systems



Generic specifications



- **Minimum standards for using UNFC**
- **Mandatory requirements**
 - Use of numerical codes
 - Effective date
 - Clarity in aggregated estimates (provide disaggregated data as possible)
 - Aggregation should include proper justification
 - Basis of classification to be clear
 - Reference point to be mentioned.
 - Reclassification in case of suspension of a project
 - Include only potentially recoverable quantities.
 - Clarity in economic assumptions.
 - Use of SI units (or conversion factors to be given)
 - Provide documentation with sufficient details

UNFC advantages

A view in 3 dimensions



- Provides definitions, rules and guidelines
- Not a single resource project is the same

Each resource project needs
a defined progression pathway

Principles

Rules

Guidelines

Social & environmental considerations

Understanding the system boundaries



- EGRM has a Working Group to examine the social and environmental aspects of the classification. Two guidance notes are available:

- Accommodating environmental and social considerations in UNFC
- Clarification of terminology and concepts related to UNFC



UNFC Evaluator / Competent Person



- “Evaluators must possess an appropriate level of expertise and relevant experience in the estimation of quantities associated with the type of deposit under evaluation.”
- Two guidance notes developed:
 - 1. UNFC Specification for Evaluator Qualifications – **Top-level guidance**
 - 2. Competent Person Requirements and Options for Resources Reporting – **Detailed guidance on generic requirements for public reporting and disclosures for all commodities**

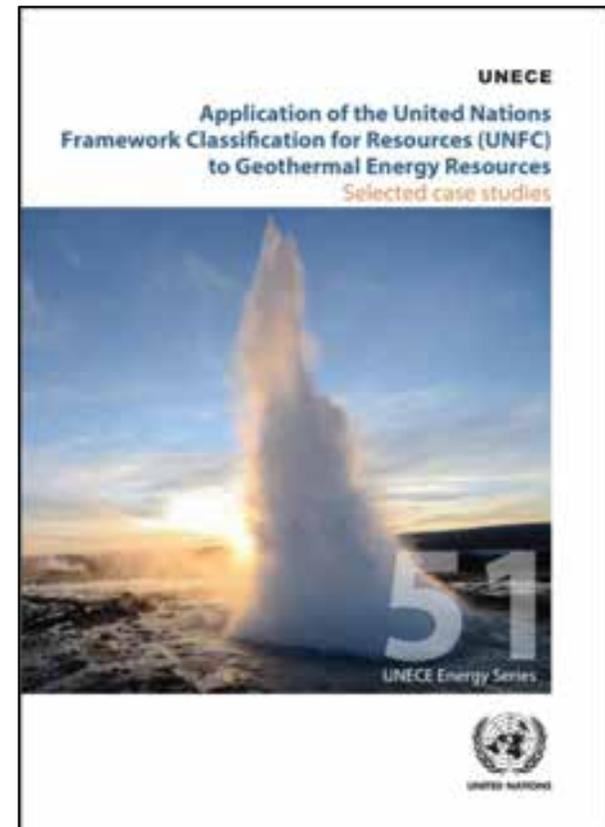
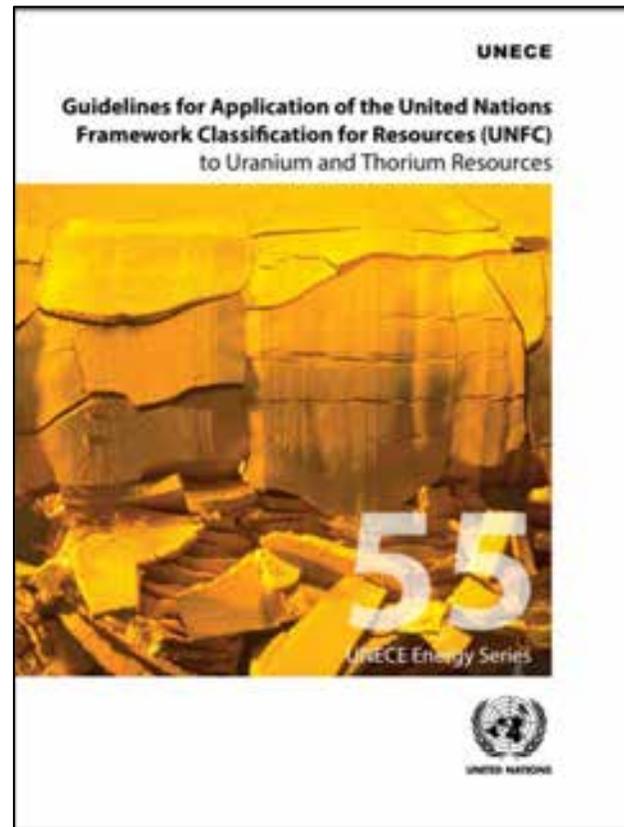
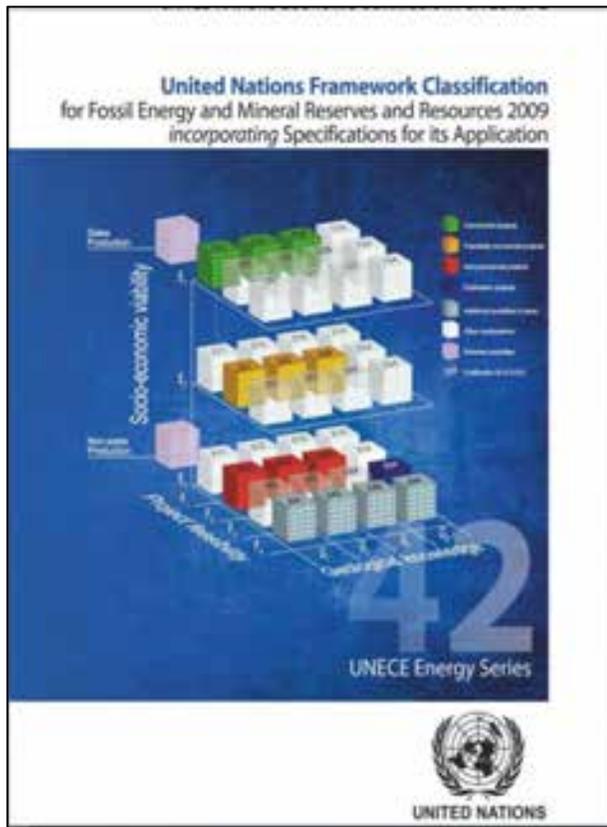


In summary ...



- **UNFC is a generic, principles-based system**
 - Applicable to both solid minerals and fluids
 - Uses a numerical coding system
- **Based on three fundamental criteria**
 - Economic and social viability
 - Field project status and feasibility
 - Geological knowledge
- **Each criterion is sub-divided into 3 or 4 defined categories**
 - Optional use of sub-categories for more granularity
- **Classes are defined by a combination of a single category or sub-category for each of the three criteria**
 - Numerical category or sub-category for E, for F and for G
 - Always quoted in same sequence: E – F – G
 - Axis letters can be dropped: e.g. Class 221

Recent publications



More information



<http://unece.org/energy/se/reserves.html>

Sustainable Energy

- UNFC and Sustainable Resource Management**
- About UNFC and Sustainable Resource Management
- Areas of Work
- Applications
- UNFC Documents
- Case Studies and Application Examples
- Governance
- Public consultations
- MOUs
- FAQs
- Meetings and Events
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- Media
- Contact us

UNFC and Sustainable Resource Management

United Nations Framework Classification for Resources (UNFC) - a universally acceptable and internationally applicable scheme for the sustainable management of all energy and mineral resources.





23-27 April 2018

Resource Management Week 2018
UNFC FOR SUSTAINABLE DEVELOPMENT
9th Session of the Expert Group on Resource Classification



 Applications	 UNFC Documents	 Case studies
 Governance	 Public consultations	 MOUs
 Learning	 FAQs	

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Thank you!



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Mexico City, 14 June 2019**