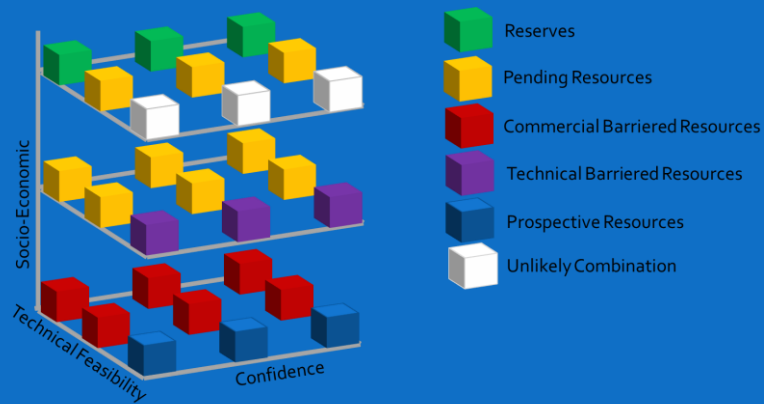


# UNFC FOR SUSTAINABLE DEVELOPMENT

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# Goals for the UNFC

- Provide a useful tool to aid the communication and insight into the status of sustainable development of energy, natural and anthropogenic resources;
- Provide something novel that does not reproduce existing tools;
- Work with and for all stakeholders
  - Governments, Industry, Financial Institutions, Society; and
- Supply tools to meet the SDGs

# Current Status

- A fantastic level of commitment and energy to the UNFC from multiple stakeholders, countries and individuals;
- Operational tool that meets many stakeholder needs:
  - Comparability of entire resource base is of value to governments; and
  - Growing applicability to new resources (Injection, Renewables, Anthropogenic).
- Take up is just before the tipping point:
  - Scepticism of some Renewables group with UNFC foundation in fossil energy and limited understanding of value of classification and development planning rigour;
  - UNFC is often viewed as being complex and non-intuitive; and
  - Need for some modern tools to facilitate use and communication.

# Proposals

1. Revamp and harmonize the language to be inclusive of all of the diversity of the various commodities and stakeholders of the UNFC; for submission to CSE in September 2019 (no public comment) send to EGRM for info prior to submission to CSE. Bureau TAG and all WG Chairs,
2. Engage with new stakeholders (statistics users, developing countries, renewables, etc.) to build consensus on the value of the UNFC, and to clarify specific requirements of a classification system for their needs; **before end 2019**. Bureau to oversee ? Survey, outreach to EU, AUC, Mexico, India, RF, CCOP, China
3. Simplify and update the UNFC category and subcategory definitions, and provide efficient, digital tools to aid the understanding and use. Build a framework that will be of greater value for the UN Resource Management System.

# Proposal 1 – Revamp & Modernise

- The UNFC as published in 2009 was specifically designed for the sole use of fossil energy and mineral reserves and resource reporting – its language and vocabulary reflects this;
- The generic renewable specifications addressed this by building a glossary to map terms for the commodities that the renewables task force was addressing;
- During 2017 and 2018, a significant amount of effort has been put into developing additional specifications and guidance for the E-axis specifically on social and environmental concerns;
- It is proposed that a small task force consisting of representatives of each commodity prepare a consensus revamp of the UNFC that incorporates commodity neutral language and references or additional text on the E-axis;
- Upon Bureau consensus of the revamp, the commodity generic version of the UNFC will be sent to the Committee for endorsement.

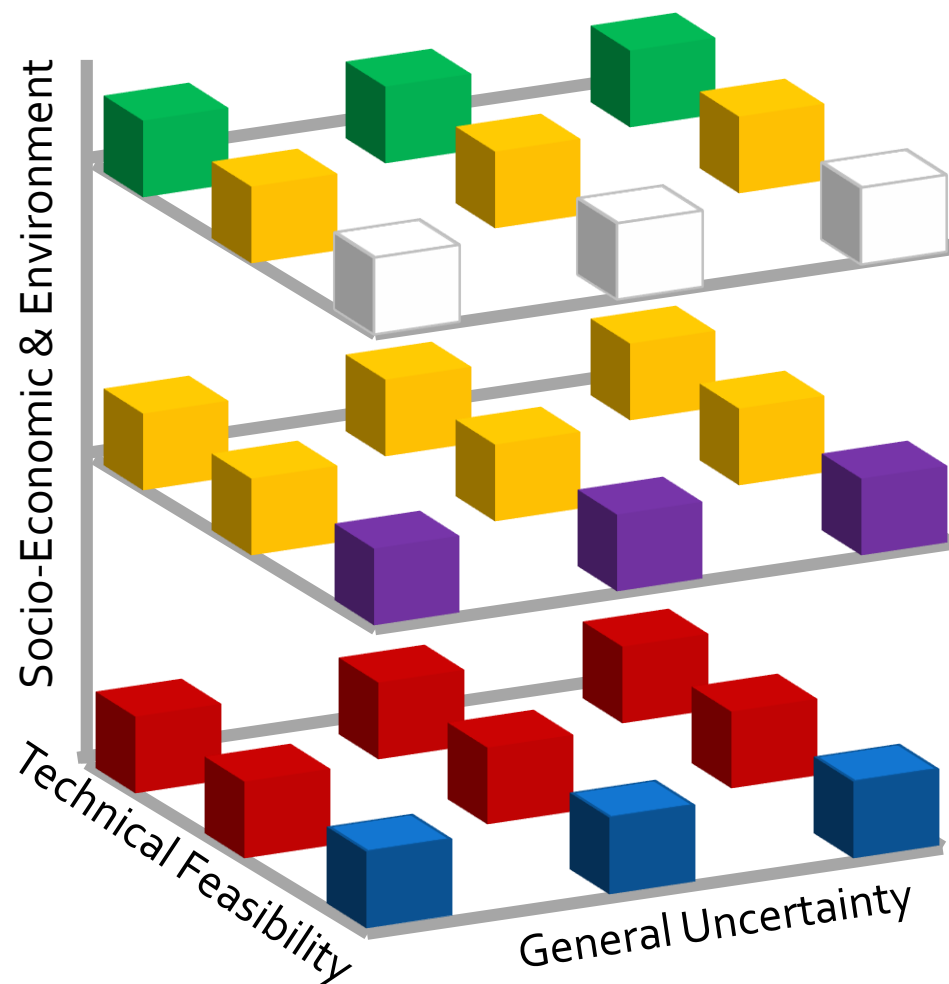
# Proposal 2 – Engage with Stakeholders

- Nations from the Americas to Asia to Africa are recognising the need for a consistent system that can be competently applied and reflects the unique needs of their situation. There is an opportunity to work with geologic surveys, governments and industry to develop guidelines and specifications that meet their distinctive needs and give them a sense of ownership;
- Renewables Sector is still developing requirements as the level of their investments prepares to increase significantly. There is an opportunity to assist the sector in achieving sustainable, commercial development, through education and targeted modifications to the UNFC;
- Possible considerations:
  - Flexibility on statistic being classified. Volume is relevant for extractive industry, but rate may be more appropriate for renewables;
  - Guidance to ensure consistency across application will be important for nations with growing industries;
  - Simplified, inclusive language.

# Proposal 3 – Update of the UNFC

- Opportunity with this update to clarify and simplify the language of the UNFC. Absolute need to be inclusive of new commodities such as renewables;
- Need to clarify the purpose of each of the axes – what are they measuring? This is not clear from the UNFC documentation and has led to confusion of the interaction between the axes.
- Need to work on the communication of the value that is added by the UNFC and how it can be used as an aid to sustainable development. Digital tools will make this easier, and aid in consistent application of the UNFC;
- Opportunity to scale the three axes to better align with business practices and technology progress;
- Make the UNFC a project classification system, not a volume classification system.

# Revised UNFC



- Commercial Projects
- Potentially Commercial Projects
- Non-Commercial Projects (Commercial Barrier)
- Non-Commercial Projects (Technical Barrier)
- Prospective Resources
- Unlikely Combination



# UNFC Classification Matrix

		E3		E2	E1		
		Access	Appraise	Define	Execute	Operate	
F3	Concept	Prospect	Tech Barrier				
	Proof of Concept	Unclarified	Unclarified				
F2	Analogue	Comm Barrier	Pending	Pending			
	Pilot	Comm Barrier	Pending	Pending			
F1	Qualified	Comm Barrier	On-Hold	Justified Projects	Undeveloped Projects	Undeveloped Projects	
	Developed				Developed Projects	Developed Projects	

Rough mapping to UNFC-2009 is illustrative only

# Standardised Specifications

- Aim for a pre-flight checklist approach for consistency. The checklist should be evidence based to reduce the amount of interpretation required;
- Subdivide each axis into the key issues that they are addressing;
- Define minimum standards required to meet each axis classification point;
- Reviewing all of the key issues a picture should emerge of the overall standing. General expectation is that the minimum maturity will reflect the overall maturity, but there may be rationale for other interpretations.

# Socio-Economic Maturity Tests

	Access	Appraise	Define	Execute	Operate
Access & Entitlement					
Market & Sales Connectivity		Potential markets for production have been identified with options for connection to those markets. There are plans to evaluate these options to identify at least one commercially viable option.			
Environmental & Social Considerations					
Authorisation & Commitment					
Economic status					

Maturity levels are based on a generic capital value process.

# Technical Maturity Tests

	TRL 2 - Concept	TRL 3 – Proof of Concept	TRL 4 – Tech Validated	TRL 6 - Analog	TRL 7 - Pilot	TRL 8 - Qualified	TRL 9 - Operate
Project							
Data & Analysis							
Development Plan							
Performance Prediction							

Maturity levels are based on the Technology Readiness Levels (TRL) taken from the European Commission Horizon 2020 Framework for Research and Innovation (<https://ec.europa.eu/programmes/horizon2020/>)

# Proposals

1. Revamp and modernise the our language to be inclusive of all of the diversity of the various commodities and stakeholders of the UNFC;
2. Engage with new stakeholders (statistics users, developing countries, renewables, etc.) to build consensus on the value of the UNFC, and to clarify specific requirements of a classification system for their needs; and
3. Simplify and update the UNFC category and subcategory definitions, and provide efficient, digital tools to aid the understanding and use.