




THE UNFC E-AXIS SOCIO-ECONOMIC VIABILITY

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SOCIO-ECONOMIC FACTORS

- The Socio-Economic E-Axis is described in the UNFC as:
 - “... designates the degree of favorability of social and economic conditions in establishing the commercial viability of the project, including consideration of market prices and relevant legal, regulatory, environmental and contractual conditions.”
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5TH SESSION OF THE EGRC, 2015

- Recommended the formation of a subgroup to the Bureau to prepare guidance on accommodating environmental and social considerations in UNFC-2009
- Noted that these involve many diverse and complex issues. ... a wide range of material is already available ... requested that any guidance produced should revolve around high-level principles ...
- NOTE. There is a “wide range of material”, but not on classification!

THE IMPACT OF “SOCIO-ENVIRONMENTAL” ISSUES

- Can result in legal, contractual, environmental, and/or government approval issues that affect the timing and Implementation of a project:
 - Access to market
 - Construction of or access to production and transportation facilities
 - Internal and external approval
 - Access to financing
- BUT, There are positive aspects to society:
 - Supply of raw material on which our society depends
 - Revenue from taxes and royalties
 - Jobs

CLASSIFICATION PERSPECTIVE

INTERNAL AND EXTERNAL FACTORS

- INTERNALITY: Factors that are under the control of an operator, and directly affects the commercial (including economic) viability of a project.
- EXTERNALITY: "The cost or benefit that affects a party who did not choose to incur that cost or benefit." (Wikipedia)

Greatly simplified table:

	COSTS		BENEFITS	
	OPERATOR	SOCIETY	OPERATOR	SOCIETY
INTERNALITY	Capex, Opex	X	Profits from sales	X
EXTERNALITY	X	Social and Environmental	X	Raw material, Revenue from Taxes, Royalties, Jobs

Different perspectives on social and environmental (possibly economic) issues could result in differences in classification.



E-AXIS SUB-CATEGORY E1

- **E1**, Commercial: discovered, with a known recovery process and economically viable.
- Sub-classes:
 - **E1.1** Extraction and sale is economic on the basis of current market conditions and realistic assumptions of future market conditions.
 - **E1.2** Extraction and sale is not economic on the basis of current market conditions and realistic assumptions of future market conditions, but is made viable through government subsidies and/or other considerations.



E-AXIS SUB-CATEGORY E2

- **E2**, “Expected to become economically viable in the foreseeable future”.
 - There are currently no sub-categories.



E-AXIS SUB-CATEGORY E3

- 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.”
 - E3.1, Quantities that are forecast to be extracted but, which will not be available for sale.
 - E3.2, Economic viability of extraction cannot yet be determined due to insufficient information (e.g. during the exploration phase).
 - E3.3, On the basis of reasonable assumptions of future market conditions, it is currently considered that there are not reasonable prospects for economic extraction and sale in the foreseeable future.



CURRENT GUIDANCE

- F-AXIS and G-AXIS
 - Considerable guidance and well-developed resource-specific practice
- E-AXIS (Socio-Economic):
 - Economic conditions
 - Considerable guidance and well-developed resource-specific practice
 - Social (and environmental) conditions
 - Cited as a factor in most resource-specific guidelines
 - But no significant guidance
 - Generally NOT resource specific



RESOURCE SPECIFIC GUIDANCE

- Recognised by UNFC
 - Oil and Gas: SPE PRMS (Petroleum Resource Management System)
 - Minerals: CRIRSCO Template
 - Uranium and Thorium: NEA/IAEA Red Book
- Others
 - COGEH, NPD, SAMREC, JORC, NI 43-101, SEC, ESMA, PERC, etc.
- All recognise Socio-Environmental factors (not necessarily by that name), but there is no significant guidance regarding classification



SUB-GROUP REPORTS, 2017

- Draft guidance on accommodating environmental and social considerations in the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009.
- Report on Concepts and Terminology
- To be presented and discussed at the EGRC meeting.

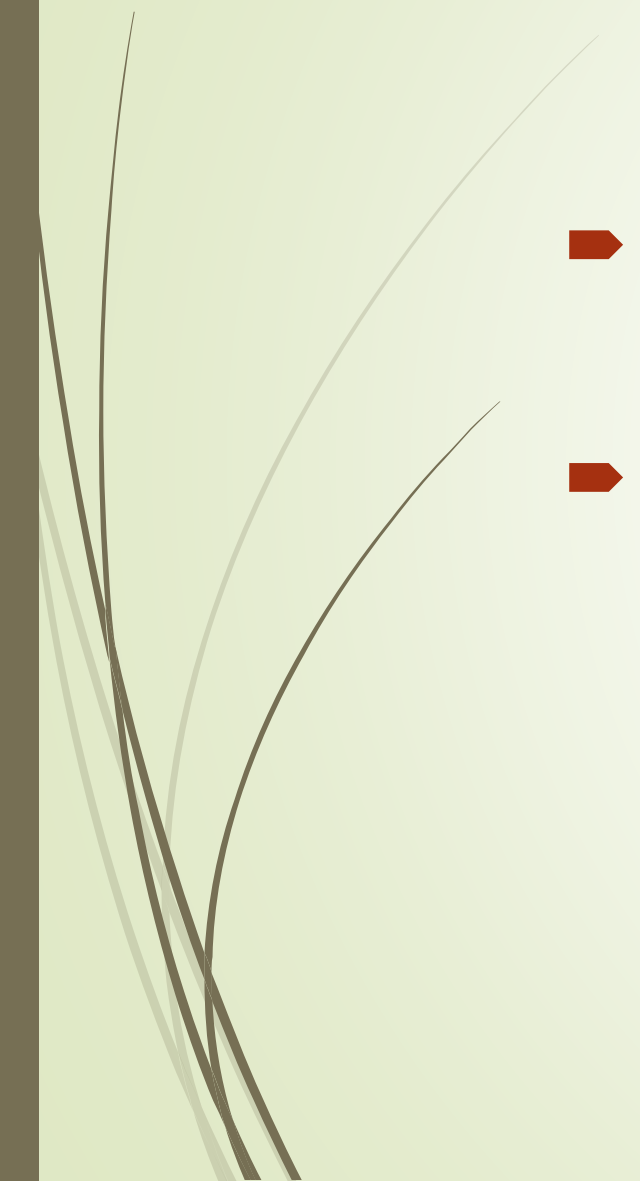


SUB-GROUP REPORT: MAIN CONCLUSIONS

- There is no significant guidance regarding classification with regard to Socio-Environmental factors.
- Many of these factors are common to all types of resource
- Three points:
 1. High level guidance
 2. Development of detailed guidelines
 3. Concepts and terminology



E-AXIS SUB-CATEGORIES

- E.1 and E.3 No changes being considered
 - E2, Attempts to resolve contingencies with:
 - E2.1 High probability of resolution
 - E2.2 Medium probability of resolution
 - (E3.3 Low probability of resolution)
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SOCIAL LICENCE

- Often arises because of concerns about the potential for harm (economic, physical or cultural) to the environment or people
- Several “definitions”, in summary:
 - Resolution of activities that could delay or prevent a project, by agencies inside or outside a formal legal and regulatory process.
- For Classification:
 - Not recommended as a classification term because it is uncertain as to what it could include.
 - Use specific criteria (e.g., regulatory approval, etc.)



FORMAL AND NON-FORMAL CONDITIONS

- FORMAL legal and regulatory processes:
 - E.g., environmental approval or a licence to drill, or to mine.
- NON-FORMAL, outside a formal legal or regulatory process:
 - Could be a result of concerns of local communities about the impact of a mineral recovery project, or of organisations that would not be directly affected but who have concerns of a more general nature.
 - Harder to determine how to classify.



POSSIBLE TERMS OF REFERENCE FOR FUTURE WORK

- Prepare detailed guidance on assessing environmental and social considerations for the classification of resources for non-resource specific issues.
- Cooperate with resource-specific EGRC committees to ensure consistency with detailed resource-specific E-axis guidance.
- Clarify related terms and concepts as relevant.
 - Although focused on environmental and social issues, consider how these integrate with E-axis economic issues and with related F and G-axes issues.