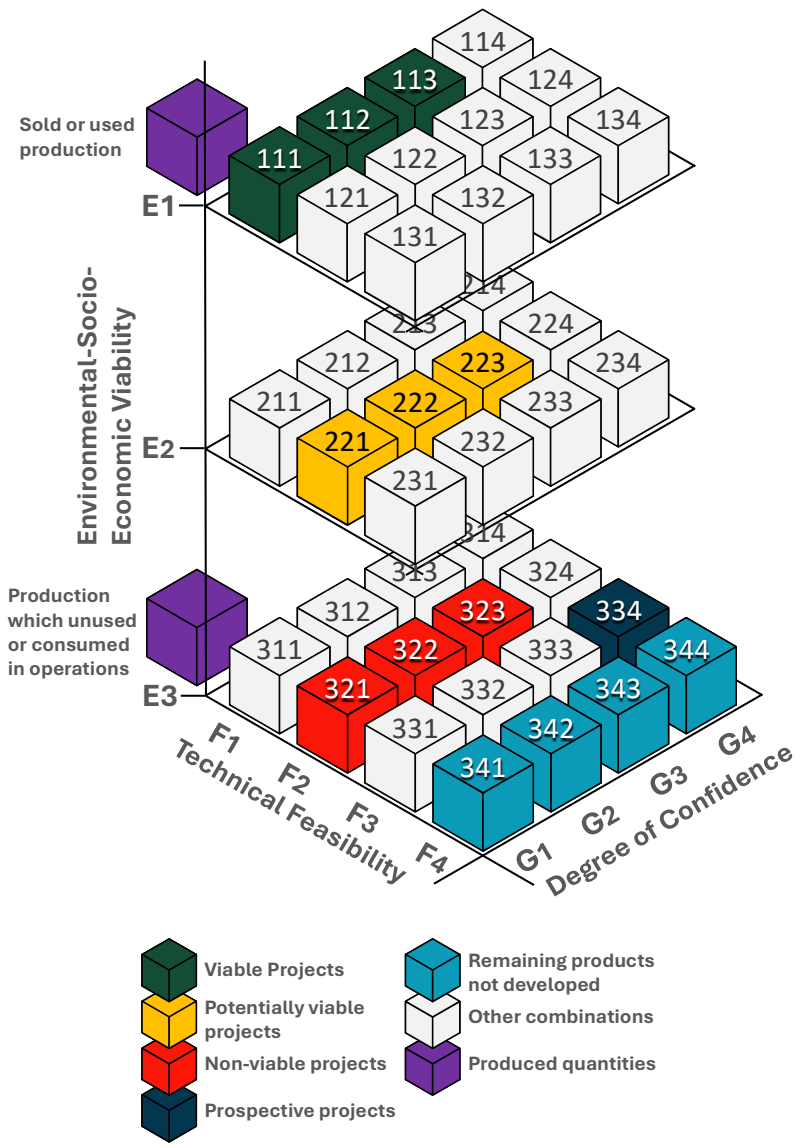
UNFC-2019 FACTSHEET

UNITED NATIONS FRAMEWORK CLASSIFICATION FOR RESOURCES

SATARLA

3D REPRESENTATION OF UNFC AXES

Developed by the United Nations Economic Commission for Europe (UNECE).



UNFC CATEGORIES

E: Environmental-Socio-Economic Viability – determined by relevant legal, regulatory, social, environmental and contractual conditions, and market prices.

F: Technical Feasibility – based on the maturity of technology, studies, and commitments involved with its development.

G: Degree of Confidence – in the estimate of the quantities of products from the project based on geological knowledge.

UNFC-2019 BACKGROUND

The United Nations Framework Classification for Resources (UNFC, developed by the UNECE) is a global principle-based tool for the classification, management, and reporting of minerals, petroleum, renewable energy, anthropogenic resources, as well as geological storage and groundwater resources.

Fully aligned with UN Sustainable Development Goals UNFC provides a coherent approach and a common language to communicating the availability and project maturity level of these varied resources.

Supplementary Specifications for the Application of the United Nations Framework Classification for Resources to Minerals is a supporting guidance document for the use of UNFC specifically within the minerals sector.

UNFC can be used to assess a minerals project at all stages, from exploration to closure and remediation, and recycling to processing of tailings storage facilities.

Use of UNFC is mandated within the EU's Critical Raw Materials Act; both in monitoring and reporting of primary and secondary critical raw materials by geological surveys, and for private sector applicants to EU Strategic Projects (which have streamlined permitting and funding).

UNFC-CRIRSCO BRIDGING

The Committee for Mineral Reserves International Reporting Standards (CRIRSCO) aligned reporting codes aim to provide information for public disclosure for investors, as well as exploration and mining companies. UNFC classifies raw materials to primarily provide information for policy-makers, environmental experts, geosurveys and international organisations.

A shared objective of both systems is to communicate the levels of confidence in the quality and size of mineral deposits. This linkage is enhanced by the CRIRSCO-UNFC Bridging Document, allowing the mapping of CRIRSCO Template reporting codes with UNFC numerical codes.

A combined approach to minerals reporting using these two complimentary classification systems can help manage risk for a broader range of stakeholders than relying on a single system.

CRIRSCO FACTSHEET

THE CRIRSCO CODES – MINERAL RESOURCES & MINERAL RESERVES

WHAT ARE THE CRIRSCO CODES

The Committee for Mineral Reserves International Reporting Standards (CRIRSCO) Codes are a set of international standards for the classification and reporting of mineral resources and reserves.

The codes are widely recognised and followed in the mining and minerals industry to ensure transparency, consistency, and accuracy when reporting the value and quantities of mineral resources and reserve to investors, regulators and other stakeholders.

The CRIRSCO Codes are applied in several countries and regions, and the specific reporting systems based on these codes can vary by country.

Examples of regional systems include:

- NI 43-101 (Canada)
- JORC Code (Australia)
- SAMREC (South Africa)
- PERC (Europe)
- JAPAN (Japan)

MINERAL RESOURCES

Mineral resources are concentrations of minerals in the Earth's crust that are of potential economic interest but have not yet been fully developed into reserves.

Resources are categorized solely based on the level of confidence in the geological data.

MINERAL RESERVES

Mineral reserves are the part of the mineral resource base that is economically viable for extraction under current market conditions. Reserves are classified based on both geological confidence and economic feasibility of extraction – variables that impact economic feasibility of distraction are referred to as 'modifying factors'.

MODIFYING FACTORS

Can include:

- Mining methodology
- Geological complexity
- Ore grade
- Environmental Impact
- Regulatory Requirements
- Commodity Prices
- Community relations
- Etc.

RESOURCE & RESERVE CATEGORISATION

Under the CRIRSCO Codes mineral concentrations can be categorised as:

Category	Confidence Level	Geological Basis	Economic Viability
Inferred Resource	Low confidence	Limited geological data, significant uncertainty	Not yet determined
Indicated Resource	Moderate confidence	More data and geological knowledge, reasonable estimates	Further evaluation needed
Measured Resource	High confidence	Detailed exploration, high accuracy	High accuracy
Probable Reserve	Moderate confidence	Economically viable, based on Indicated Resource	Expected to be profitable, with some uncertainty
Proved Reserve	High confidence	Economically viable, based on Measured Resource	Expected to be highly profitable