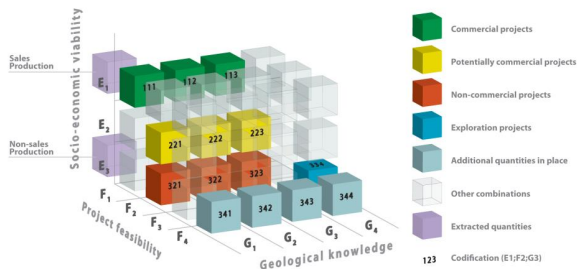


The four principal applications of the UNFC

The four principal applications of the UNFC



1. Policy formulation

- Understand the resource base for
 - National and regional policy
 - Global policy

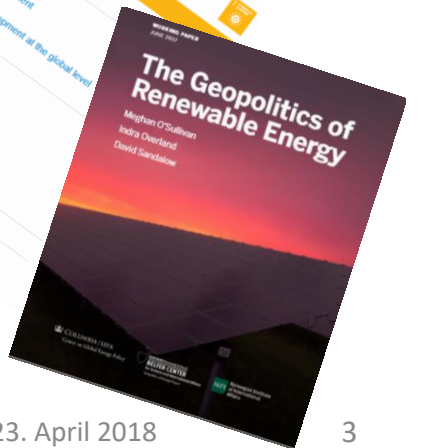
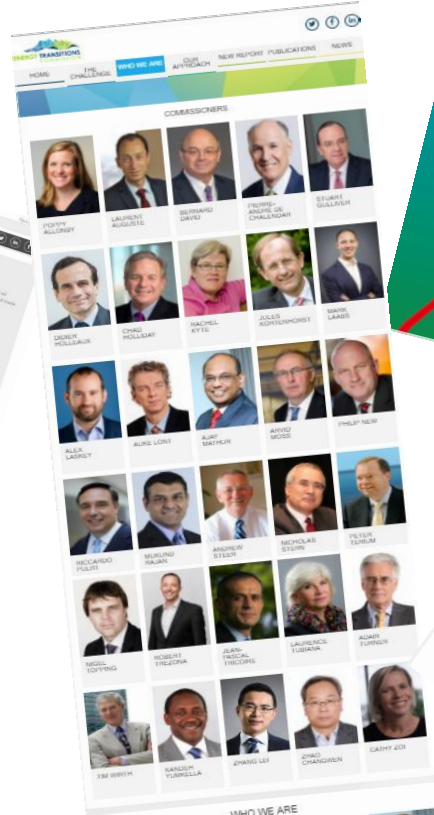
2. Government resource management

3. Industry business process management

4. Capital allocation

Selected policy initiatives

Norway's petroleum act



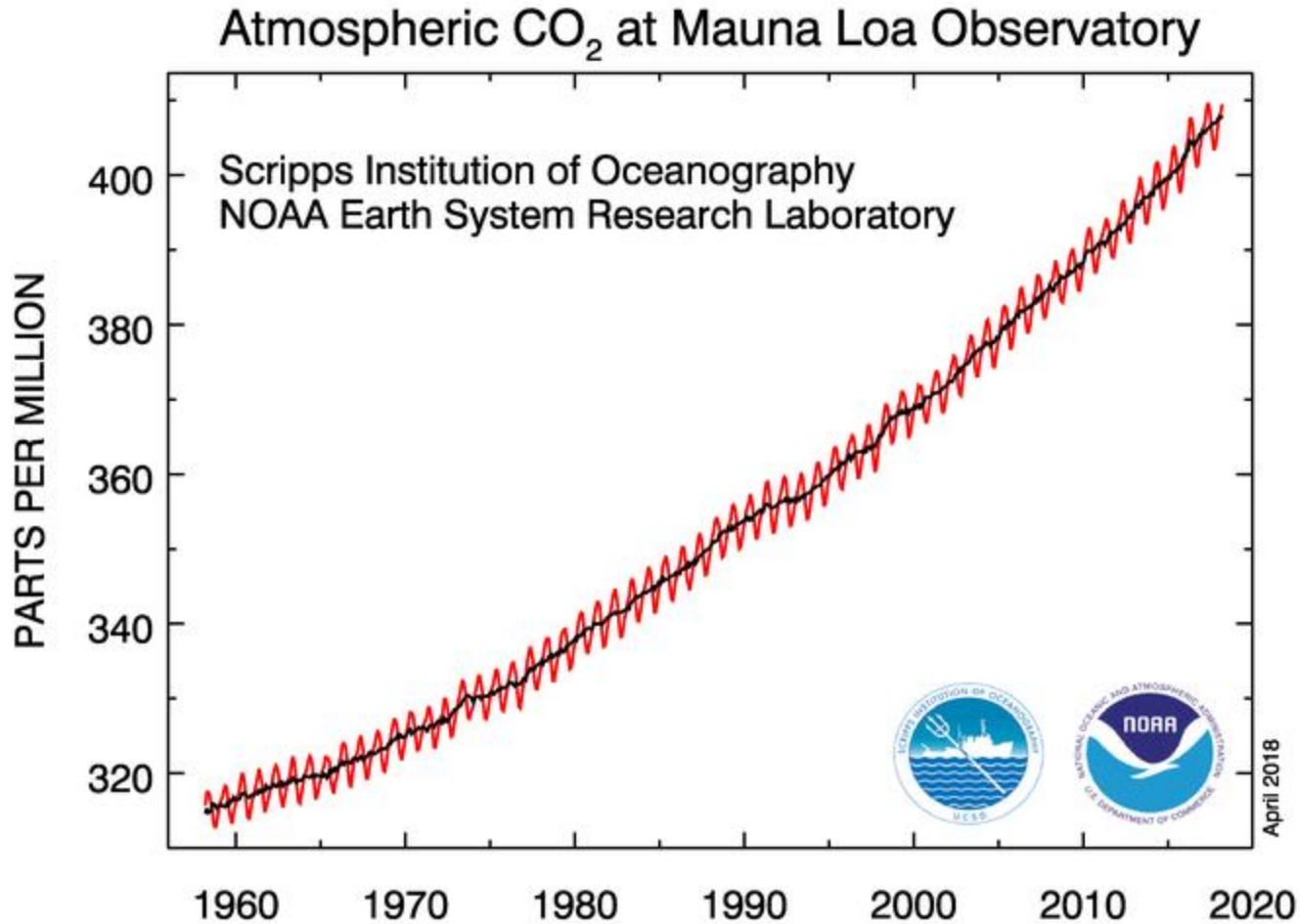
Sweden's mineral strategy

Selected policy initiatives some of the hyperlinks

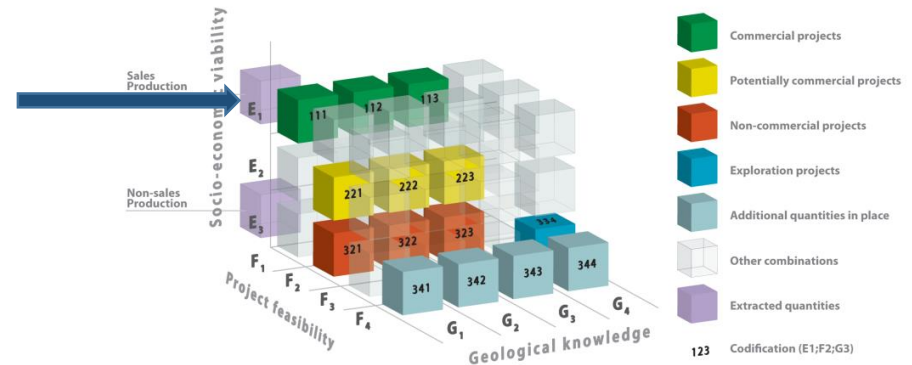


- [UNECE Pathways to Sustainable Energy](#)
- [IEA World Energy Outlook and special reports](#)
- [Energy Transitions Commission](#)
- [Irena: Untapped potential for climate action: Renewable energy in Nationally Determined Contributions](#)
- [Global SDG 7 Conference. 21-23 February, Bangkok, UN ESCAP](#)
- [IEA/IRENA Perspectives for the energy transition – Investment needs for a low-carbon energy system](#)

Policy effects on atmospheric CO₂ concentrations is not obvious



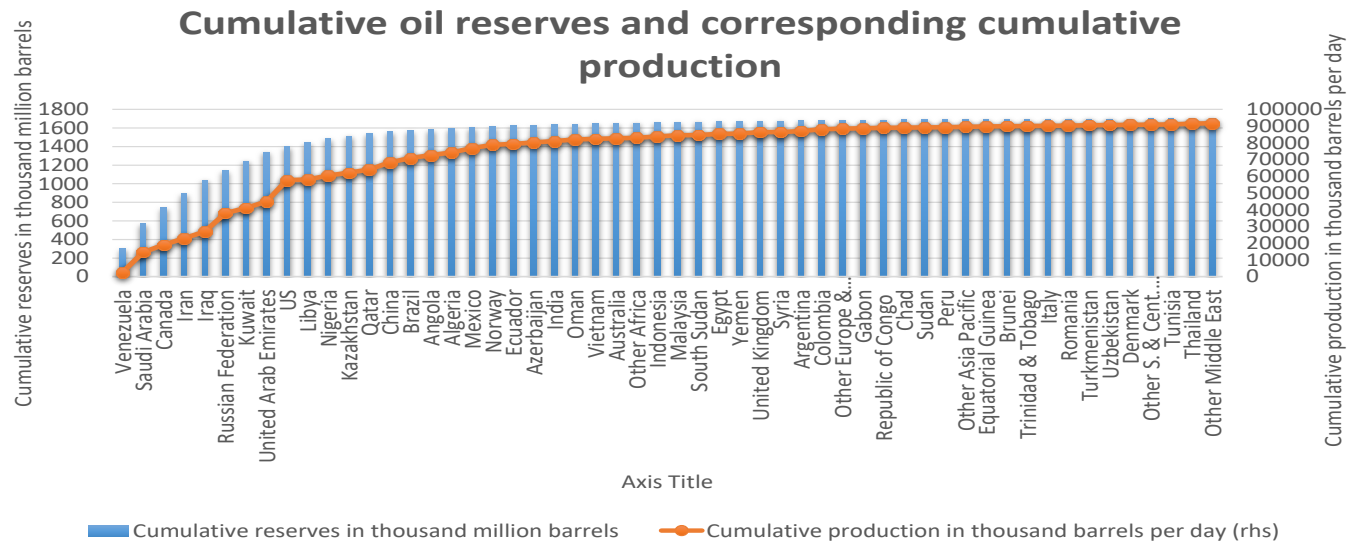
UNFC in policy analyses



- Policy analyses require information on both future consumption and production (which need to be about equal).
- Production and recovery takes place when resources have a positive value at the point of production (value at source).
- **Information on future sale (UNFC inventories), its cost of production and the effect of policy on the value at source are required to assess how policy will impact production and therefore also consumption.**

Application of the UNFC in policy analyses

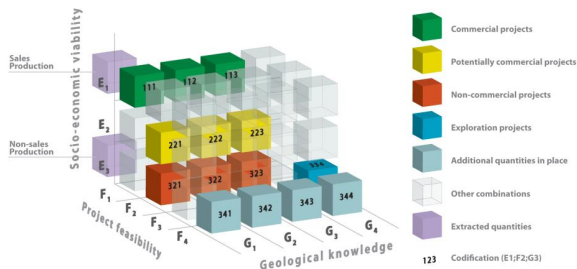
- The resource base is large and diversified.
- **Uncertainty range is often much less important than quality expected values.**



Source: BP Statistical review of world energy data workbook 2016

Introduction to Application of the United Nations Framework Classification for Resources (UNFC), UNECE 23. April 2018

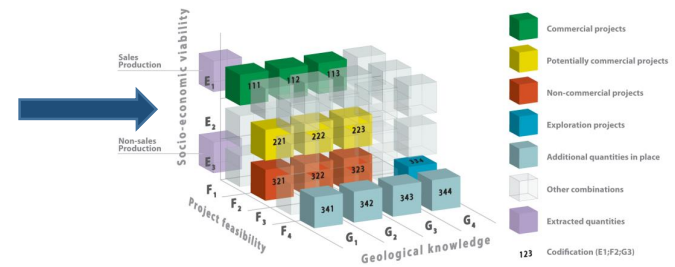
The four principal applications of the UNFC



1. Policy formulation
2. Government resource management
 - Stable investment environment
 - National value creation
 - Macroeconomic management
3. Industry business process management
4. Capital allocation

Government control determines resource management efficiency.

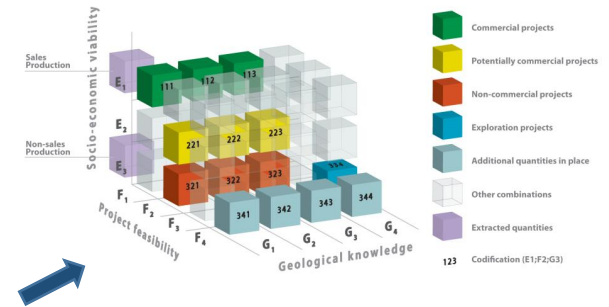
Economic and social framework conditions



- Stable frameworks with predictable flexibility
- Value at source determines recoverable quantities:
 - Collection of economic rent at the source, not mid- or down-stream
 - Neutral fiscal systems that do not erode the value at source for investors
 - Efficient national infrastructures
- Alignment of interests creates balanced decisions
- **E-axis informs governments of the quantitative effects of framework conditions and of interest alignment.**

Government control determines resource management efficiency

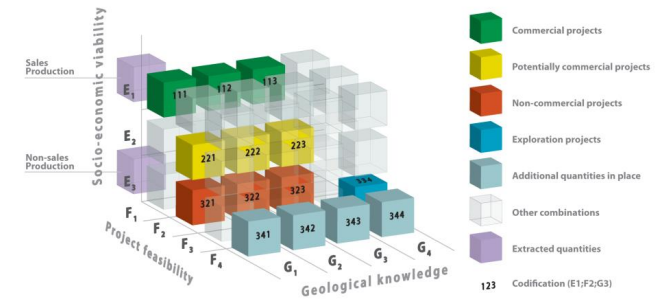
Field project status and feasibility



- Licensing determines tempo and development patterns.
- Tempo determines the efficiency of capability deployment both in the public and private sector. Too little and too much can be damaging.
 - HSE is essential.
 - Tempo must resonate with Government and industry development dynamics
- Return on capital employed requires capital intensive infrastructure to produce at capacity.
- **Managing tempo requires some feel for quantity uncertainty, particularly on the immature end of the F-axis**

Government control determines resource efficiency

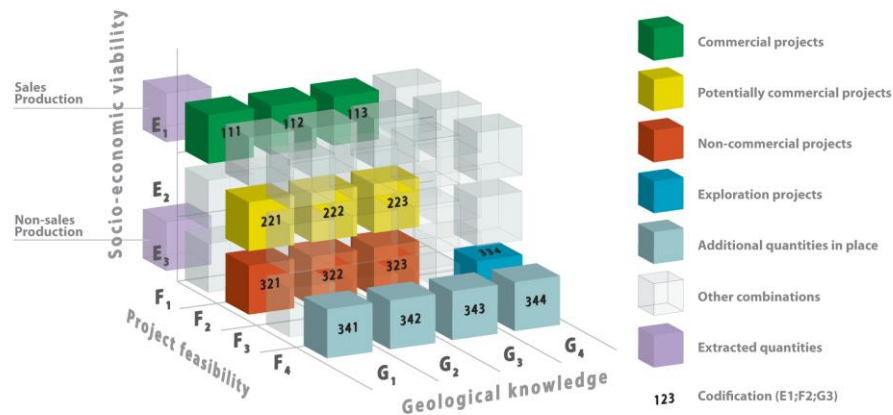
Transparency and macroeconomic management



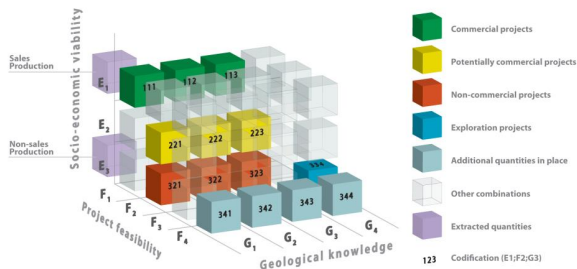
- Legal, regulatory and fiscal stability requires transparency and broad public consensus on resource management principles.
- Strong public data management capabilities are required.
- Reliable forecasts, including total recoverable UNFC quantities over time are required for Government macroeconomic management, including revenue and revenue risk management.
- **Trusted and relevant public disclosure of UNFC inventories is required**

UNFC in Government resource management

- UNFC forms the base for scientifically led Government resource management.
- **Aggregated stable numbers are required.**

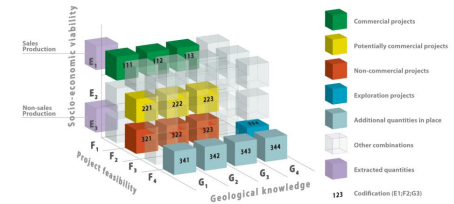


The four principal applications of the UNFC



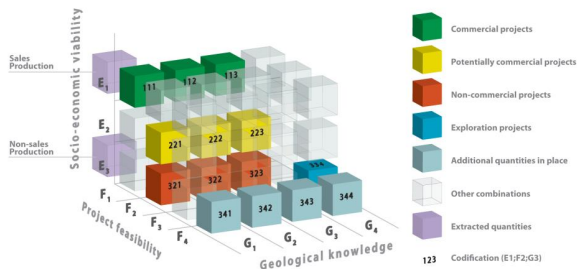
1. Policy formulation
2. Government resource management
3. Industry business process management
 - Deploy capability along the value chain - holistic project management
 - Manage opportunities and risks
 - Optimise portfolio
 - Inform capital providers
4. Capital allocation

Industry uses the full UNFC



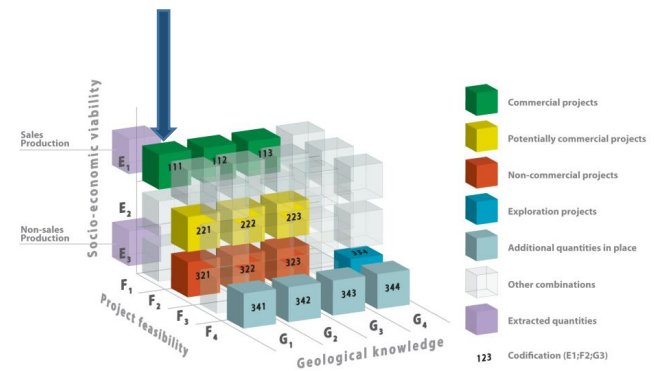
- **UNFC applies to life cycle project management from accessing resources to abandonment**
- Information on quantity uncertainty and the chance of success allows valuing options to manage opportunities and risks.
- Options may be complementary or mutually exclusive UNFC subprojects.
- Options change frequently reacting to new information. Disclosing their UNFC quantities outside the group managing them is problematic.
- UNFC is basic to portfolio optimisation.
- **Numbers may be disaggregated and estimates volatile, reacting to details.**

The four principal applications of the UNFC



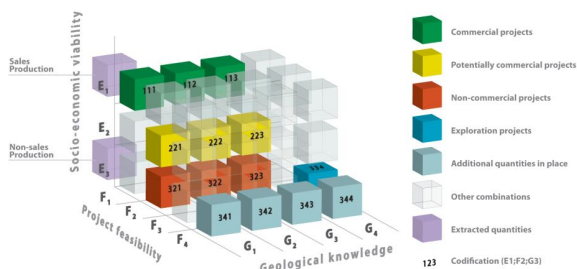
1. Policy formulation
2. Government resource management
3. Industry business process management
4. Capital allocation
 - Lending
 - Balance sheet
 - Project finance
 - Divestment, Merger and Acquisition (DM&A)
 - Shareholder finance

Capital allocation



- **Capital is available for projects where there is an industrial capability to produce a commercial business case under prevailing framework conditions.**
- Information needs for capital allocation differs in DM&A, balance sheet finance, project finance, and public (shareholder) finance.
- Project financing and price setting for DM&A require full UNFC inventories (depending on the value proposition).
- Balance sheet finance will require more aggregated information with focus on mature projects.
- **Information to shareholders is normally defined by financial regulators and focus on E1, F1 (Proved reserves).**

The four principal applications of the UNFC boil down to two



1. Policy formulation

2. Operating effective public-private partnerships where:

- Government designs the legal, regulatory, fiscal and infrastructural frameworks.
- Industry provides capabilities (industrial competence and capacity)
- The capital market provides finance

Thank you

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Summary

- Background
- UNFC explained
- Relationship to other classifications bridged to it
- Regional applications – categorizing and classifying projects taking account of social and environmental aspects
- Quality assurance and resource accounting
- Applications of the UNFC in its four functions



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