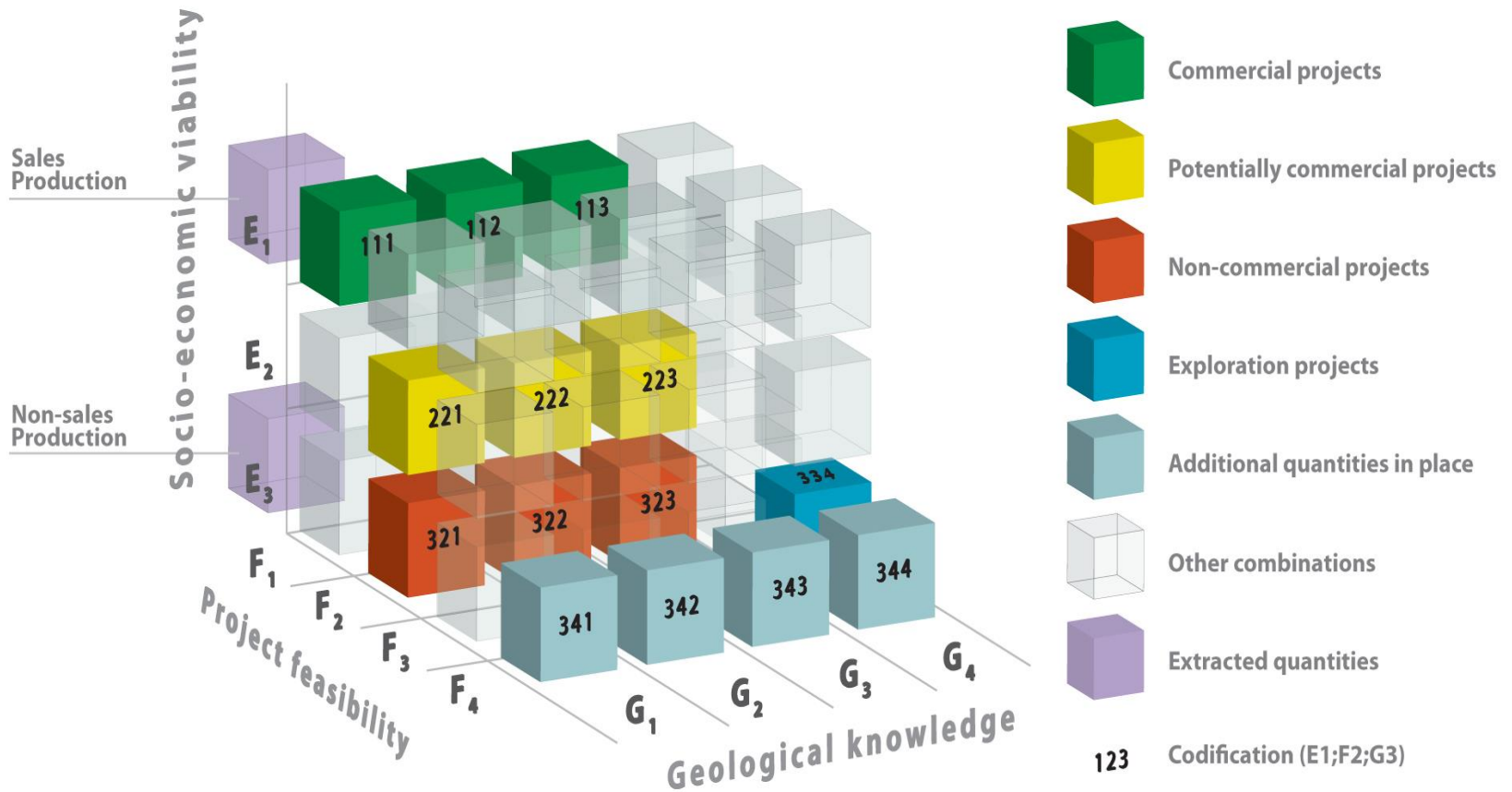


# Quality assurance, Resource accounting and Reconciliation

# How to ensure quality of estimates?



## **Guidance Note to support the United Nations Framework Classification for Resources Specification for Evaluator Qualifications**

**Prepared by the Bureau of the Expert Group on Resource Classification**

### *Summary*

The Expert Group on Resource Classification work plan for 2016–2017 calls for the Bureau of the Expert Group to review and prepare a guidance note on the need for, and responsibilities of, a Competent Person or Persons with regard to the United Nations Framework Classification for Resources (UNFC). A draft of this document was submitted for discussion at the eighth session of the Expert Group and provides additional information regarding the specification for Evaluator Qualifications (Specification M) as documented in the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC-2009) *incorporating* Specifications for its Application, ECE Energy Series No. 42, Part II, Annex I. Further, it provides a link to a companion document (Guidance Note on Competent Person Requirements and Options for Resources Reporting) that is not an integral part of UNFC, but which has been prepared on behalf of the Expert Group and contains detailed guidance on appropriate quality assurance mechanisms, qualification criteria and/or disclosure obligations that can be adopted in circumstances where explicit mandatory competency requirements are considered desirable. The Expert Group accepted the text of this Guidance note and recommended that this be posted on the UNECE website.

## **Guidance Note on Competent Person Requirements and Options for Resources Reporting**

**Prepared by the Bureau of the Expert Group on Resource Classification**

### *Summary*

This document provides non-mandatory guidance for organizations or entities such as national governments, financial institutions and companies, who wish to establish appropriate quality assurance mechanisms, qualification criteria and/or disclosure obligations that can be adopted in circumstances where competency requirements are considered desirable. This document sets out the purpose, scope, definition of a Competent Person, as well as the requirements for and governance of a Competent Person. The guidelines contained in this document reflect options that could be selected, refined and imposed by an organization when the United Nations Framework Classification for Resources (UNFC) or an officially aligned system may be adopted as the classification system and/or mandatory reporting system. A draft of this document was submitted for discussion at the eighth session of the Expert Group. The Expert Group accepted the text of this Guidance note and recommended that this be posted on the UNECE website.

Source:[https://www.unece.org/fileadmin/DAM/energy/se/pdfs/UNFC/UNFC-Guidance-Notes/Revised\\_UNFC\\_Guidance\\_Note\\_to\\_support\\_UNFC\\_Specification\\_for\\_Evaluator\\_Qualifications.pdf](https://www.unece.org/fileadmin/DAM/energy/se/pdfs/UNFC/UNFC-Guidance-Notes/Revised_UNFC_Guidance_Note_to_support_UNFC_Specification_for_Evaluator_Qualifications.pdf)

[https://www.unece.org/fileadmin/DAM/energy/se/pdfs/UNFC/UNFC-Guidance-Notes/Guidance\\_Note\\_on\\_Compentent\\_Person\\_Requirements\\_and\\_Options\\_for\\_Resource\\_Reporting.pdf](https://www.unece.org/fileadmin/DAM/energy/se/pdfs/UNFC/UNFC-Guidance-Notes/Guidance_Note_on_Compentent_Person_Requirements_and_Options_for_Resource_Reporting.pdf)

# Authorised Body

*in “Draft guidance for the application of the UNFC for mineral resources in Finland, Norway and Sweden.”*

- An **Authorized Body** is a legal or physical person with the legal competence to issue statements of UNFC resource inventories, i.e. a government agency or the chairperson of a corporation.
- An Authorized Body is one who has the ability to put skills, knowledge and experience into practice in order to manage activities in an effective and efficient manner to achieve an adequate and correct resource assessment, classification, and reporting, taking into account the conditions that determine cumulative sales and non-sales production from the Asset.
- This definition of Authorized Body is subject to any additional restrictions or conditions which may be required by national legislation, the appropriate government and stock exchange regulations etc. or private contracts.

# Qualified Person

*in “Draft guidance for the application of the UNFC for mineral resources in Finland, Norway and Sweden.”*

- A **Qualified Person** is a minerals industry professional, defined by an Association that hold enforceable disciplinary processes including the powers to suspend or cancel the entitlement to be a Qualified Person.
- A **Qualified Person** must have a minimum of five years relevant experience in the style of mineralization or type of deposit under consideration and in the activity which that person is undertaking.

# Resource Accounting

## Reporting petroleum data to the Government, Revised National Budget (Norway)

SUDS



NORWEGIAN PETROLEUM DIRECTORATE

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### Reporting to the revised national budget 2018 (RNB2018)

31.08.2017 **According to Section 50a of the Petroleum Regulations, operators must submit data to the revised national budget (RNB).** **RNB2018**

Every autumn, on 15 October, all operators must report data and prognoses related to their fields, discoveries, transport and onshore facilities.

**Objective**  
The reporting to the RNB is included in the basis for the state and national budget and the Government's oil and environmental policy. It is therefore very important that the reporting is of high quality and **that the deadlines are met, so that we can meet the deadlines set by the MPE.**

Schedule for the RNB2018 reporting process	
Date	
15 October	First report from operators
30 October at 12:00	First feedback from NPD
6 November at 12:00	Second report from operators
10 November at 12:00	Second feedback from NPD
14 November at 16:00	Third report from operator

### REPORTING RNB

- Download the [reporting file](#) (excel)

### GUIDELINES

The guidelines are provided in English. Download the [entire guidelines](#) (pdf) or select a chapter topic:

### DOWNLOAD PDF

- [NPD's resource classification](#)

# Revised National Budget Reporting

## Types of data to be reported for each project

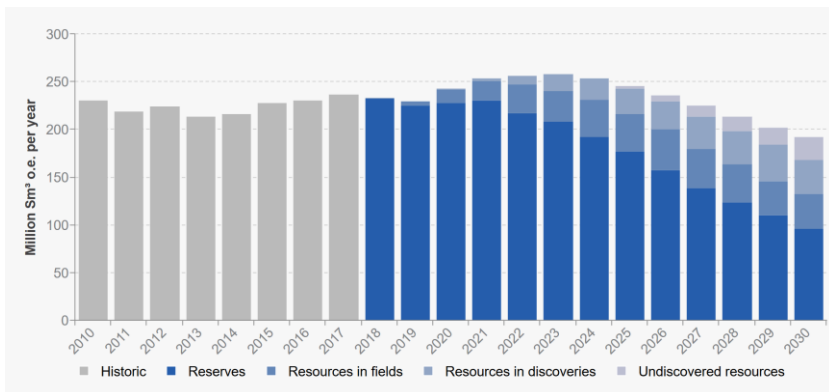
- Quantities
  - In-Place and recoverable volumes
  - Low, Base and High estimates
- Profiles
  - Production sales profiles
    - Oil, Gas, NGL and Condensate,
  - Costs
    - Investments, Operating cost, Tariff expenditures
- Environmental data
  - Emissions (CO<sub>2</sub>, NO<sub>x</sub>, nmVOC, CH<sub>4</sub>)
  - Background data (Water production, Injection profiles)
- Other data
  - Project attributes for contingent resources, Development concepts, Number of production wells to be drilled, etc.....

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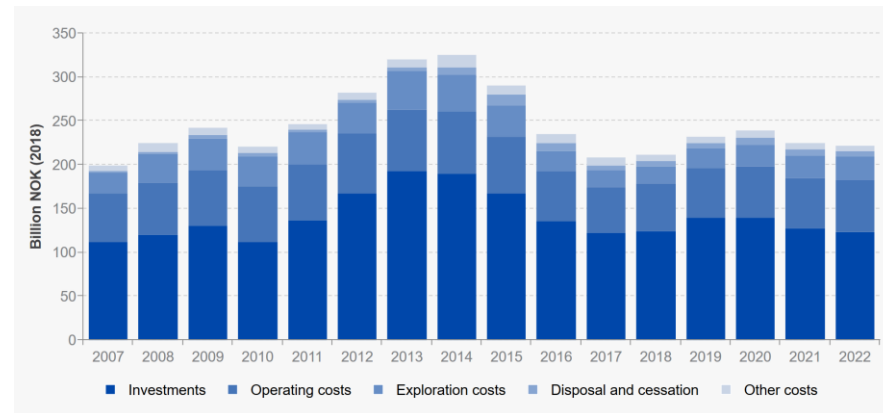
**NPD classification have to be used in reporting**

# Forecasts based on reporting for Revised National Budget

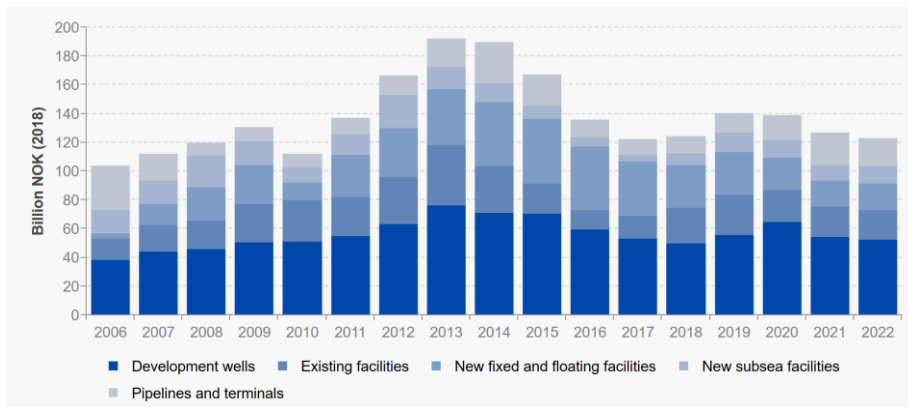
## Production



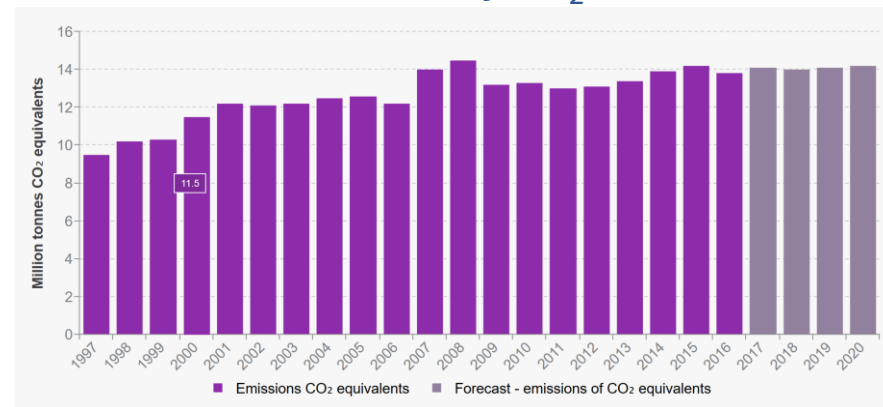
## Costs



## Investments



## Emissions of CO<sub>2</sub>





## Petroleum resources on the Norwegian Continental shelf per 31 Dec 2017

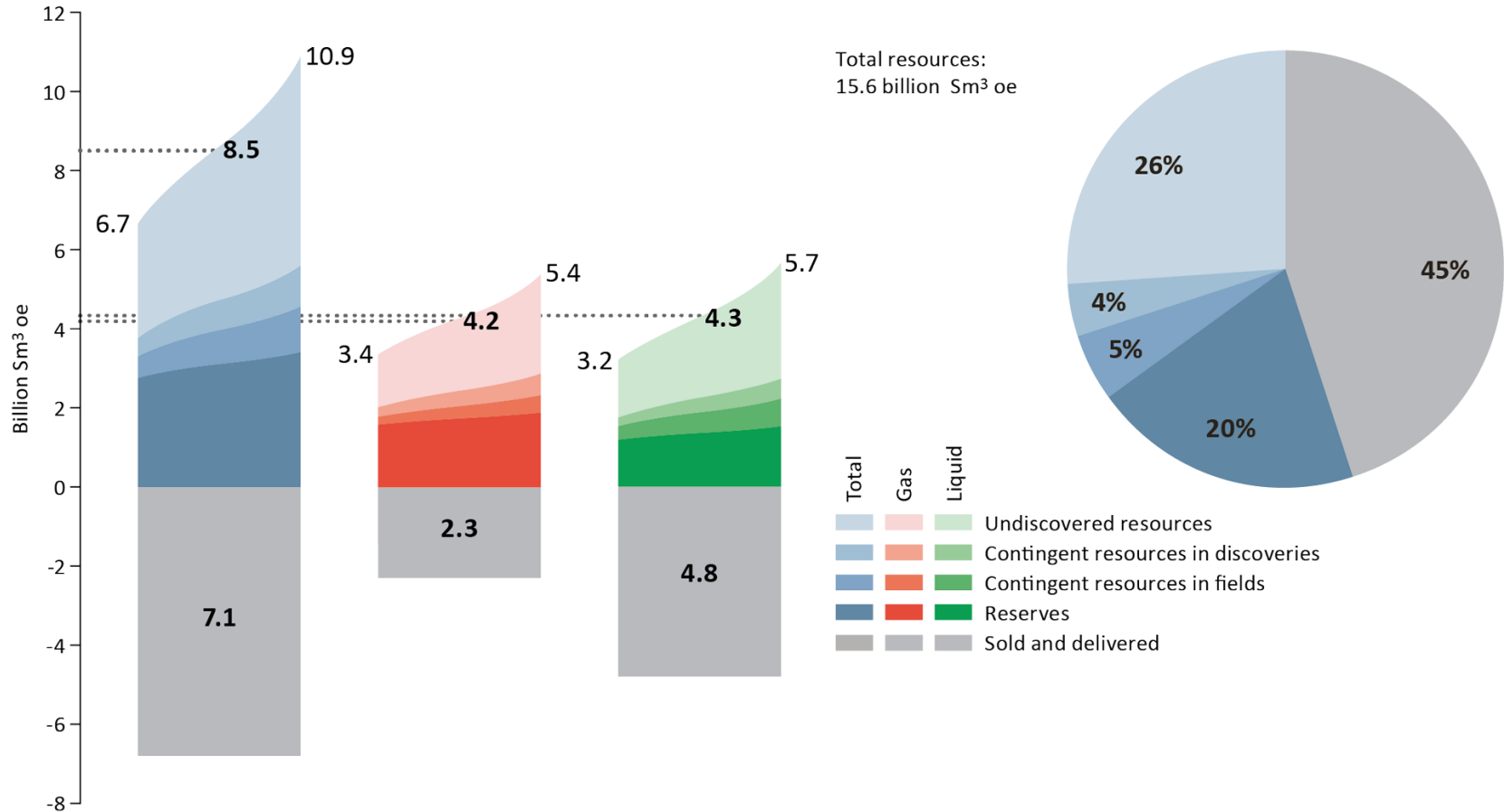
	<b>Oil</b> mill. Sm <sup>3</sup>	<b>Gas</b> bill. Sm <sup>3</sup>	<b>NGL</b> mill. tonn	<b>Condensate</b> mill. Sm <sup>3</sup>	<b>Sum o.e.</b> mill. Sm <sup>3</sup>
Produced	4261.4	2341.1	200.3	117.3	7100.3
Reserves*	1131.1	1729.1	109.5	20.7	3088.9
Contingent resources in fields	338.5	241.3	20.8	2.4	621.5
Contingent resources in discoveries	275.0	293.4	15.2	1.9	599.2
Production not evaluated (RC 7A)	130.0	70.0			200.0
Undiscovered resources	1995.0	1870.0		135.0	4000.0
<b>Total</b>	<b>8130.7</b>	<b>6544.9</b>	<b>345.8</b>	<b>277.4</b>	<b>15610.0</b>

\* Includes resource classes 1, 2 and 3

# Petroleum resources on the Norwegian Continental Shelf as of 31. Dec. 2017

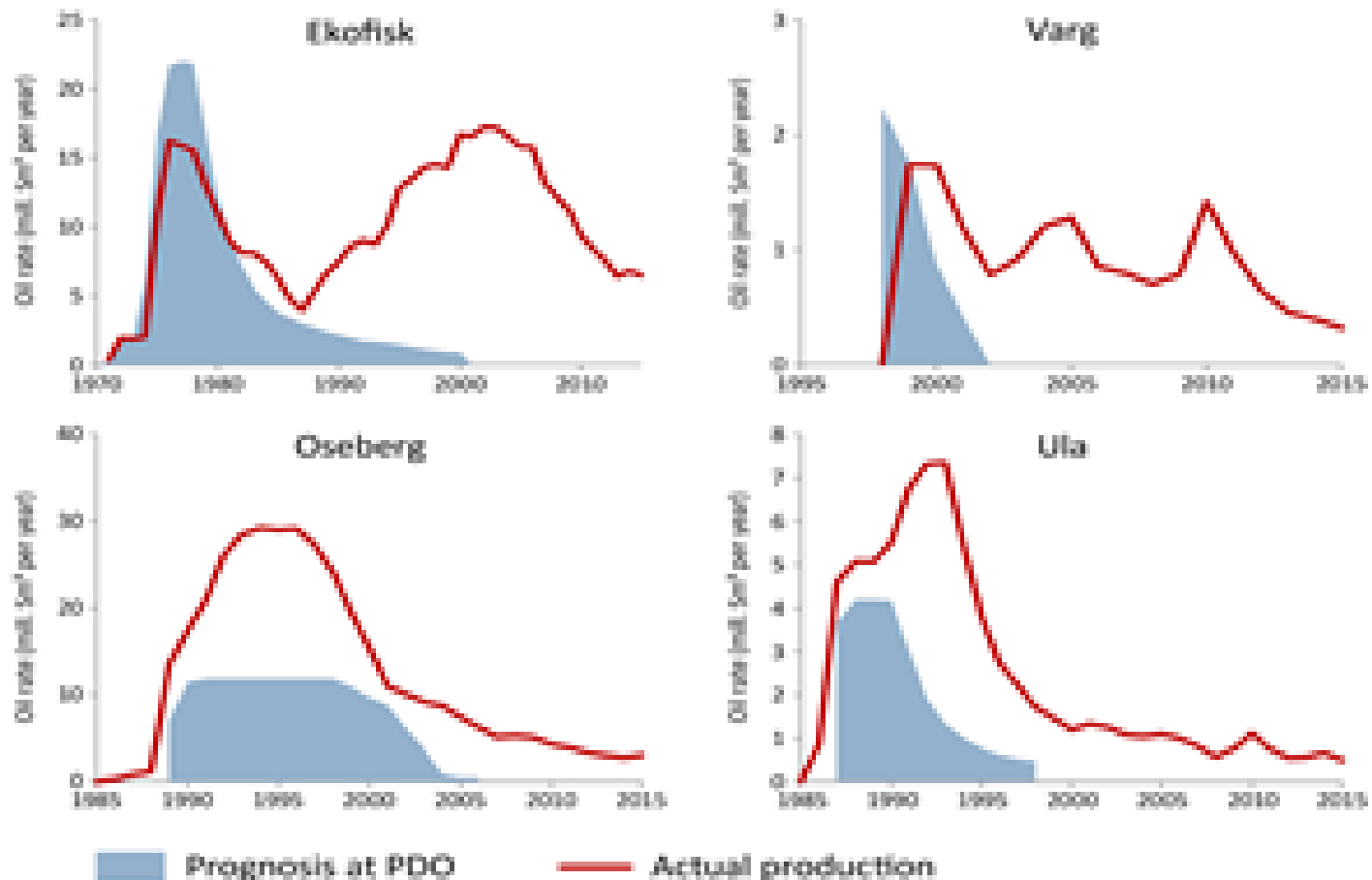
UNFC Sub-class	oil mill Sm <sup>3</sup>	NGL mill tonn	condensate mill Sm <sup>3</sup>	gas bill Sm <sup>3</sup>	Total mill Sm <sup>3</sup> o.e
1.1;1.1;1+2	570	85	20	1185	1937
1.1;1.2;1+2	388	13	1	144	558
1.1;1.3;1+2	173	11	0	400	594
1.1;2.1;1+2	243	21	2	186	472
2;2.1;1+2	33	2	0	15	51
2;2.2;1+2	264	12	1	227	516
3.2;2.2;1+2	202	2	1	177	383
3.3;2.3;1+2					
3.2;3;4	1995		135	1870	4000

# Petroleum resources and estimate uncertainty per 31 Dec 2017



# On reconciliation

## Oil field production performance



# Accounting and reconciliation

(Example: use of Design Structure Matrix methodology)

				Output columns							Total quantity change
				Sales	Non-sales	Commercial	F1 Extractable non-sales	Potentially commercial	F2 Extractable non-sales	Remaining in place	
Final quantity				10	1	116	4	0	0	190	
				E1F1.1	E3.1F1.1	E1F2.1	E3.1F2.1	E3.3F4			
				1	2	3	4	5	6	7	
Input rows	Class	Initial quantity	class no								
	Sales		1								
	Non-sales		2								
	Commercial		E1F1.1								
	F1 Extractable non-sales		E3.1F1.1								
	Potentially commercial	100	E1F2.1	5	10		95		0	5	
	F2 Extractable non-sales	10	E3.1F2.1	6		1	1	4		0	
Remaining in place	200	E3.3F4	7			20			190	10	

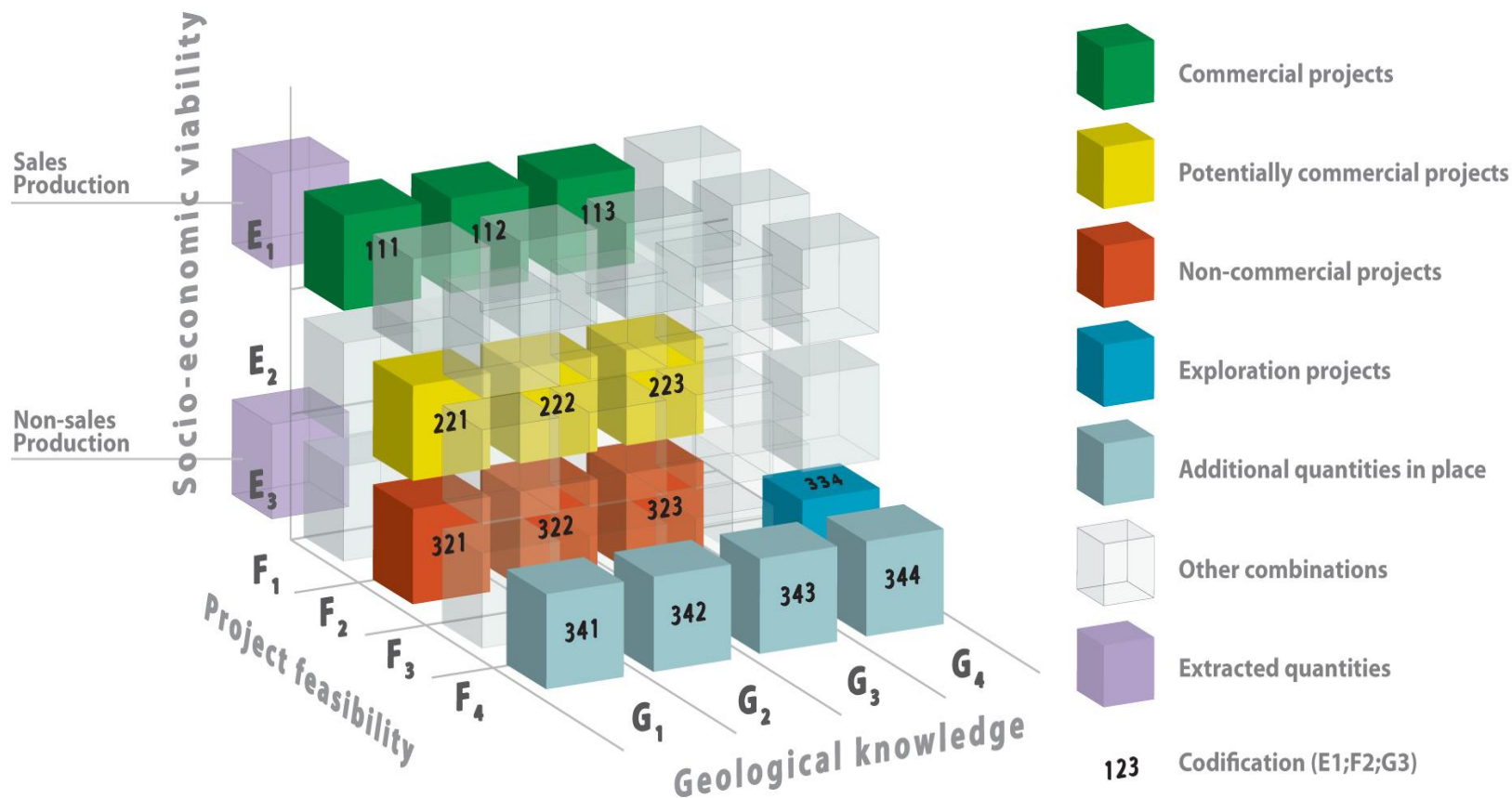
Output Coulmns

Input rows

# Disclosure

- Classification should not be mixed up with disclosure requirements.
- The owner may be required by law, contract or agreement to disclose certain information. Beyond that it is her or his choice.
- The reporter remains responsible for the correctness of disclosed information. Also when competent persons are used and have signed off on the numbers, the Chairperson remains accountable.

# United Nations Framework Classification of Resources (UNFC)



# Thank you!

*Per Blystad* [per.blystad@lyse.net](mailto:per.blystad@lyse.net)

Picture by Calle Eklund/V-wolf ([https://commons.wikimedia.org/wiki/File:Stora\\_stöten\\_Falun\\_01.jpg](https://commons.wikimedia.org/wiki/File:Stora_stöten_Falun_01.jpg)), „Stora stöten Falun 01“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>