

# VALUATION OF NATURAL RESOURCES AND MINERAL EXPLORATION

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UNECE, Group of Experts on National Accounts

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Agenda item 6

## Three papers/presentations:

- The wealth of Norwegian raw oil and natural gas: 1970-2015, Statistics Norway
- Classification and valuation of natural resources, OECD
- Australian valuation of subsoil natural resources, ABS

## General:

- Two country studies and one focussing on issues concerning concepts and classification
- Reference to SNA and System of Environmental-Economic Accounts (SEEA)
- Main focus on Net Present Value -> balance sheets

# Asset boundary

- 2008 SNA (para.12.17):  
" ... those proven subsoil resources of coal, oil and natural gas, metallic minerals that are economically exploitable given current technology and relative prices."
- 2008 SNA (para.10.179): " ... on or below earth's surface ... "

# The wealth of Norwegian raw oil and natural gas: 1970-2015, Statistics Norway

Extensive and well structured

- I. Introduction and motivation
- II. Methodology
- III. Empirical results
- IV. Concluding remarks

# The wealth of Norwegian raw oil and natural gas: 1970-2015, Statistics Norway

- > 45% of total export (with export 40% of GDP)
- Policy perspective: Lessons learnt from NL
- 78% tax for oil industry
- In constant prices resource rent from oil and gas has already reached its peak in 2005

# The wealth of Norwegian raw oil and natural gas: 1970-2015, Statistics Norway

Specific questions:

- Natural gas and LNG?
- 'Normal' return based on NOS divided by net stock of produced assets in mainland-Norway

# Classification and valuation of natural resources, OECD

- Concise paper with recommendations regarding further clarifications of the 2008 SNA
- Staying closer to SEEA-Central Framework
- Include all known deposits?
- Calculating Net Present Value according to Ch.5 of SEEA 2012



# Classification and valuation of natural resources, OECD

Specific questions:

- Deviating from SNA?
- What about 'known unknowns'?
- Possibilities to make use of data mining companies that value their own projects

# Australian valuation of subsoil natural resources, ABS

- Concise paper regarding recent improvements of the calculation of the Net Present Value
- Estimates begin in 1988/1989
- Paper discusses concepts, methods of valuation, sources and validation of results

# Australian valuation of subsoil natural resources, ABS

- 27 minerals included (including *antimony*)
- Economically Demonstrated Resources: proven + probable resources
- Using 5-year lagged average for prices, costs and production
- 10% of total non-financial assets

# Australian valuation of subsoil natural resources, ABS

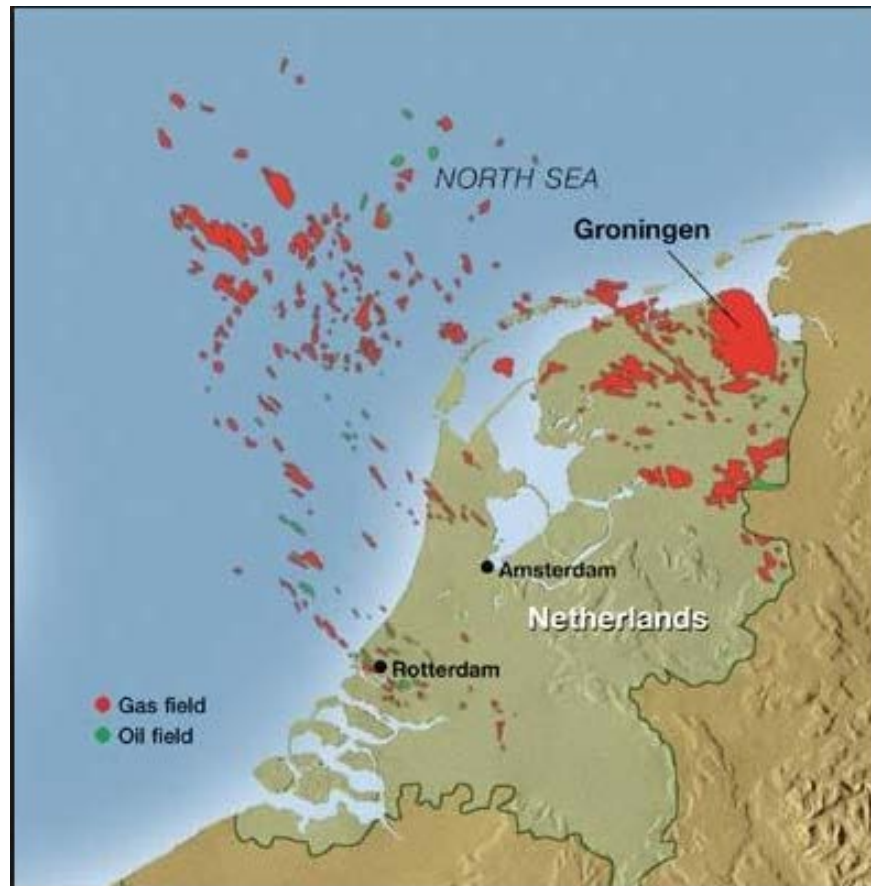
Specific questions:

- Including 'probable resources' deviates from SNA?
- Normal rate of return to capital not derived from national accounts?

# General questions:

1. How meaningful? Given the considerable uncertainty concerning prices, production, costs, discount rate and new discoveries
2. All costs included?

# Groningen Gas Field



# Groningen Gas Field



# North Sea





# General questions

1. How meaningful? Given uncertainty concerning prices, production, costs, discount rate, new discoveries
2. All costs included?

**Thanks for your attention!**