



Algemene Rekenkamer

Extractive industries, safety and the NCA

*Presentation at 2nd WGEI meeting in Oslo
21 September 2015*



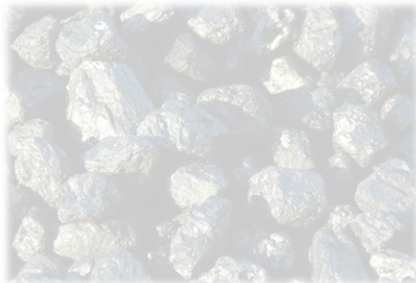
Extractive industries in The Netherlands

- Dutch natural resources and NCA's work
- The wake up call
- Setup and results of national risk analysis
- The way ahead





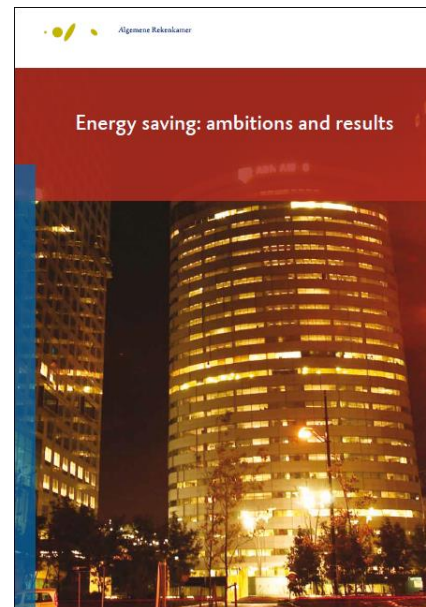
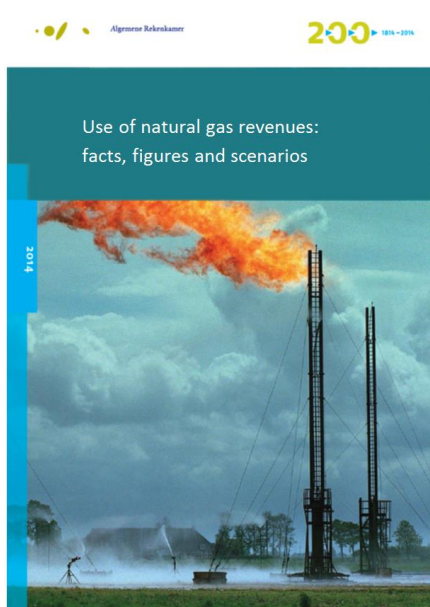
The Dutch natural resources





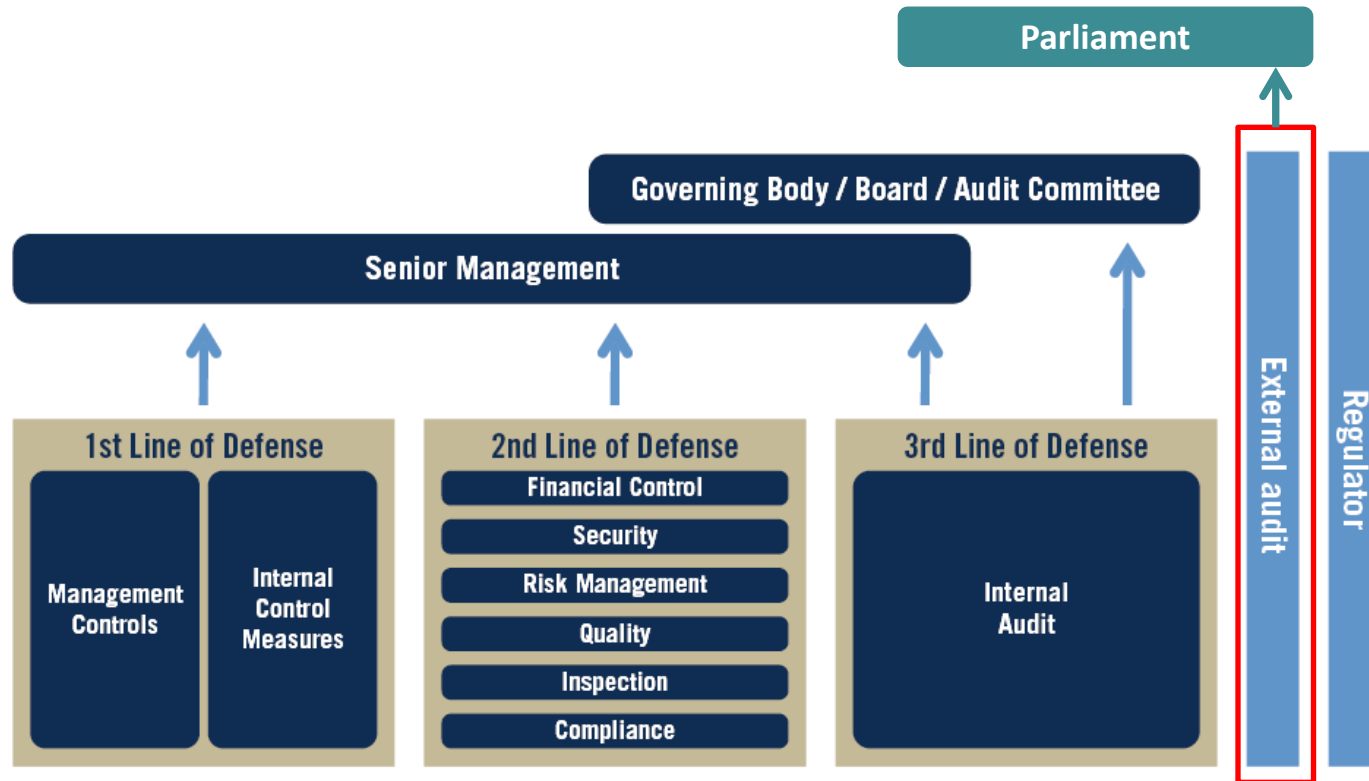
Our audit focus until 2014

- Until recently NCA focused for extractive industries on:
 - Spending gas revenues
 - Security of energy supplies (natural gas, electricity and energy savings)





Position NCA: systems approach





Dutch gas value chain

Executive

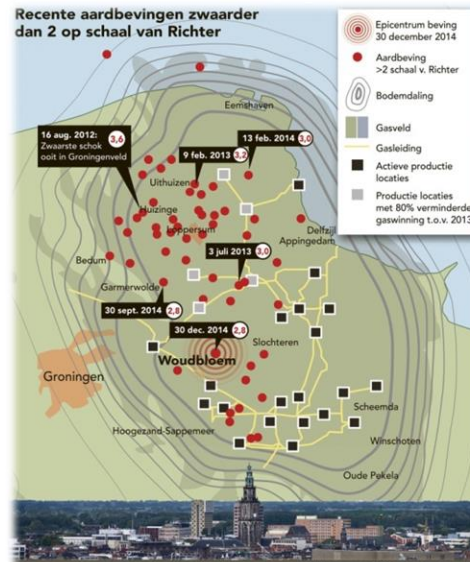
Supervising

Consulting

| Legal Framework | Seismic surveys and data management | Awarding contracts and licenses | Monitoring of operations | Collection of taxes and revenues | Managing and allocating revenues | Implementing sustainable policy |
|--|--|---|---|---|--|--|
| <ul style="list-style-type: none"> • Min. of Economic Affairs (Mining Act) • Ministry of Infrastructure and Environment (<u>Environm. Laws</u>) • Ministry of Finance (Tax Laws) • State Supervision of Mines (SodM) (regulator) | <ul style="list-style-type: none"> • Dutch Oil Company NAM (all onshore, some offshore) • Other IOC's (only offshore) • Energy Management Netherlands (EBN) | <ul style="list-style-type: none"> • Ministry of Economic Affairs • Energy Management Netherlands (EBN) | <ul style="list-style-type: none"> • State Supervision of Mines (SodM) • Dutch Oil Company NAM including highly developed internal control procedures • Local and regional governments | <ul style="list-style-type: none"> • Dutch Tax and Customs Administration • Ministry of Economic Affairs • Ministry of Finance | <ul style="list-style-type: none"> • Ministry of Finance • -> Ministries funded with general State budget partially fed with natural gas revenues and taxes | <ul style="list-style-type: none"> • Ministry of Economic Affairs • Ministry of infrastructure and Environment • Ministry of Labour • Local and regional governments |
| <ul style="list-style-type: none"> • Council of State • Council for Environment and Infrastructure • (NCA to ensure our mandate for auditing central government) | <ul style="list-style-type: none"> • Netherlands Organisation for Applied Scientific Research TNO | <ul style="list-style-type: none"> • Specialised law consultancy firms • State attorney including hired specialised consultancy companies | <ul style="list-style-type: none"> • Council for Environment and Infrastructure • Dutch Safety Board | | <ul style="list-style-type: none"> • CPB Central Bureau of Economic Policy Analysis | <ul style="list-style-type: none"> • Council for Environment and Infrastructure • Labour unions |
| <ul style="list-style-type: none"> • Parliament | <ul style="list-style-type: none"> • Min. of Economic Affairs • Ministry of infrastructure and Environment | <ul style="list-style-type: none"> • Central Government Audit Service | <ul style="list-style-type: none"> • Ministry of Economic Affairs | <ul style="list-style-type: none"> • Central Government Audit Service | <ul style="list-style-type: none"> • Central Government Audit Service • Netherlands Court of Audit | <ul style="list-style-type: none"> • Parliament |



The wake up call: earthquakes and damage





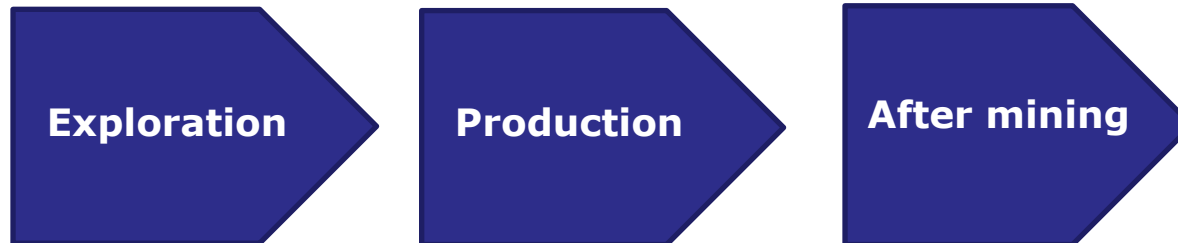
Responses to the wake up call

- National level
 - Gas production restricted
 - Special government service established
- Netherlands Court of Audit level
 - WGEI membership
 - Risk analysis focused on extractive industries



NCA Risk analysis with externality approach

- Problem of 'externalities'
 - Economic definition of externalities
 - Not included in price or investment decisions > loss of prosperity and well being for current and future generations
- Experimental approach
 - Identifying externalities along production chain





Risk analysis matrix

| Life cycle | | Risk component | Identified risk | Probability | Impact | Risk mitigated | Rest risk in the Netherlands |
|--------------|---------------------|----------------|-----------------|-------------------------|-------------------------|----------------|------------------------------|
| Exploration | Direct | | | High/ medium/ low | High/ Medium/ low | | High/ Medium/ low |
| | Indirect short term | | | | | | |
| | Indirect long term | | | | | | |
| Production | Direct | | | | | | |
| | Indirect short term | | | | | | |
| | Indirect long term | | | | | | |
| After mining | Risk | | | | | | |



Example

| Life cycle | | Risk component | Identified risk | Probability | Impact | Risk mitigated | Rest risk in the Netherlands |
|--------------|------|----------------|--------------------------------|-------------|--------|--|---|
| After mining | Risk | Safety | Collapse of buildings and area | Medium | Medium | A strict monitoring regime applies. However, Dutch Safety Board points out that there are unknown risks are inherent in a large-scale multi-year operation and that there is lack of integral, independent scientific knowledge of the deep substratum and mechanisms at work. | Medium. Collapse did not happen yet, but damage did occur |



Risks identified with EI risk analysis

- Most risks mitigated with system's checks and balances
- Two significant risks emerged
 - Neglect of safety considerations
 - After mining policy not sufficient



The wake up call confirmed

- Critical report Dutch Safety Board (Februari 2015)
 - Central question: role of safety citizens embedded adequately in decision making process?
- Main conclusions:
 - Safety not embedded as separate public interest
 - Neglect of uncertainties > fragmented knowledge
 - Poor communication with population affected



Risks identified with EI risk analysis

- Two significant risks emerged
 - Neglect of safety considerations
 - After mining policy not sufficient
- Preliminary conclusion:
 - Both risks on political agenda
 - Too early for intervention by NCA > reconsider in few years



Current actions NCA

- Monitoring activities government
- Distribution of risk matrix within EUROSAI



Take away messages

- Externality approach useful
- EI risks manifest on long term (even after finishing production)



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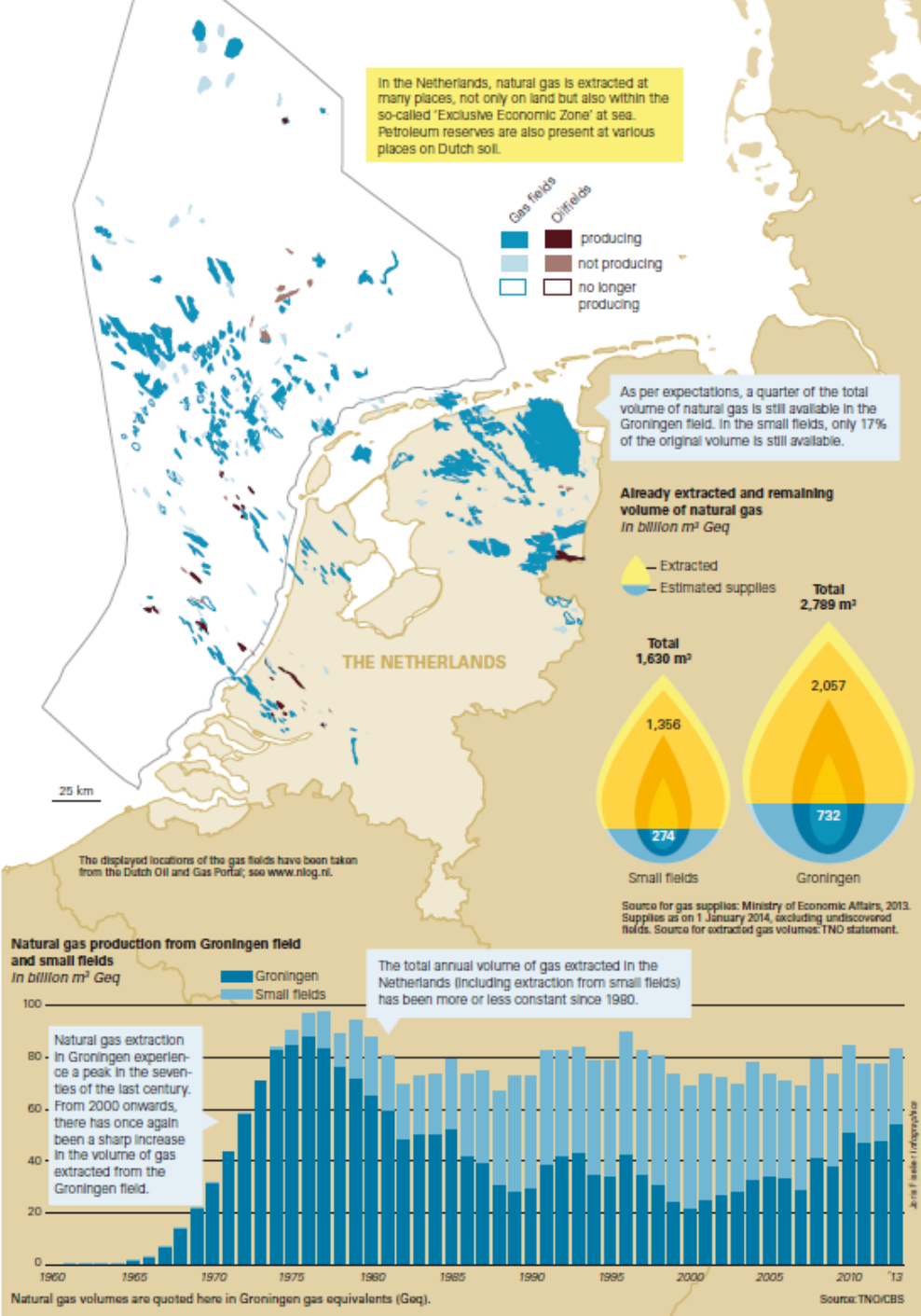


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Figure 1 Natural gas extraction in the Netherlands 1960-2013: locations, supplies and production





Parties involved in exploitation of Dutch natural gas

