



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





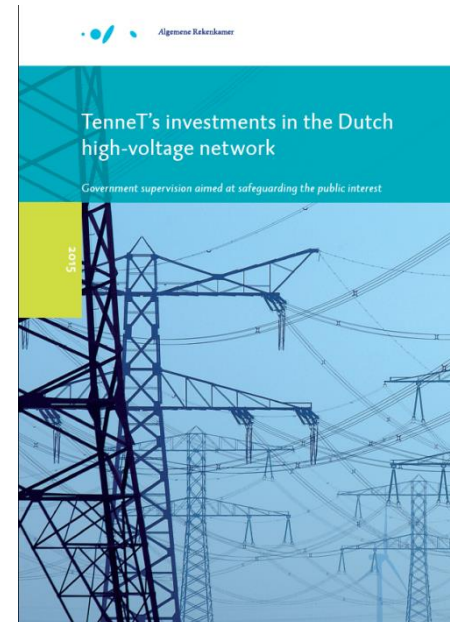
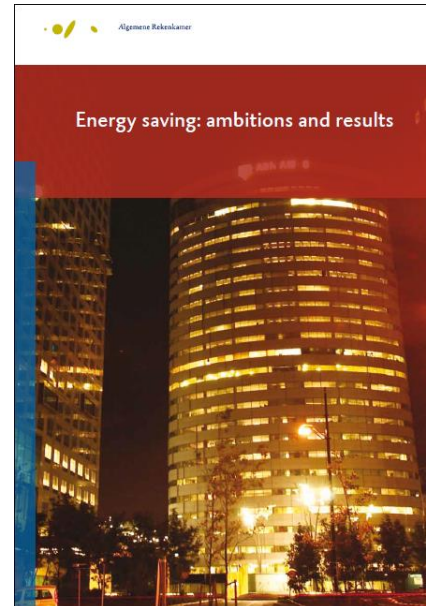
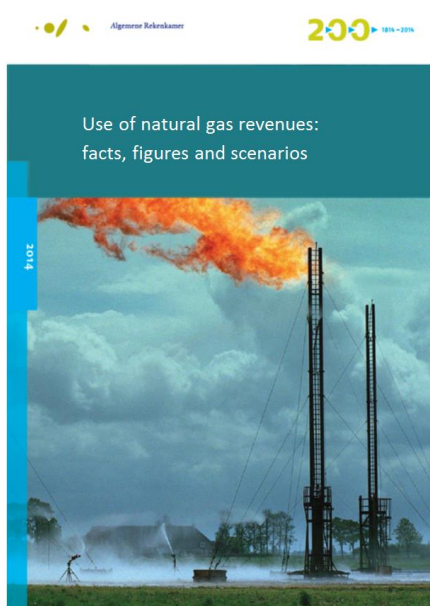
The Dutch natural resources





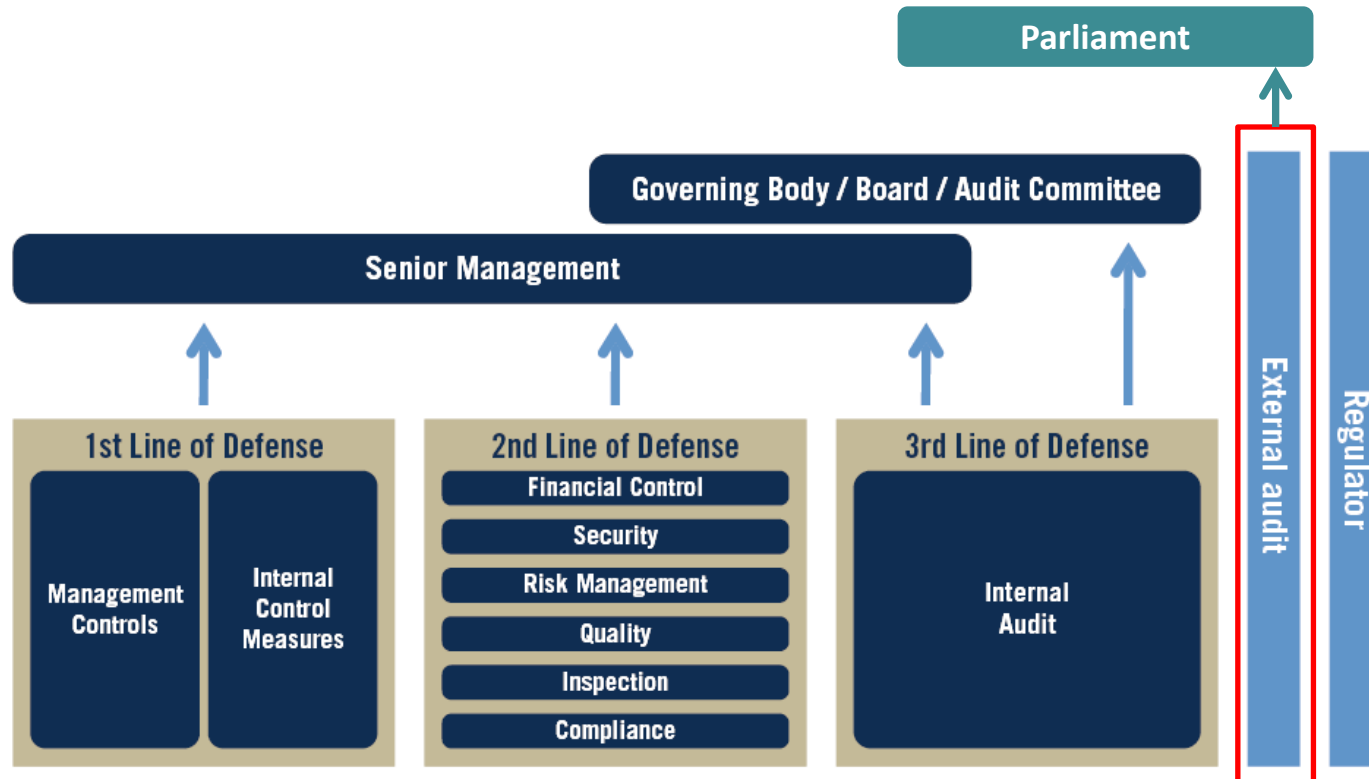
Our audit focus until 2014

- 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

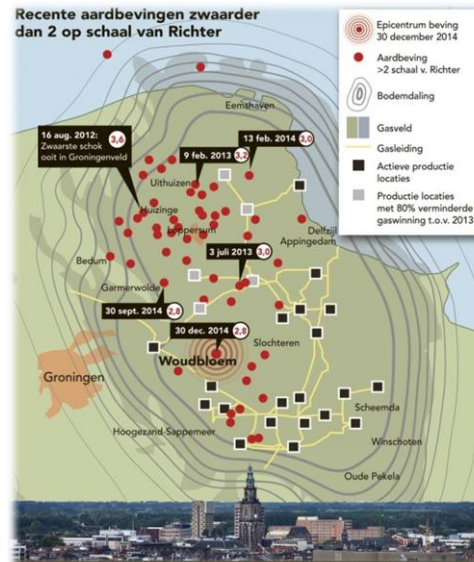
Supervising

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 (Environm. Laws) • 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

Consulting



The wake up call: earthquakes and damage





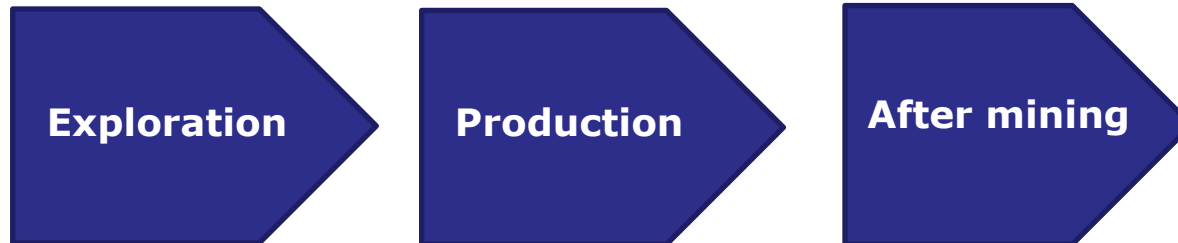
Responses to the wake up call

- 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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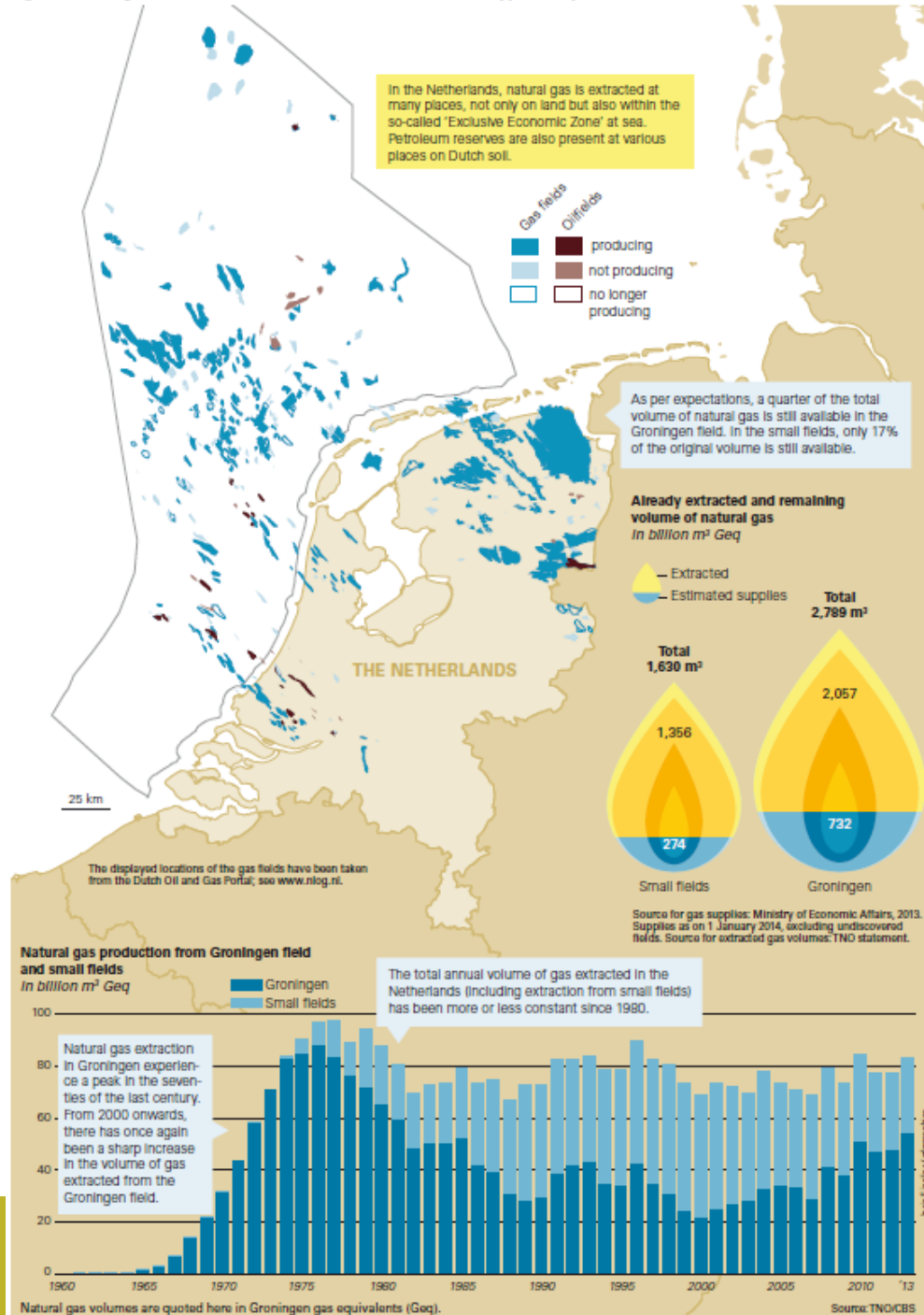


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Figure 1 Natural gas extraction in the Netherlands 1960-2013: locations, supplies and production





Parties involved in exploitation of Dutch natural gas

