Compliance of the Dutch Oil and Gas Sector to OECD Guidelines

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Annotated Outline Content

Executive summary

The Dutch government participates and supports so-called Responsible Business Conduct (RBC) Agreements (in Dutch: IMVO-convenanten) with various important internationally operating sectors. The RBC agreements have a voluntary character and are a means towards increased corporate social responsibility throughout the supply chain. The Dutch government, employer employee associations, consumers, and civil society organisations expect companies to conduct their business with respect for human rights and the environment. Internationally, these responsibilities are enshrined in the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the United Nations Guiding Principles on Business and Human Rights (UNGPs). According to these guiding documents, companies are expected to identify, prevent, mitigate and account for how they address their actual and potential adverse impacts through due diligence. An RBC agreement translates these international principles to the specific sectoral content for Dutch companies.

The OECD Guidelines set expectations for responsible business conduct and due diligence beyond compliance to national legislation. The Dutch government expects Dutch companies to adhere to the OECD Guidelines. The guidelines can help companies in integrating Corporate Social Responsibility (CSR) to the heart of the company and to develop a solid due diligence approach.

This report presents the results of a study to the extent to which the oil and gas sector operating in the Netherlands does indeed adhere to the OECD Guidelines for Multinational Enterprises. The study attempted to answer the following questions:

1. Are the activities of the Dutch oil and gas sector conducted in accordance with the OECD Guidelines for multinational enterprises?
2. If non-conformities can be identified, are companies working towards improved conformance to the OECD Guidelines and what are the adaptive activities?

As part of this study, the following topics have been covered:

- an investigation of the impacts of the sector on society (both in the Netherlands and abroad);
- an assessment how and to what extent the sector is currently implementing the OECD Guidelines and how the implementation relates to that of parties abroad;
- considerations about how the sector can guarantee, maintain or improve the implementation of the OECD Guidelines.

In this study the Dutch oil and gas (O&G) sector is defined as all companies with a representation (e.g. office or installation) on Dutch territory that conduct activities related to the exploration, extraction, refinement and adaptation, sale, trade and transport of (fossil fuel based) oil and natural gas products. All companies operating in the Dutch O&G sector are subject to this study: both foreign owned subsidiaries of companies operating on Dutch territory and companies with headquarters or ownership based in the Netherlands. However, in practical terms this study especially focussed on medium and larger companies that surpass 50 employees or annual turnover of 20 million. In total 83 companies, operating on Dutch territory, met these criteria.

Research methods in this study were a survey amongst 81 companies (with a response rate of 40-50%), literature research, international databases analysis and interviews. The results show that the sector employs many activities that can be recognized as efforts to comply with the OECD Guidelines. For most of these activities, the OECD Guidelines have not been the leading framework. The question is to what extent the quantity and quality of these activities are in line with the OECD Guidelines.

The results from the survey suggests that about 54-75% of the respondents to our questionnaire report that they have some form of CSR practices in place for human rights and corruption.
The percentage of survey respondents who have CSR practices in place for the environment and employment is higher (78-91%). In some instances, such plans seem to lack concrete procedures and long term perspectives. External auditing or disclosure of such policies is less common. Our research indicates that on average 30-40% of the respondents active in the oil and gas sector disclose information on their CSR policies, for example through a sustainability report. A similar percentage of companies was found to have a certified environmental management system in place with valid certification.

Analysis of the questionnaire, dossiers and independent sources of information furthermore indicate that the conformity to the OECD Guidelines becomes less towards the operational steps in the due diligence framework: tracking performance, communicating transparently and enabling remediation. Moreover, in the 'trading' and 'distribution to consumers' subsectors, our study suggests that CSR policies are less frequently implemented. In addition, CSR practices seem to be less common in smaller companies than in larger companies.

The effectiveness of the Responsible Business Conduct policies has been analysed through three so-called dossiers: dirty diesel, methane emissions and the extent to which the Dutch oil and gas sector features in the complaint mechanism of the OECD Guidelines (also called the NCP cases) and the character of these cases.

The study of the dossiers demonstrates challenges in implementing the corporate principles to concrete, real-life situations when companies operate in competing markets and short-term financial gains may dominate long term societal and environmental benefits. We also identified a tension between the individual responsibility of a company to adhere to the OECD Guidelines and effectively organizing (joint) leverage to change the existing situation. The dirty diesel and methane emissions dossiers showed that larger companies do organize themselves in international initiatives to address specific shortcomings in their individual execution of CSR principles. These initiatives can be considered a positive step towards better compliance with the OECD Guidelines by organizing leverage. However, such initiatives do not dismiss individual companies from taking their responsibility in improving transparency or taking individual action to cease negative impacts.
In both dossiers we witnessed a lack of transparency from individual companies to report to the public on company-specific activities that relate to these dossiers. Moreover, these international initiatives have started only recently and we have not been able to be able to estimate their effectiveness and to what extent they have resulted in new standards in business operations that go beyond national legislation.

List of abbreviations

AQF	African Quality Fuels
BAT	Best available technology
BETA	Belangenvereniging Tankstations (Interest group for petrol stations)
CAO	Collectieve Arbeidsovereenkomst (Collective Labour Agreement)
CCAC	Climate and Clean Air Coalition
CHRB	Corporate Human Rights Benchmark
CIEL	Center for International Environmental Law
CO_2	Carbon dioxide
CSO	Civil Society Organisations
CSR	Corporate Social Responsibility
EDF	Environmental Defense Fund
EMS	Environmental Management System
E&P	Exploration & Production
EU	European Union
FOE	Friends of the Earth
FPSO	Floating Production Storage and Offloading facility
GC	Global Compact
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GWP	Global warming potential
HQ	Headquarters
HSE	Health and Safety Executive
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
ILO	International Labour Organisation
IMVO	Internationaal maatschappelijk verantwoord ondernemen (International Corporate Social Responsibility)
IPIECA	International Petroleum Industry Environmental Conservation Association
IRO	Association of Dutch Suppliers in the Oil and Gas Industry and Offshore Renewable Industry
ISO	International Organisation for Standardisation
LDAR	Leak detection and repair
LNG	Liquefied Natural Gas
Mcf	One thousand cubic feet
MEE	Meerjarenafspraken energie-efficiëntie (Long term Energy Efficiency Agreement)
M&E	Monitoring & Evaluation
MNE	Multinational Enterprise
NCP	National Contact Point
NACE	Statistical Classification of Economic Activities in the European Community
NAM	Nederlandse Aardolie Maatschappij
NGO	Non-Governmental Organisation
NOGEPA	Nederlandse Olie en Gas Exploratie en Productie Associatie (Dutch Organisation for Oil and Gas Exploration and Production)
NOVE	Nederlandse Organisatie Voor de Energiebranche (Dutch Organisation for the Energy Industry)
NO_x	Nitrogen oxides
OECD	Organisation for Economic Co-operation and Development
OGMP	Oil & Gas Methane Partnership

OHSAS	Occupational Health and Safety Assessment Series
$PM_{2.5}$	Fine particulate matter
QH&S	Quality, Health & Safety
RBC	Responsible Business Conduct
RIVM	Rijksinstituut voor Volksgezondheid en Milieu
R&D	Research & Development
SCCM	Stichting Coördinatie Certificatie Milieu- en arbomanagementsystemen (Dutch Institute for the Coordination and Certification of Environmental and Occupational Health and Safety Systems)
SEPA	Scottish Environmental Protection Agency
SME	Small and medium-sized enterprises
SO_2	Sulphur dioxide
SOMO	Stichting Onderzoek Multinational Ondernemingen (Centre for Research on Multinational Corporations)
UDHR	Universal Declaration of Human Rights
UNEP	United Nations Environmental Programme
UNGP	United Nations Guiding Principles on Business and Human Rights
VBDO	Vereniging van Beleggers voor Duurzame Ontwikkeling (Association of Investors for Sustainable Development)
VCA	Veiligheid, Gezondheid en Milieu Checklist Aannemers (Safety Certificate for Contractors)
VNPI	Vereniging Nederlandse Petroleum Industrie (Dutch Association for the Petroleum Industry)
VOC	Volatile Organic Compound
VOTOB	Vereniging van Onafhankelijke Tankopslagbedrijven (Association of Independent Tankstorage Companies)

1 Introduction

1.1 Background

The Dutch government participates and supports so-called Responsible Business Conduct (RBC) Agreements (in Dutch: IMVO-convenanten) with various important internationally operating sectors. In these voluntary RBC agreements companies, NGOs and trade unions make agreements within the sector about reducing risks related to their social responsibility throughout their value chain. So far, such RBC agreements have been signed with the textile sector, banks, gold sector, vegetable proteins and sustainable forest management in the Netherlands.

The RBC agreements have a voluntary character and are a means towards increased corporate social responsibility throughout the supply chain. The Dutch government, employer and employee associations, consumers, and civil society organisations (CSOs) expect companies to conduct their business with respect for human rights and the environment. Internationally, these responsibilities are enshrined in the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the United Nations Guiding Principles on Business and Human Rights (UNGPs). According to these guiding documents, companies are expected to identify, prevent, mitigate and account for how they address their actual and potential adverse impacts (due diligence). An RBC agreement translates these international principles to the specific sectoral content for Dutch companies.

The Dutch oil and gas sector, according to a report to the Lower House of Minister Kamp and Minister Ploumen, is of the opinion that RBC risks are adequately covered by their policies on Corporate Social Responsibility (CSR) at both the company and international level through the development of risk management systems. The sector therefore sees no added value in a Dutch RBC agreement.
The Dutch House of Representatives requested Minister Ploumen to examine to what extent the sector's claim is correct. The Minister asked the Dutch National Contact Point, to investigate the compliance of the oil and gas sector with the OECD Guidelines. The present study supports the Dutch National Contact Point in their reporting towards the House of Representatives.

1.2 Aims

The project aims to conduct research into the extent to which the oil and gas sector operating in the Netherlands adheres to the OECD Guidelines for Multinational Enterprises. As part of this research, the following topics are covered:

1. Investigation of the impacts of the sector on society (both in the Netherlands and abroad).
2. To examine how and to what extent the sector is currently implementing the OECD Guidelines and how the implementation relates to that of parties abroad.
3. Provide recommendations on how the sector can guarantee, maintain or continue the follow-up of the OECD Guidelines.

1.3 Understanding the OECD Guidelines in relationship with CSR

Corporate Social Responsibility (CSR) is a term that is often used to depict business initiatives to assess and take responsibility for the company's impacts on environmental and social goods. The term generally applies to efforts that go beyond what may be required by regulators.

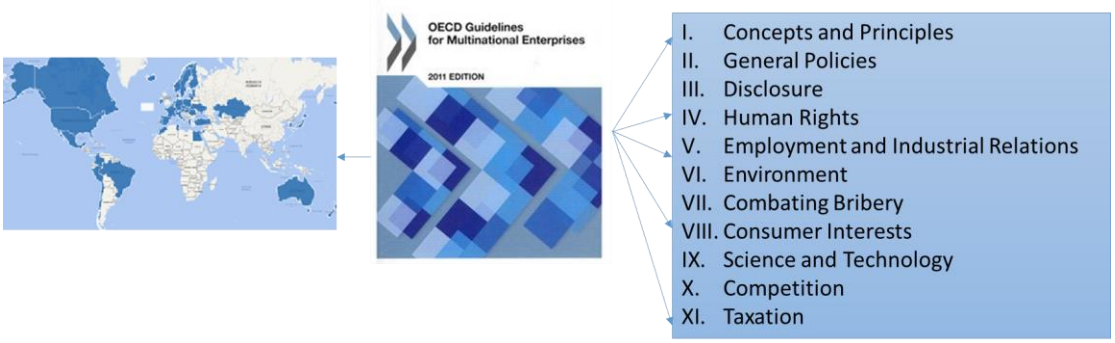
The OECD Guidelines for Multinational Enterprises can be regarded as Guidelines prescribing how companies should adhere to CSR. The OECD Guidelines are recommendations for conduct by multinational enterprises, stimulating them to enhance their corporate social responsibility in a broader context and contribute to sustainable development. As Nieuwenkamp (2013) summarizes: "*The Guidelines constitute the most comprehensive government-backed code of conduct that enterprises are expected to observe wherever they operate. They cover all relevant areas of corporate responsibility: human rights, labour rights, environment, corruption, taxation, disclosure and so forth.*"

Observance of the Guidelines is voluntary and non-binding for companies, but binding for governments, which have an obligation to implement and promote them by recommending them to multinational enterprises (MNEs) operating in or from their territories. The OECD Guidelines therefore constitute 'public guidelines' to CSR. This as opposed to many private-sector initiatives, such as the ISO 26000 standards, or the Global Reporting Initiative. Although these initiatives share concepts and values similar to the OECD Guidelines, the OECD Guidelines form the official Guidelines that 48 governments worldwide have agreed upon[1]. In order to disseminate, promote and evaluate the use of the Guidelines, each government has installed National Contact Points (NCP) that contain a mediation mechanism in case of alleged breaches of the Guidelines. The NCPs play a key role in the effective implementation of the OECD Guidelines.

The scope of the application of the Guidelines encompasses an enterprise's own activities and activities linked to the enterprise by a business relationship. The NCPs are responsible for both the companies that are headquartered in the respective country, and the subsidiaries of foreign companies. Enterprises should, amongst others, seek to prevent or mitigate an adverse impact, even when they have not contributed to that impact but when the impact is nevertheless directly linked to their operations, products or services by a business relationship (Guidelines II, A.12). For a full list of general policies please refer to Guidelines II, A).

Figure 1 gives a graphical interpretation of the Guidelines: the countries that implemented the Guidelines and the various chapters of the Guidelines. More information on the content of these Guidelines can be found in Chapter 2 of this study.

Figure 1 - Graphical interpretation of the Guidelines



As was recognized by the SER (Dutch Social Economic Council), many companies and industry sectors are making positive contributions to international responsible business conduct and sustainable supply chain management (SER, 2014).

[1] The Guidelines were originally adopted in 1976 and have been updated five times since then, most recently in 2011. At present, the OECD Guidelines have been signed by all 35 OECD members and 13 additional countries, with the expectation that in the future more countries will follow.

It is likely that the oil and gas sector in the Netherlands is here no exception. However, the risks in the oil and gas sector are relatively high. This implies that companies will have to carry out their due diligence accordingly. Agreements on international responsible business conduct offer companies the opportunity to work jointly at the sector level in conjunction with the government and other parties to address specific complex problems in a structured and solution-oriented manner and thus to increase their leverage business conduct and sustainable supply chain management (SER, 2014).
In 2011 the Guidelines were updated. The updated Guidelines addressed more topics and introduced the concept of due diligence. The scope of application of the Guidelines extended from investment to business relationships, including suppliers, agents and franchises. In 2011 the Guidelines were expanded with:

- a new chapter on human rights (IV);
- the concept of due diligence: risk analysis & impact assessments on CSR issues;
- more elaborate guidance on supply chain responsibility. This refers to the whole supply chain.

The 2011 update mentioned that enterprises should:

- carry out risk-based due diligence, (…), to identify, prevent and mitigate actual and potential adverse impacts (…), and account for how these impacts are addressed;
- avoid causing or contributing to adverse impacts on matters covered by the Guidelines, through their own activities, and address such impacts when they occur;
- seek to prevent or mitigate an adverse impact where they have not contributed to that impact, when the impact is nevertheless directly linked to their operations, products or services by a business relationship.

Between 2011 and 2017 several additional publications specifically addressed due diligence and provided more explanation and guidance to implement due diligence in companies.

1.4 Delineation of the project

This study concerns the oil and gas sector, where the oil and gas sector has been defined as all activities related to the exploration, extraction, refinement and adaptation, sale, trade and transport of (fossil fuel based) oil and natural gas products. This definition thus excludes the (petro-)chemical industry. In Chapter 2 a more precise definition of the oil and gas sector is given.

All companies operating in the Dutch oil and gas sector are subject to the present research: both foreign owned subsidiaries of companies operating on Dutch territory as companies with headquarters or ownership based in the Netherlands. This is in line with the OECD Guidelines that state (Chapter 1, Paragraph IV) that "*Ownership may be private, State or mixed. The Guidelines are addressed to all the entities within the multinational enterprise (parent companies and/or local entities).*"

It is also important to recognize that the OECD Guidelines for multinational enterprises are not solely meant for multinational enterprises with operations in multiple countries. The OECD Guidelines make clear that (Chapter I, Paragraph V): "*multinational and domestic enterprises are subject to the same expectations in respect of their conduct wherever the Guidelines are relevant to both.*" Domestic companies may also link to the world market through trade and thus in defining and operationalising due diligence for their business operations the OECD Guidelines may be relevant to them.

Furthermore, the OECD Guidelines are not only meant for large businesses. Small businesses are expected to adhere to the OECD Guidelines too. However, the Guidelines acknowledge that large businesses may have more capacities to exert due diligence in their business operations. Nevertheless, governments should still encourage smaller enterprises to observe the recommendations outlined in the Guidelines. In the present study, this distinction is translated into

the fact that we pay more attention to larger companies rather than SMEs. We define an SME as a company with less than 50 employees or an annual turnover not exceeding 20 million euros.

In this study, we investigate the compliance of the oil and gas sector to the OECD Guidelines as a whole. We will not investigate whether company A complies and company B does not. Furthermore, we will not provide information about individual companies that was obtained in this study (e.g. through surveys or interviews). However, if the individual company is listed in the (international) literature, we may refer to the individual company if this is needed for the line of argumentation in the present study.

1.5 Study design

1.5.1 Methodological framework

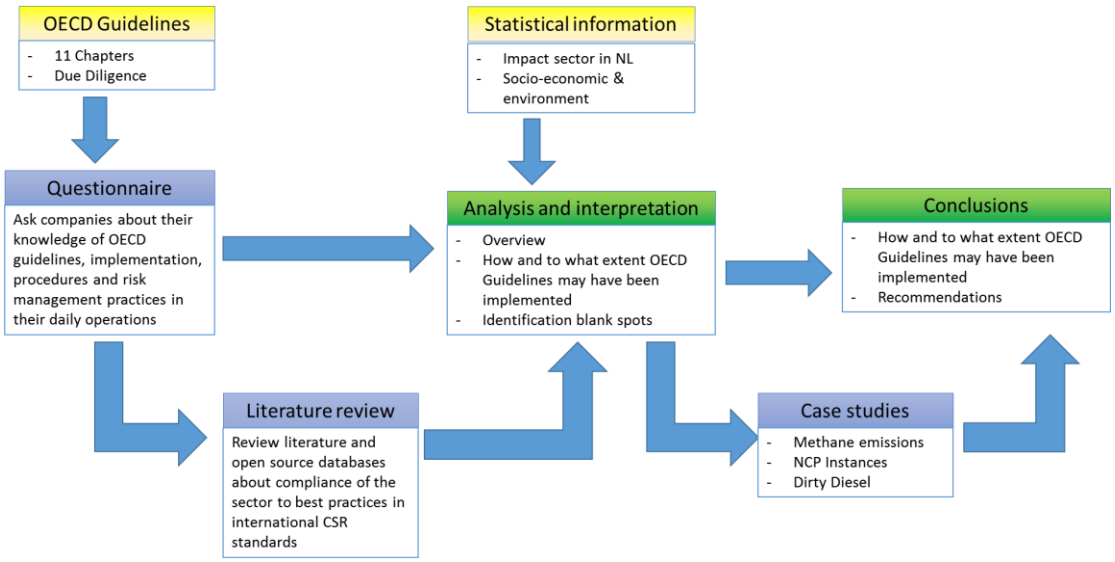
The question if the Dutch oil and gas sector adheres to the OECD Guidelines for Multinational Enterprises is difficult to answer with a straightforward yes or no. In order to gain insights into the practices in the oil and gas sector, various methods were used:

- literature review;
- survey among companies active in the oil and gas sector;
- interviews with experts (academic, NGOs, companies);
- international databases.

Figure 2 gives an overview of the approach followed in this study. The starting point is the OECD Guidelines. Each of the 11 Chapters has been analysed with respect to the implications for the oil and gas industry and from this analysis, specific chapters of interest have been found for the oil and gas sector. We also have identified and described how a process of due diligence for these aspects may be formulated in the sector. In addition, we have collected some statistical information about the importance of the sector in the Netherlands with respect to socio-economic variables, trade and the environment.

Subsequently we set up a questionnaire that was distributed among companies active in the Dutch oil and gas sector. The outcomes of the questionnaire, combined with the literature review and the statistical information formed the basis for a first analysis of the extent to which the Dutch oil and gas sector adheres to the OECD Guidelines. Based on this first interpretation, three dossiers were selected where the application of the OECD Guidelines in the oil and gas sector was examined in more detail. These dossiers were chosen to cover potential gaps in the knowledge that were identified in the analysis and interpretation phase.

Figure 2 - Methodological framework of this study



1.5.2 Structure of the report

The structure of the report is as follows. In Chapter 2 we will define the oil and gas sector and provide an overview of its operations and potential risks in the light of the OECD Guidelines. The socio-economic and environmental impact of the sector in the Netherlands will also be sketched. Then in Chapter 3, we try to provide an initial answer to the question of to what extent the Dutch oil and gas sector adheres to the OECD Guidelines. Here we will present the survey and interpret the outcomes of the survey in light of the international literature and other information. Then, in Chapter 4, we will focus on specific dossiers where we elaborate on how the sector has mitigated certain risks that are inherent in the operations of the sector. Finally, in Chapter 5, we will conclude.

In the Annexes the dossiers are described in more detail. In addition, more technical background information can be found on the sector classification, the companies that were approached in the survey and the interviews that were held.

2 Impact of the Dutch oil and gas sector

This chapter provides an overview of the oil and gas sector in the Netherlands. It starts with providing the definition of the oil and gas sector used in this study. Subsequently, in Section 2.2, it proceeds to discuss the importance of that sector to the Netherlands. Here it focusses on both the positive economic and social impacts, such as employment effects, profits and value added and effects on the trade balance, as well as the negative environmental impacts, particularly in terms of CO_2 emissions. The focus in this paragraph is entirely on impacts in the Netherlands. Lastly, in Section 2.3 attention will be paid to the due diligence aspects for the sector in relation to the OECD Guidelines.
Due consideration will be given to the human rights, environment, employment and corruption aspects of the OECD Guidelines.

2.1 Definition of the oil and gas sector

The oil and gas sector embodies a range of different activities and processes which jointly contribute to the transformation of (fossil) fuel resources into useable end-products. Within the sector, activities as extraction, refining (cracking), trade and sale of oil and gas take place, alongside various support activities for specific parts in the chain. These different activities are inherently linked with each other (conceptually, contractually and/or physically), and such linkages can occur within or across individual firms, and within or across national boundaries (WBG, 2011).

The sector sells energy sources (e.g. gasoline), both as final and intermediate products, to a wide range of clients, including other industries and consumers. Most products are being used for combustion. However, the sector also sells large amounts of feedstock (naphtha and natural gas) as intermediate products to the petrochemical and fertilizer industries. Below, the value chain of the oil and gas sector will be introduced and the particular presence of Dutch companies in this value chain will be analysed.

2.1.1 Description of the value chain

A value chain describes the full range of activities that firms and workers do to bring a product/good or service from its conception to its end use and beyond. Value chains thus include activities such as design, production, marketing, distribution and support to the final consumer. In the oil and gas sector, one may argue that the value chain starts with the exploration phase: the identification of suitable areas (fields) to conduct exploration activities. Once these have yielded results, petroleum and natural gas fields are being appraised, developed, and exploited. These activities are generally called exploration and production (E&P), or referred to as 'upstream' oil and gas. There are substantial services included in the E&P phase such as geological and geophysical surveys and analysis, drilling, equipment supply, and engineering projects (WBG, 2011). Often these support services are tailored specifically to the oil and gas industry and should thus be regarded as an integral part of the oil and gas sector.

Extraction is the next phase in the value chain. Often, oil and gas fields are located in inaccessible areas, such as deep oceans, and building infrastructure (e.g. pipelines and access to roads, rails and ports) is another important element for the value chain. There are companies that have specialized in transporting oil and natural gas from the extraction location to the refineries or processing units.

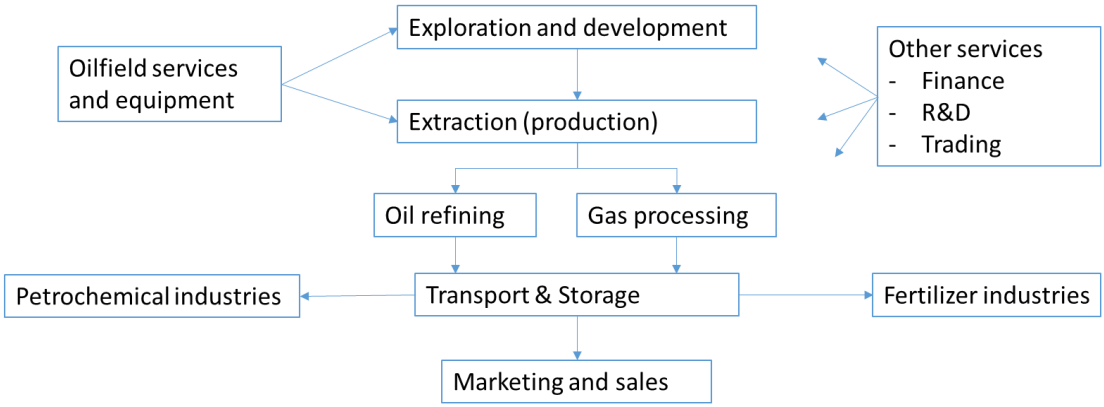
Oil refining and gas processing turn the extracted hydrocarbons into useable products. Natural gas is further processed in various forms (e.g. gas, LNG or hydrogen) that serve specific markets. Crude oil is provided as an input into the refinery industry. The oil refining process itself varies in (IEA, 2005) but all techniques do follow a similar production pattern. The process can be split into four parts (McKinsey & Company ; Ecofys, 2006); (ECN ; WoodMcKenzie, 2015)

1. Separation. The crude oil is broken up into its components through, e.g., atmospheric distillation to fractionate oil and condensate in products: refinery gas, LPG, medium and heavy naphtha, kerosene, diesel and atmospheric residue.[2] Some distillates are marketable products; other distillates need further refinement through conversion and finishing.
2. Conversion. Fractions of vacuum distillation are through visbreaking, cat cracking and hydrocracking further broken and converted into valuable fractions such as petrol and diesel and a residual that is being sold in the bunker market.
3. Treatment. The fractions from conversion are being treated to improve the quality and characteristics of the fuel and removal of impurities, e.g. to desulphurise oil fractions to meet environmental regulation (and to reduce corrosive capacities of the fuel).
4. Blending and finishing. In this step, the different intermediate streams are blended to achieve the desired qualities.

The outputs of the refinery sector are transported to wholesale, retail or directly as feedstocks to industrial clients in the petrochemical or fertilizer industries. Storage facilities, e.g. largescale bunkers, play an important role in the distribution phase here where also some blending and finishing of products takes place. The final step in the value chain is the oil marketing and sales to customers.

The various steps in the value chain are depicted in Figure 3!

Figure 3 - Various steps in the value chain of the oil and gas sector



Source: Adapted from (WBG, 2011).

The oil and gas sector depends on inputs from other sectors, e.g. financial services, R&D and trading facilities. Some of the companies in these sectors develop services only for the oil and gas industries, and should thus be regarded as part of the oil and gas sector as well.

[2] Distillation is actually the cooking of the crude oil and the condensation of the different sub fractions at specific temperatures (cut points).

2.1.2 Statistical definition of the sector

It is important to clearly delineate the oil and gas sector. Previous studies, such as (KPMG, 2014), divided the oil and gas sector into four subsectors:

1. Extraction of crude petroleum and natural gas.
2. Manufacture of refined petroleum products.
3. Support activities for petroleum and natural gas extraction.
4. Wholesale and storage of oil and gas.

The KPMG division into four subsectors was largely based on the availability of industry associations in the Netherlands (VNPI, IRO, VOTOB, NOVE). One major downside of this approach is that companies that are not members of any of these four industry associations or sub sectors are excluded from the analysis.

Below we will provide an overview of the number of companies and jobs using the statistical approach, compare this to the KPMG approach and discuss those companies that are excluded from the KPMG approach but could classify as relevant companies for this study.

The NACE-code (nomenclature statistique des activités économiques dans la Communauté Européenne) is a code that is assigned by the European Union and its Member States to specify classes of economic activities (including non-commercial activities). In the used statistical definition of the oil and gas sector, we employ the following NACE-codes from the Standaard Bedrijfsindeling (CBS). The first four digits of the NACE code are harmonised across the EU. In cases where the Standaard Bedrijfsindeling has a fifth number, this is unique to the Netherlands. Table 1 gives an indication of the various NACE activities that we have identified as being part of the oil and gas sector.

An additional distinction would be in the usual three-sector division that in the literature has been made of the oil and gas industry: upstream, midstream and downstream. The upstream sector, (or exploration and production- E&P), includes searching for potential underground or underwater crude oil and natural gas fields, drilling exploratory wells, and subsequently drilling and operating the wells that recover and bring the crude oil or raw natural gas to the surface. The midstream sector involves the transportation (by pipeline, rail, barge, oil tanker or truck), storage, and wholesale marketing of crude or refined petroleum products. Pipelines and other transport systems can be used to move crude oil from production sites to refineries and deliver the various refined products to downstream distributors. The downstream sector is the refining of petroleum crude oil and the processing and purifying of raw natural gas as well as the marketing and distribution of products derived from crude oil and natural gas. The downstream sector reaches consumers (either end consumers or other industrial customers) through products such as gasoline or petrol, kerosene, naphtha, natural gas, etc. In this sector we will make a distinction between downstream production and downstream distribution.

Table 1 - NACE-codes identifying the oil and gas sector and their part of the production chain

Code	Name	Part of the chain
06.10	Extraction of crude petroleum	Upstream
06.20	Extraction of natural gas	Upstream
09.10	Support activities for petroleum and natural gas extraction	Upstream
19.20.1	Refining of petroleum	Downstream production
19.20.2	Processing of petroleum (no refining)	Downstream production
35.20	Manufacture of gas (including biogas)	Downstream production
46.12	Agents involved in the sale of fuels, ores, metals and chemicals	Midstream Trade
46.71	Wholesale of fuels and other mineral oils	Midstream Trade

Code	Name	Part of the chain
47.30	Petrol stations	Downstream distribution
49.50	Transport via pipeline	Midstream Transport
50.20.1	Sea and coastal water transport (cargo and tank ships)	Midstream Transport
50.40.2	Inland water transport by tankers	Downstream distribution
52.10.1	Storage in tanks	Midstream Storage

These sectors locate most of their activities in what can be identified as the 'oil and gas sector'. Compared to e.g. KPMG, the present classification includes the transport and trade of oil and gas as well.

2.2 The oil and gas sector in the Netherlands

In this Chapter we give an overview of the oil and gas sector in the Netherlands, according to the statistical classification as given in Section 2.1. We orient here primarily on the impacts on Dutch territory, impacts over the supply chain in other countries are being discussed in Section 2.3.

2.2.1 Activities in the value chain

The oil and gas industry is a very important sector in the Dutch economy. The availability of major ports, on- and offshore gas fields and large industrial complexes for refineries and petrochemicals make that the Netherlands is an attractive country for the international oil and gas industries. It is therefore not surprizing that many of the international oil and gas multinationals are present in the Netherlands. Table 2 shows that the biggest oil and gas companies (measured by annual turnover in 2016) have an office or refinery in the Netherlands.

Table 2 - Overview of the largest oil and gas companies in the world, measured in their 2016 annual turnover and their presence in the Netherlands with a refinery and/or offices/services, indicated by an *x*

#	Name	Home country	Presence in the Netherlands	
			Refinery	Office/Services
1	Saudi Aramco	Saudi Arabia		x
2	Sinopec	China		
3	China National Petroleum Corp.	China		x
4	PetroChina	China		
5	Exxon Mobil	US	x	x
6	Royal Dutch Shell	Netherlands/United Kingdom	x	x
7	Kuwait Petroleum Corporation	Kuwait		x
8	BP	United Kingdom	x	x
9	Total SA	France	x^	x
10	Lukoil	Russian Federation	x^	x
11	Eni	Italy		x
12	Valero Energy	US		
13	Petrobras	Brazil		x
14	Chevron Corporation	United States of America		x
15	PDVSA	Venezuela		
16	Pemex	Mexico		
17	Nat. Iranian Oil Company	Iran		
18	Gazprom	Russian Federation		x

^ The Zeeland refinery in Vlissingen is co-owned by both Total (55%) and Lukoil (45%).

Because of the attractive location of the Netherlands in the international oil and gas world, only one company is listed here as being (partly) Dutch: Royal Dutch Shell. This holds true for the sector in general: most companies active in the oil and gas sector in the Netherlands are of foreign origin.

Oil and gas products dominate especially the trade balance of the Netherlands. Oil products are by far the single largest commodity that is being imported and exported in the Dutch economy. In 2015, 13.7% of all goods imported were spent on petroleum and petroleum products. In 2012, with oil prices at their peak, this share was even 22.2% (CBS, 2016). In a European context, the Netherlands is the largest importer and exporter of oil and gas products. Rotterdam is the world's third largest marine bunker harbour, after Singapore and Shanghai (IEA, 2012). The Amsterdam port is especially oriented towards oil products and has developed into one of the most important gasoline stockholding sites in the world. For the whole of Netherland, most of the imported oil and gas products nowadays originate from Russia, followed by Norway, Saudi Arabia and the United Kingdom.

Extraction of crude oil in the Netherlands is a very minor activity limited to a few locations (mostly offshore). 99% of the crude oil in the Netherlands is imported. Crude oil is shipped and pipelined to refineries, or being stored and further re-exported to other countries. There are five larger refineries in the Netherlands. They are mainly concentrated around the port of Rotterdam, where oil is converted into petrol and diesel. The Netherlands has the sixth largest refinery capacity in Europe, taking into account 8.2% of refinery capacity in 2011 (Roland Berger, 2014).Total refinery output is higher than demand, so that the Netherlands is a net exporter of refined products. At the same time, large volumes of crude and oil products enter the country, only to be exported to neighbouring countries, as regional suppliers take advantage of available port and storage infrastructure (IEA, 2012). The largest storage tanks in the Netherlands are located at the tip of the Maasvlakte and belong to the Maasvlakte Oil Terminal (MOT), a joint venture between BP Refinery, Esso Netherlands, Kuwait Petroleum, Vopak, Shell Nederland and Zeeland Refinery. Here the world's largest vessels can board. The MOT storage tanks have a combined capacity of over four million m^3 - one of the largest storage facilities in the world (IEA, 2012). Elsewhere in the Europoort and in Amsterdam, comparable storage capacities can be found. Total storage capacity in the Netherlands can be estimated to be 30 million m^3 (IEA, 2012).

The Netherlands became the largest gas producer within the European Union following the discovery in 1959 of a gas field near the village of Slochteren in the northern province of Groningen.
The Groningen gas field is the largest natural gas field in Europe, and the tenth largest in the world (Whaley, 2009). Offshore production in the Dutch sector of the North Sea began in the 1970s.
The Netherlands produces two types of natural gas, one with a low-range calorific value (L-gas), mainly from Groningen, and one with a high calorific value (H-gas), mainly offshore and smaller fields. H-gas and L-gas must be transported on separate networks. Both residential and commercial gas users in the Netherlands are equipped to burn the Groningen-quality L-gas, while industry and power generators use mostly H-gas (IEA, 2012).

On the upstream side, NAM (Shell and ExxonMobil each own half) is the largest gas producer and is notably in charge of the Groningen field. Several other oil and gas producers operate small fields onshore and offshore in the North Sea. As production continues to decline in the Netherlands due to the social turmoil following extraction-induced earthquakes in the province of Groningen (see also Section 2.2.3) imports became more important. The Netherlands nowadays imports and exports large volumes of gas, with roughly 40% of the total volume of gas flows used domestically. Gasterra (a trading and supply company that is half owned by the State, and for a quarter each by Shell and Exxon) is an important player in the European gas market, with import contracts with suppliers from Russia, Norway and Germany (IEA, 2012).

2.2.2 Number of companies active in the sector and distribution to sub activities

Table 3 shows the number of companies active in the different subsectors in 2017 (March-May). We distinguish between the total number of companies and the number of larger companies with over 50 employees. For the survey conducted in Chapter 3 we have solely focussed on the larger companies that have over 50 employees (or over 20 million turnover). Table 3 shows that there are 130 companies active in the oil and gas sector that have over 50 employees.[3]

Table 3 - Overview of number of companies per NACE-code (2017)

Code	Name	# of companies	# of companies with > 50 employees
06.10	Extraction of crude petroleum	20	5
06.20	Extraction of natural gas	10	5
09.10	Support activities for petroleum and natural gas extraction	230	10
19.20.1	Refining of petroleum	15	5
19.20.2	Processing of petroleum (no refining)	15	5
35.20	Manufacture of gas (including biogas)	10	0
46.12	Agents involved in the sale of fuels, ores, metals and chemicals	440	0
46.71	Wholesale of fuels and other mineral oils	495	25
47.30	Petrol stations	775	30
49.50	Transport via pipeline	10	0
50.20.1	Sea and coastal water transport (cargo and tank ships)	525	30
50.40.2	Inland water transport by tankers	260	5
52.10.1	Storage in tanks	45	10
	Total	**2,850**	**130**

Source: CBS Statline (bedrijven-bedrijvendemografie-bedrijven-bedrijfstak).

In an earlier research, KPMG listed the number of companies active in the oil and gas sector as being member of a branch organisation plus Shell. In total, they state that there are nearly 700 companies, divided among the four subsectors (extraction, refining, sale/storage and support activities). Table 4 identifies the number of members of industry associations as used in the KPMG analysis, as well as updated figures by using the most recent information available on industry association websites. The industry association have both national and multinational members.

[3] One should note that one company can be listed under multiple NACE codes according to the CBS. Therefore the total number of large companies active in the oil and gas sector is lower than the listed 130 companies here. See also Chapter 3.

Table 4 - Number of companies in KPMG analysis

Sector	Industry association	# of companies	Subsector
Manufacture of refined petroleum products	VNPI	8 members (KPMG, 2014) 12 members (VNPI website, 2017)[4]	**19.20.1** Refining of petroleum **19.20.2** Processing of petroleum
Extraction of crude petroleum and natural gas	NOGEPA	KPMG does not include this industry association and lists 1 company (Shell) instead 16 members (NOGEPA website, 2017)	**06.10** Extraction of crude petroleum **06.20** Extraction of natural gas
Support activities for petroleum and natural gas extraction	IRO	430 members (KPMG, 2014) Nearly 450 (IRO website, 2017)	09.10. Support activities for petroleum and natural gas extraction
Wholesale and storage of oil and gas	NOVE + VOTOB	185 + 15 members, some multinational companies (KPMG, 2014) 185 + 17 +12 (NOVE, VOTOB and VNPI websites, 2017)	**46.71** Wholesale of fuels and other mineral oils (**47.30** Petrol stations) **52.10.1** Storage in tanks

Source: (KPMG, 2014) and VNPI, IRO, NOVE and VOTOB websites.

It seems that the statistical definition contains (a) more subsectors than the KPMG analysis, and (b) identifies larger numbers of enterprises on each sector except the support activities.

In the KPMG analysis, the 16 NOGEPA members (industry association for the extraction of crude petroleum and natural gas) have not been included for reasons not clear to us. Furthermore, KPMG only included two industry associations (NOVE and VNPI) related to the exploitation of petrol stations, whereas the interests of the 3,900 petrol stations in the Netherlands are promoted by four different industry associations. NOVE members exploit over 1,000 petrol stations in the Netherlands. 800 petrol stations are exploited by BOVAG members. BETA is the industry association for 1,000 (smaller) independent petrol stations. Lastly, VNPI members also exploit petrol stations.

Conversely, the number of companies active in the 'support activities for petroleum and natural gas extraction' segment is probably higher than in the KPMG analysis. The IRO, the Association of Dutch Suppliers in the Oil and Gas Industry and Offshore Renewable Industry, has nearly 450 members. However, members also include service companies that are not primarily related to the oil and gas sector, e.g. banks (Rabobank), auditing (EY, KPMG) and law firms (AKD).

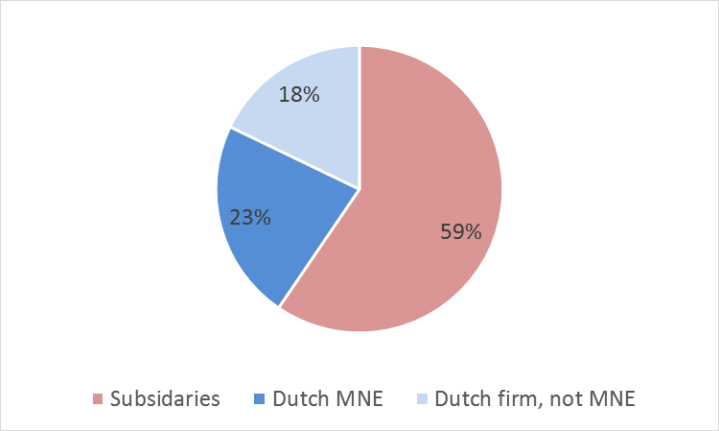
Another area of the oil and gas sector where the Netherlands has a prominent role is in trading. Gunvor, Vitol and Trafigura, which belong to the fourth world largest trading communities, have offices and facilities in the Netherlands. Moreover, also refineries as Shell, BP and Total have trading activities located in the Netherlands. This sector is not formally represented by an association, though some of the above listed companies are part of the VNPI because they also have production facilities operating in the Netherlands.

Overall, we conclude that it seems better fit for the purpose of this study to use the sector delineation following the NACE-codes from CBS. Therefore, this is the type of delineation that we used to identify

[4] Not all VNPI members are active in the Netherlands in refining crude oil.

companies that are active in the oil and gas industry. As explained in Chapter 3 we have identified over 80 companies active in the Dutch oil and gas industry with over € 20 million turnover or over 50 employees. Figure 4 shows these companies with respect to the location of their headquarters and the whether they belong to a multinational enterprise or not. Around 60% of the companies active in the Dutch oil and gas sector are subsidiaries of foreign firms. Less than a quarter of companies active in the Dutch oil and gas sector can be considered as Dutch multinational enterprises.

Figure 4 - Distribution of the largest companies in the Dutch oil and gas sector to country of origin and orientation



Note: MNE implies multinational company.

2.2.3 Economic and social impacts

The oil and gas sector is an important sector in the Netherlands, with respect to employment and value added. There is no research that exactly can determine the importance of the sector to the Dutch economy, but it is normally considered to be sizeable. However, direct employment in the sector is likely to be relatively small. In 2015, 0.5% of Dutch employment can be attributed to the oil- and gas sector. In 2009 the percentage employed in the oil and gas sector was still an estimated 0.6%, showing that the percentage of employment in oil and gas has decreased slightly over time (see also Annex A.2).
In general, the oil and gas sector as a whole managed to increase their net turnover by 12.5% between 2009 and 2015. Net turnover and total operating returns have increased for nearly all subsectors of the oil and gas sector over that time period, with the exception of companies operating in the extraction of crude petroleum and gas. Operating returns and net turnover increased each year up until 2013. Both operating returns and net turnover dropped in 2014 and 2015. This is likely the result of announcements by the Dutch Ministry of Economic Affairs in 2014 and 2015, which limited the amount of gas that could be extracted from Dutch gas fields as well as falling oil prices over that same period. Correspondingly, turnover and operating returns fell for each of these years (see also Annex A.2).

An important impact of the oil and gas industry in the Netherlands that may not be overlooked when referring to social impacts is the increasing occurrence of extraction-induced earthquakes and soil subsidence. This is particular relevant for inhabitants near the Groningen gas field, where it has caused much social turmoil. The societal impacts of these earthquakes are far-reaching: damage to property, declining house prices, concerns about the chances of dykes breaking, feelings of anxiety and insecurity, health issues and anger.

Induced seismicity from natural gas extraction is related to the fact that the gas in the reservoirs is located there under high pressure. When gas is extracted, the pressure in the cavities where the gas was located is reduced, so that the cavities collapse a little due to the sheer weight of the other rock in the earth's crust. This leads to soil subsistence and earthquakes induced by gas extraction. While extraction-induced earthquakes are considered minor earthquakes on the Richter scale there has been evidence of physical damage to property and psychological and health damage to inhabitants (Voort & Vanclay, 2015). This can be regarded as a human rights issue.

The number of earthquakes per year in Groningen has increased significantly from zero in the early 1990s to 125 earthquakes in 2017 (NAM, 2018). Although part of this increase can be explained due to better measurements, it remains a very sharp increase. In 2017, the gas production was roughly half of the production in 2014, although no similar decrease in the total number of earthquakes was found. Furthermore, a study conducted at the request of the Dutch Ministry of Economic Affairs concluded that much stronger earthquakes cannot be ruled out in the future (Voort & Vanclay, 2015).

The impacts of gas extraction on earthquakes and its corresponding societal effects are an important impact of the Dutch oil and gas sector and the question can be put forward if the sector has sufficiently recognized the risk of these earthquakes and have formulated policies to mitigate those risks. This is a complex question, in which also the changed risk perception and growing NIMBY (not in my backyard) responses have to be weighted (see also Chapter 4).

2.2.4 Environmental impacts

The oil and gas sector is a sector with important impacts on the environment over the life chain of the product. Crude oil is a toxic substance that causes damage to ecosystems and human health. In the process of extracting crude oil, oil spills can have important detrimental environmental impacts. Leakage of natural gas can lead to accelerated global warming.

In the Netherlands, oil spills during extraction have been rare (Ministerie van Economische Zaken, Landbouw en Innovatie, 2011) probably because of the small scale of extraction activities within Dutch territories. However, spills of oil-based fuels occur almost annually during transport or storage of fuels in the Netherlands (RIVM; RPS, 2016; RIVM 2017). The frequency of incidents is normally less than in the chemical industry, but the consequences can be severe. The situation regarding leakage of natural gas is further investigated in Chapter 4 of this report.

Most of the products of the oil and gas sector are being used as an energy source. Because of trace elements and incomplete combustion processes, additional pollutants are being formed in the use of the product causing air pollution that has severe human health impacts (smog, particulate matter formation) and degradation of ecosystems (acid rain). This applies especially to oil products. Since the 1970s, governmental policies, particularly in the US and the EU have resulted in cleaner fuels that are being produced. Limits have been put on the content of lead, benzene, sulphur, methyl tert-buthyl ether (MBTE) and various additives in gasoline and diesel (EC, 2009). This has resulted in a decrease of (localized) air pollution from transport in the Netherlands. However, the burning of fuels from the oil and gas industry is still responsible for the majority of emissions of PM2.5, SO2, NOx and VOC in the Netherlands. These result in lower air quality, especially in cities.

Finally, the use of products from the oil and gas sector is an important contributor to global warming through the release of CO_2. CO_2 can be released during the production process to the atmosphere and during the use of the fuels. Table 5 provides an overview of the CO_2 emissions of the sector in the Netherlands administered through the EU ETS. These emissions occur during the production phase in the oil and gas sector (and thus excluding the use phase). This table shows that the largest part of the emissions are concentrated in the refinery sector causing about 90% of emissions in the oil and gas sector. In the refinery sector, the emissions of CO_2 tend to increase because of the lower international

sulphur norms for bunker fuels. This implies that refineries must built and execute additional desulphurisation capacity, which is more energy consuming (CE Delft, 2013).

Table 5 - Direct emissions of CO_2 administered to the EU ETS in the Netherlands

Sector		2013 tCO_2	2014 tCO_2		2014 tCO_2	In % of total O+G
06.10	Extraction of crude petroleum	182834	182960		179508	1.4%
06.20	Extraction of natural gas	1190811	1130391		981156	7.9%
19.20	Refining and processing of petroleum	10427926	10724744		11165255	90.1%
49.50	Transport via pipeline	13953	12412		13966	0.1%
52.10	Storage in tanks	45733	40982		46671	0.4%
Total	**Oil and Gas Sector**	**11861257**	**12091489**		**12386556**	**100.0%**
Total EU ETS		89046497	91686068		97033539	

The oil and gas sector in the Netherlands causes about 13% of the total GHG emissions regulated through the EU ETS. When compared to other countries, the Dutch oil and gas sector is, in relative contribution to nation's CO_2 emissions, on the 7th place among the 31 countries that are part of the EU ETS.[5] In Norway, over 50% of the nation's CO_2 emissions are being caused by the oil and gas industry.

Table 6 - Relative share of the oil and gas industry in the GHG total emissions regulated by the EU ETS in the top-10-countries in 2015

#	Country	Percentage oil and gas
1	Norway	54.5%
2	Latvia	25.3%
3	Croatia	16.7%
4	Denmark	16.4%
5	United Kingdom	15.3%
6	Belgium	13.5%
7	Netherlands	12.8%
8	Italy	12.7%
9	Sweden	12.7%
10	Portugal	11.7%

2.3 Risks in the Dutch oil and gas sector in relation to the OECD Guidelines

2.3.1 Introduction (General guidelines)

The OECD Guidelines are relevant for MNEs particularly when they are relevant for international business operations in other countries. Adhering to the OECD Guidelines is more than just following national law. Enterprises should also take the framework of internationally recognised human rights, the international human rights obligations of the countries in which they operate into consideration (Chapter IV OECD Guidelines). As is stated in Chapter I, Paragraph 2 of the Guidelines: "*Obeying domestic laws is the first obligation of enterprises. The Guidelines are not a substitute for nor should they be considered to override domestic law and regulation. While the Guidelines extend beyond the law in many cases, they should not and are not intended to place an enterprise in situations where it*

[5] In addition to the EU28, also Norway, Iceland, Liechtenstein participate in the EU ETS.

faces conflicting requirements. However, in countries where domestic laws and regulations conflict with the principles and standards of the Guidelines, enterprises should seek ways to honour such principles and standards to the fullest extent which does not place them in violation of domestic law."

A key provision in the OECD Guidelines is that MNEs should avoid causing or contributing to adverse impacts on the topics to which the Guidelines relate. This provision covers their own activities, but also the direct involvement in activities in the supply chain. This is not to say that the responsibility for risks in the supply chain has shifted from the entity causing an adverse impact to the MNE with which it has a business relationship (Nieuwenkamp, 2013) but that considerations on the potential adverse impacts through the supply chain must be taken into account in the business operations.

For doing that, companies are expected to carry out risk-based due diligence: the notion that appropriate care should be taken to avoid adverse impacts to other persons or their property in preparation for a business transaction. Due diligence should be carried out when there is a risk that companies' activities directly cause or contribute to such adverse impacts, but also when the impact is linked to companies' activities through business relationships. Concretely, the Guidelines recommend to incorporate risk-based due diligence into their enterprise risk management systems and decision-making process to identify, prevent and mitigate actual and potential adverse impacts. Potential effects ought to be addressed through prevention or reduction. Already existent effects should be addressed through restorative measures. The due diligence provision in the OECD Guidelines is applicable to all chapters, except those dealing with science and technology, competition and taxation (Nieuwenkamp, 2013)

2.3.2 Framework for due diligence

The OECD has defined several steps in relation to the due diligence process. There are several documents available in which the OECD explains the concept of due diligence such as the Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and the OECD Due Diligence guidance for responsible supply chains in the garment and footwear sector. In 2018, the OECD will publish the OECD Due Diligence Guidance for Responsible Business Conduct. This will explain the definition and background of the due diligence process as defined by the OECD. Below an overall framework for due diligence is presented that is in line with the OECD Guidelines and that was used in this study to substantiate the concept of due diligence.

The concept of due diligence is referred to by the OECD Guidelines as the process through which enterprises can identify, prevent, mitigate and account for how they address their actual and potential adverse impacts. This process should be integrated in business decision-making and risk management systems. Due diligence is risk based, and should correspond to the perceived level of risk.

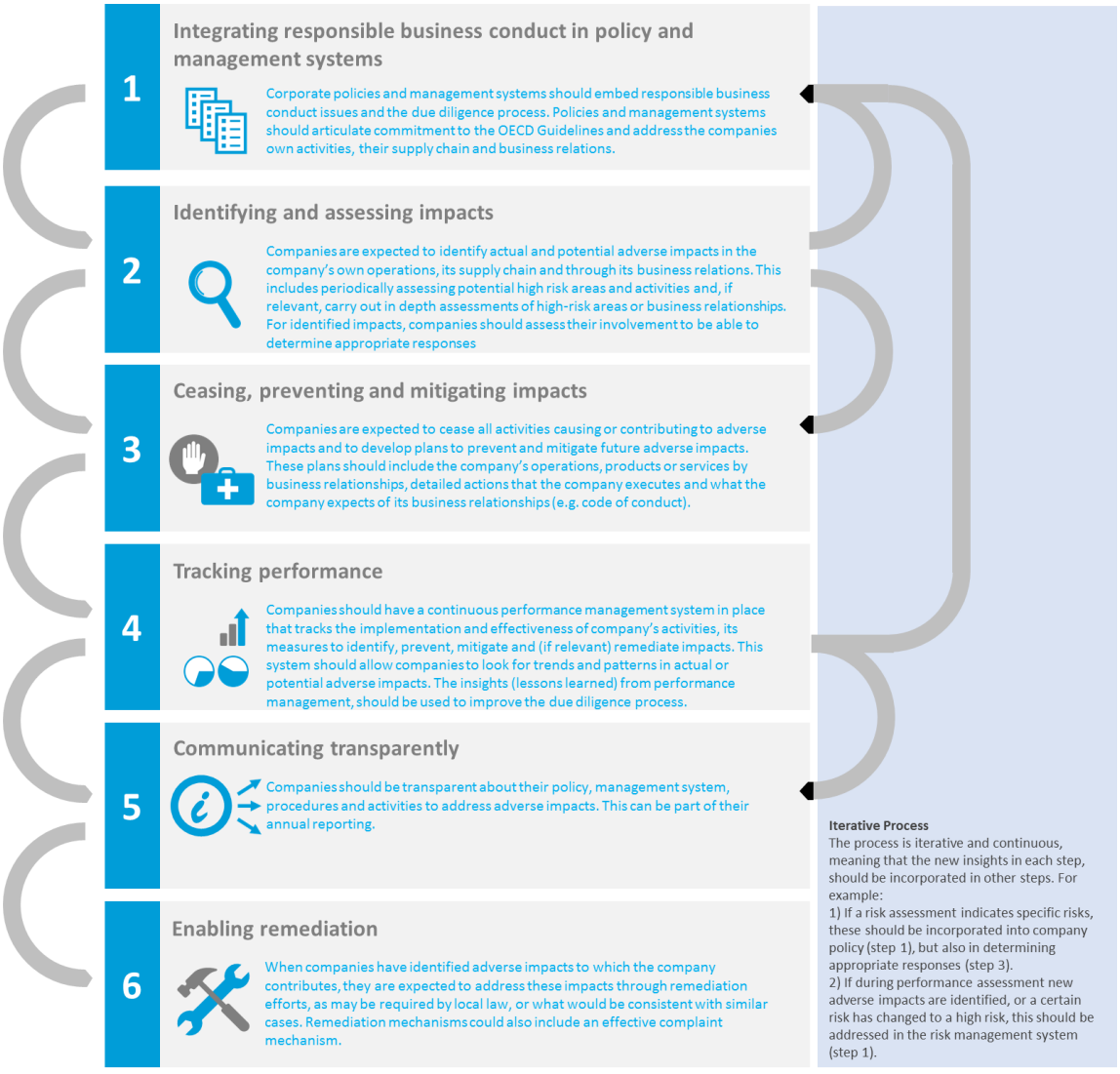
"For many enterprises, the term 'risk' means primarily risks to the enterprise - financial risk, market risk, operational risk, reputational risk, etc. Enterprises are concerned with their position in the market, vis-à-vis their competitors, their image and long term existence, so when they look at risks, it is typically risks to themselves. The Guidelines especially focus on risks of adverse impacts on people, the environment, society and governance that enterprises cause, contribute to, or to which they are directly linked - in other words, it is an outward facing approach to risk."[6] Such risks may be risks for the company as well, especially in the long run.

The goal of due diligence is to avoid causing or contributing to adverse impacts. When involvement in adverse impacts cannot be avoided, due diligence should enable enterprises to mitigate them, prevent their recurrence and where relevant remediate them. Due diligence should be preventative,

[6] OECD Due Diligence Guidance for Responsible Business Conduct, draft version 4-5 December 2017, OECD, final version due in 2018.

complementary and mutually reinforcing with other actions taken by governments and enterprises in a business relationship. The due diligence process should be systematic and dynamic, as in tailored to the context and should involve a process of learning.

Due diligence should also be realistic and companies are expected to act in line with their level of impact and respecting available resources. It should be appropriate to an enterprise's size, circumstances and context and adapted to the practical limitations of working with business relationships. The process should be informed by stakeholders and transparent[7].



[7] Based on the OECD Due Diligence Guidance for Responsible Business Conduct, draft version 4-5 December 2017, OECD, final version due in 2018.

Value Chain

The OECD Guidelines refer to those adverse impacts that are either caused or contributed to by the company, or are directly linked to its operations, products or services by a business relationship and hence includes its value chain. Due diligence should be equally applied to an enterprise's own activities (e.g. human resources, marketing, retail, sale of products and services) and to the activities of its business relationships (e.g. suppliers, joint ventures, licensees).

Where enterprises have large numbers of suppliers, they are encouraged to identify general areas where the risk of adverse impacts is most significant and, based on this risk assessment, prioritise suppliers for due diligence.

The OECD Guidelines for multinational enterprises are recommendations that are for many reasons relevant to the Dutch oil and gas sector. The OECD Guidelines do not limit themselves to the actual production unit, but extend to the supply chain and business relations of a company in order to take into account a process of 'due diligence': appropriate care to avoid adverse impacts to other persons or their property because of operations that can be impacted by the company. Companies are stimulated to consider adverse impacts beyond direct contractual business relationships (beyond 'Tier 1'), and to include this supply chain links in assessment and M&E activities as well.

2.3.3 Most important risks in the oil and gas sector

The OECD has identified that since the 2011 update of the Guidelines; most instances have been reported on potential breaches of the newly added Human Right Chapter, followed by the Employment Chapter and the Environment Chapter (OECD, 2016). There has been, to our knowledge, no research on how these instances are distributed between the various sectors in which companies are working. For that, we have to consult other literature.

KPMG (2014) identified for each sector in the Netherlands the most relevant CSR-risks. They state that the most important CSR risks of the oil and gas sector are related to the extraction of oil and gas. KPMG (2014) lists as most important CSR risks here issues like water scarcity, greenhouse gas emissions, land use in vulnerable areas, depletion of natural resources and depriving communities from a clean, safe and healthy environment. These areas are covered in the OECD Guidelines chapters on human rights and the environment. Also in other parts of the chain there can be CSR risks. For the area of services, storage and trade, KPMG lists employment and human rights as international risks, and for storage specifically also environment.

Although bribery and corruption is not listed by KPMG as a relevant CSR risk to the oil and gas industry, Transparency International, an organisation investigating bribery and corruption, identified the oil and gas sector as being relatively prone to bribery. Conducting business in emerging markets, frequent dealings with government officials and heavy reliance on third parties (EY, 2014) create a higher risk profile for bribery in the oil and gas industry than in other economic sectors.

For this reason, we want to emphasize in the present study especially the following Chapters in the OECD Guidelines:
- Human Rights (Chapter IV);
- Employment and Industry Relations (Chapter V);
- Environment (Chapter VI);
- Bribery (Chapter VII).

It should be emphasized that in practical cases, mostly a combination of impacts is involved. Environmental impacts, for example, often have health impacts, and thus impact on human right as well. Below these impacts will be elaborated in more detail.

2.3.4 Risks for human rights

In the global oil and gas sector human rights are a hot topic. The global industry association IPIECA[8] has developed several tools to help their members to address human rights in their activities. Nevertheless the corporate human rights benchmark of Corporate Human Rights Benchmark Limited demonstrates that the majority of the 41 largest companies in the extractive sector (amongst which the global oil and gas companies) still have a challenge to address this complex topic[9] and to integrate this topic into their due diligence process.

Human Rights can relate to a multitude of topics, including indigenous rights, right to a living wage, housing, personal security, democratic participation, the right to have access to clean drinking water, and many more. In the oil and gas sector there is specific attention to issues such as the rights of indigenous peoples, fair land acquisition, misuse of revenues, loss of access to services (finance, knowledge, education, etc.).

Many companies already address several human rights related frameworks in policies, processes and activities including, the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), and the International Labor Organisation (ILO) fundamental conventions.

The updated OECD Guidelines (version 2011), specifically address human rights in Chapter 4.
The Guidelines mention that they are based on, and linked to, the United Nations Framework for Business and Human Rights Protect, Respect and Remedy'; The International Bill of Human Rights: the international bill of rights consisting of the Universal Declaration of Human Rights (UDHR)[10]; the International Covenant on Civil and Political Rights (ICCPR)[11]; the International Covenant on Economic, Social and Cultural Rights (ICESCR)[12], and to the UN Guiding Principles on Business and Human Rights (2011)[13]. The OECD Guidelines refer to the broad scope on human rights as described in the above mentioned frameworks. Companies are expected to address human rights in their day-to-day business and to incorporate the protection of human rights in corporate policies. More specifically companies should:

- avoid causing or contributing to adverse human rights impacts and address such impacts when they occur;
- have policy commitments to respect human rights;
- carry out human rights due diligence;
- provide for remediation procedures of identified adverse human rights impacts.

Companies are expected to do this within the context of their own activities (direct activities) or their business relations (indirectly and in their up- or downstream value chain) and regardless of their size, sector, operational context, ownership and structure and wherever they operate.

In addition to this, the OECD Guidelines state that states have the duty to protect human rights, and enterprises should[14]:

- respect human rights, which means they should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved;

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8 IPIECA is the global oil and gas industry association for environmental and social issues. www.ipieca.org/our-work/social/human-rights/

9 https://www.corporatebenchmark.org/sites/default/files/2017-03/CHRB_Findings_web_pages.pdf

10 www.un.org/en/universal-declaration-human-rights/

11 www.ohchr.org/en/professionalinterest/pages/ccpr.aspx

12 www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx

13 www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf

14 OECD Guidelines for Multinational Enterprises 2011 edition, Sections 4.1 to 4.6.

- within the context of their own activities, avoid causing or contributing to adverse human rights impacts and address such impacts when they occur;
- seek ways to prevent or mitigate adverse human rights impacts that are directly linked to their business operations, products or services by a business relationship, even if they do not contribute to those impacts;
- carry out human rights due diligence as appropriate to their size, the nature and context of operations and the severity of the risks of adverse human rights impacts.

The OECD Guidelines specifically address various elements of human rights:

1. The rights of groups or populations that require specific attention such as the rights of indigenous people, persons belonging to national or ethnic, religious and linguistic minorities, women, children, persons with disabilities and migrant workers and their families.
2. To respect the standards of international humanitarian laws in situations of armed conflict.

Many enterprises active in the oil and gas sector are also present in countries with a defective government, in countries in conflict situations where enforcement of human rights is under pressure or even absent. This can be a challenging context. Nevertheless these enterprises are expected, as part of their due diligence process, to investigate if and how their activities may impact human rights of local populations and develop a mitigation for any negative effects on human rights.

In general, the activities that take place at site level can be relatively well managed and are bound to various regulations and management systems. The impacts that operations have on adjacent populations, e.g. in development of refinery facilities or the implementation of transport pipelines, can be less manageable and even more challenging are impacts generated in the up- and downstream value chain, especially when other enterprises are involved.

One key aspect in how companies address the rights of e.g. local populations is by applying the process of FPIC (Free, Prior and Informed Consent). In essence this means that all relevant stakeholders are included into the development stage of a project (e.g. pipeline development or site development) in order to create a balanced solution that respects human rights. The OECD has developed a specific guide for stakeholder management in the extractive sector as essential part of the due diligence process[15].

2.3.5 Risks for the environment

The oil and gas sector is a sector with important impacts on the environment over the life chain of the product. Different types of environmental impacts and risks are associated with the various stages in the extraction, production and use of products in the oil and gas sector.

Extraction is a phase that is normally associated with substantial environmental impacts. In the process of extracting crude oil and distribution to production locations, oil spills can have important adverse environmental impacts. For the extraction and transport of natural gas, methane emissions are important. Furthermore, extraction of natural gas can be associated with problems such as earthquakes (see Section 2.2.3) and, especially in the case of shale gas, contamination of soils and groundwater.

The production stage of fuels takes place at refineries or gas plants. These are often relatively well-regulated factories with appropriate environmental management systems in place. Within the Netherlands, refineries have to contribute to overall environmental policy plans, such as the EU ETS or the targets relevant for the NEC-ceiling. Transport from and to refineries, however, pose a risk for oil

[15] OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector.

spills. Since the production stage is very capital intensive, such facilities are less likely to be located in areas with defunct governments.

Products of the oil and gas sector are being used as a feedstock or an energy source. Because of trace elements and incomplete combustion processes, additional pollutants are being formed in the use of the product as an energy source causing air pollution that has severe human health impacts (smog, particulate matter formation, carcinogenic toxicity) and, to a much lesser extent, result in the degradation of ecosystems (acid rain). The use of products from the oil and gas sector is also a major contributor to global warming through the release of CO_2. CO_2 can be released during the production process to the atmosphere and during the use of the fuels.

The OECD Guidelines prescribe sound environmental management that include (see also Section 3.7):

- *Monitoring the environmental impact of existing operations by establishing and maintaining a system of environmental management appropriate for the enterprise*. In order to do this, environmental management system tools can be very useful.[16] Such a system tool ought to collect data on the status of the environment, concretise measurable goals, periodically evaluate those goals and exercise supervision and control to measure progress towards the goals. Environmental management systems can be certified. Internationally, there are various environmental management standards: such as the ISO 14001. ISO 14001 is an Environmental Management System (EMS), which provides a system for measuring and improving an organization's environmental impact. In addition, OHSAS 18001 is an Occupational Health and Safety Management System, which provides a system for measuring and improving an organization's health and safety impact. In practice, both systems are quite similar, although the focus is different.
- *Informing the public and workers in timely manner on the potential environmental, health and safety impacts of both operations and products with adequate, measurable and verifiable information*. The principal way in which enterprises make environmental information publicly available is the production of company reports that cover environment, health and safety issues. They can be incorporated into company annual reports, but separate environmental reporting has become increasingly common. Standards that have been established include, e.g. the Global Reporting Initiative, AA1000, ISO 14063 (OECD, 2005).
- *Strive for continuous improvement of the environmental performance of the company by exploring and assessing ways of improving the environmental performance of the enterprise over the longer term*. This recommendation is also covered by most environmental management system. ISO 14001 certification, for example, demands a program to continuously improve both the environmental management system and the environmental performance of a firm. However, other initiatives can be undertaken, such as the inclusion of environmental metrics in key performance indicators (kpi), or setting up programs such as *Design for the Environment* in order to improve the environmental footprint of the product over the lifecycle.
- *Paying due diligence to activities planned, by collecting timely information regarding the potential environmental and health effects of decisions over the full life-cycle and conducting an environmental impact assessment of the potential activities when the activities are subject to a decision of a competent authority.* In order to do this, companies can set up lifecycle analysis of products and/or processes. Tools that can be helpful are ISO14040, Design for the Environment or various toolkits, among them those that have been developed in the course of the UNEPs and SETAC's Lifecycle Initiative.

Due diligence with respect to the environment can thus be incorporated both before an activity starts or during the process of an activity. Before an economic activity takes place, the guidelines

[16] It should be noted that companies can also develop tailored approaches in environmental management, so the use of a tool is not obligatory.

recommend collecting timely information regarding the potential environmental and health effects of their potential activities. Concrete examples of situations where this would be relevant for the oil and gas sector is for the set-up of a new oilrig or the building of new gas pipelines. Before such activities are initiated, all environmental risks that may be associated with such activities ought to be identified, e.g. required land works at the expense of biodiversity, the effects of leakage of gas through the pipeline and potential reputation effects if an oil spill occurs. This includes the provision of timely and adequate information to the public and employees about the potential effects of their activities. An assessment of this information should be made, and taken into consideration in the decision-making process.

Overall, we conclude that carrying out due diligence with respect to the environment is impossible without the collection of data. Good practice due diligence involves not only the financial considerations of an economic activity, but also the environmental considerations.

2.3.6 Risks for labour circumstances

The oil and gas sector employs tens of thousands employees with various skillsets all over the world, even in the most remote and inhospitable areas.

One of the most predominant themes in this respect is safe working conditions and safety in general. In the past decades, the sector has developed a very rigorous health and safety management system that aims to prevent any casualties of any nature. Partly because in many circumstances it has become mandatory and partly because the sector does not want to be associated with an unsafe working environment.
In general labour rights are a collection of various elements. These include:

- preventing inequality, discrimination, child labour, forced labour (all of which also fall under human rights);
- to secure health and safety of workers;
- fair wages;
- fair treatment of migrant workers;
- proper workplace conditions;
- access to training.

The OECD Guidelines (version 2011) address employment issues in chapter V (Employment and Industrial Relations)[17]. The Guidelines refer to the following aspects of employment:

- the right to participate in trade unions of their own choosing;
- the abolition of child labour;
- the elimination of forced labour;
- equality of opportunity and treatment and prevention of discrimination;
- transparent communication with workers, sharing all relevant information as to inform workers about the performance of the entity or enterprise.

The OECD Guidelines address the 1998 Declaration on Fundamental Principles and Rights at Work of the International Labour Organisation (ILO) as one of the main frameworks to which the Guidelines adhere to. The OECD Guidelines also link to 1977 ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy, last revised in 2006 (the ILO MNE Declaration).

Based on above aspects of employment issues, the OECD Guidelines expect companies:

- to apply at least the standards used in the countries where their respective operations are situated and in case that the country does not have comparable organizations, the company is expected to provide the best possible wage, benefits and working conditions;

[17] OECD Guidelines for Multinational Enterprises 2011 edition, Sections 5.1 to 5.8.

- to employ local workers and to provide training where relevant;
- to provide fair and timely notice of any changes in working conditions (up to lay-offs) and provide fair and timely compensation or to provide alternative solutions.

The OECD expects enterprises to address these topics in their policies, procedures, and training related to occupational health and safety, labour rights, workplace discrimination, and sexual harassment. As part of their due diligence efforts enterprises should actively monitor and engage their workforces to prevent safety incidents, labour rights violations, and discriminatory practices.

The oil and gas sector has been a high-risk profession. For example, drilling for new oil and gas wells, at sea or working in a refinery come with the occupational health and safety impacts associated with those in heavy industrial activities. History counts numerous serious accidents killing many workers. In the past decades, the sector has developed strict and elaborate QHSE approaches aiming at zeroing the casualties.

Globally there are many examples of workers that go on strike to stimulate better working conditions. This can be seen on all continents. These strikes evolve around the lack of freedom to join labour organizations, to stimulate fair waging and in some cases workers ask for safer working conditions.

2.3.7 Combatting bribery and corruption

Bribery and corruption is an increasing concern for businesses in general. However, this may be a particular concern to the oil and gas sector according to most recent Bribe Payers Index (Transparency International, 2011). The oil and gas sector was ranked 16th out of 19 sectors, with only real estate, utilities and public works contracts & construction scoring worse. Transparency International found that although many multinational oil companies scored well on their disclosure of anti-corruption programmes, many were severely lacking in their operations at the country level (Transparency International, 2011). As disclosure on the country level is necessary to identify the agents, opportunities and channels through which bribery can occur this is a serious concern.

The main reason for corruption playing a large role in the oil and gas sector is due to inherent characteristics of the sector, which increase the risks for corruption. These include conducting business in emerging markets, frequent dealings with government officials in order to obtain permits and concessions, and heavy reliance on third parties for delivering services (EY, 2014).

Frequent interactions with government officials is another characteristic of the oil and gas sector that makes the sector especially vulnerable to corruption. Many of the organisations involved in the sector are either wholly or partially state-owned, which coupled with the excessively bureaucratic structure of governments in emerging markets can create many occasions where bribes can be demanded.

Thirdly, heavy reliance on third parties is a factor influencing corruption levels in the industry. For on-site transactions, the oil and gas sector frequently hires third parties. Exercising control over these third parties can be a significant challenge, which could be one of the factors explaining the link between corruption and the oil and gas sector.

The OECD Guidelines explicitly state that enterprises should not, directly or indirectly, offer, promise, give or demand a bribe or undue advantage to obtain or retain business or other improper advantage. Simultaneously, enterprises should also resist the solicitation of bribes and extortion. Due diligence with reference to corruption should take place through the adoption of adequate internal controls, ethics and compliance programs. Such programs should discourage bribery and corruption in the future. To further challenge potential corruption adequate training programmes and disciplinary procedures should be introduced. Due diligence pertaining to the hiring of intermediaries will also help increase transparency and decrease corruption.

Next to the principles mentioned in the OECD Guidelines, a legally binding anti-bribery convention also exists. The OECD convention on preventing bribery of foreign public officials in international business transactions criminalises bribery of foreign officials and provides a host of related measures that make this effective (OECD, 2011). This convention is unique in the sense that it is the first and only international anti-corruption instrument that focusses on the 'supply-side' of the bribery transaction. Although the convention is binding, it is only binding to its signatories. All 35 OECD countries, and eight non-OECD countries (Argentina, Bulgaria, Colombia, Costa Rica, Lithuania, Russia and South Africa) signed it.

In conclusion, transparency can help in exerting due diligence – especially in the context of anti-bribery. Awareness that the public is looking will enhance the potential for dialogue with the public and cooperation in the fight against bribery, bribe solicitation and extortion. For operations in countries where that have signed the OECD's anti-bribery convention those articles are legally binding. For countries where the convention is not binding, multinational enterprises are strongly encouraged to follow the principles mentioned in the OECD Guidelines.

2.4 Conclusions

This chapter has investigated the oil and gas sector in the Netherlands, discussed its economic, social and environmental impacts in the Netherlands and identified potential topics relevant to the OECD Guidelines that may place a role in supply chains.

The oil and gas sector in the Netherlands is an important sector, especially for international trade. The trade balance of the Netherlands is dominated by trade in oil and gas products. Most of the top-20 global companies in the oil and gas industry have a subsidiary in the Netherlands - some of them own some of the refinery capacity. However, there are relatively few companies that have their headquarters in the Netherlands.

Direct employment in the oil and gas sector is about 0.5% of total employment in the Netherlands. There is no estimate of the indirect employment that is related to the sector. Companies in the sector differ with respect to their activities and size. We have identified over 80 companies active in the oil and gas sector that have more than 50 employees or have an annual turnover exceeding 20 million Euros. These companies have the majority of their operations in the oil and gas sector. Around 60% of these companies are subsidiaries of foreign firms. Less than a quarter of companies active in the Dutch oil and gas sector can be considered as Dutch multinational enterprises.

Human rights, employment and industry relations, environment and combatting bribery seems to be the OECD topics most relevant for the oil and gas industry. However, the specific topics may vary from company to company and subsector to subsector. The impacts of gas extraction on earthquakes and its corresponding societal effects are also an important social impact of the Dutch oil and gas sector. However, since these primarily have a social impact within the Netherlands, they have not been scrutinized further in this research that is more oriented on the international dimension of CSR.

3 Efforts in the Oil and Gas sector in the Netherlands

3.1 Introduction

In this Chapter we aim to investigate to what extent the OESO Guidelines have been implemented in Dutch companies in the oil and gas sector - as defined in Chapter 2. First, a questionnaire has been set up and distributed to the companies active in the Dutch oil and gas sector. This questionnaire contained over 90 questions on the application of the OECD Guidelines by the companies and was distributed to over 80 companies. The response rate was 40% for completed questionnaires and an additional 10% of questionnaires that were partly completed. Both completed and partly completed questionnaires have been used. Annex A.3 gives more indication on the technical set up of the questionnaire and response rates.

The answers to the questionnaires provide a first insight into the implementation of the OECD Guidelines in the oil and gas sector. These results have subsequently been compared with the existing academic literature and various open source databases that have been set up as part of the dissemination and promotion of CSR practices[18]. This results in an overview, in Section 3.2 to 3.8 of the implementation of the OECD Guidelines along the various chapters in the Guidelines. We focus especially here on the chapters Human Rights, Environment, Employment and Corruption that have been identified as relevant chapters to the oil and gas industry in Chapter 2. Finally, in Section 3.9 we draw some tentative conclusions.

In the remainder of this Chapter we will refer to “respondents” if the focus group has been the respondents of the questionnaire, and “sector” if we concluded that the findings of the survey could be generalized to the sector as a whole.

3.2 Chapters 1 and 2: Concepts and General policies and Disclosure

3.2.1 OECD Guidelines

The OECD Guidelines for Multinational Enterprises are recommendations addressed by governments to multinational enterprises. Governments that have signed the Declaration, agree that they recommend to multinational enterprises operating in or from their territories the observance of the Guidelines. Many companies active in the Dutch oil and gas sector have subsidiaries in other countries or are part of multinational enterprises with headquarters in other countries. The OECD Guidelines apply to all of these companies.

[18] We have in the literature research focussed on evidences that could enhance insight from the questionnaire. By doing this, we have in particularly searched for objective information: e.g. in the peer reviewed academic literature or in databases that have covered elements relevant for the OECD Guidelines. Secondary literature, e.g. those featured in the numerous research reports have not been used by us in this Chapter. However, that literature has formed an important ingredient in the case studies that will be summarized in Chapter 4.

3.2.2 Questionnaire

In the questionnaire we have asked about the knowledge of the OECD Guidelines and the application of the Guidelines in daily business operations. We first simply asked if the respondents are familiar with the OECD Guidelines. Table 7 gives the outcomes of the question if companies are familiar with the OECD Guidelines, expressed in percentages and distributed between large and small enterprises.

Table 7 - Are you familiar with the OECD Guidelines for multinational enterprises?

	Small	Large	Total	Small	Large	Total
Yes	7	16	23	47%	64%	58%
No	8	9	17	53%	36%	43%
Total	15	25	40	100%	100%	100%

Note: n=40. Large companies are companies with over 200 employees worldwide, small companies are companies with less than 200 employees worldwide.

More than half of the respondents are familiar with the OECD Guidelines. Larger companies state more often that they are familiar with these Guidelines. However, still over 1/3 of the larger companies reported not to be familiar with the OECD Guidelines. The most common way to become familiar with the Guidelines was through the company itself (54%). 43% of the respondents mentioned an external information source, i.e. a newspaper or other media (17%); the government (12%) or an industry association (12%).

The familiarity of the OECD Guidelines differs per company situation of the respondents (Table 8). In general, the highest score is among the companies that have subsidiaries in non-EU countries. The familiarity is lowest for companies that have no subsidiaries and are oriented mostly on the Dutch or EU market. This is in line with the intended use of the OECD Guidelines. However, even for companies with subsidiaries in foreign countries, the familiarity with the OECD Guidelines is not higher than 75%, as stated by the respondents.

Figure 5 - Familiarity with the OECD Guidelines, depending on company situation

Note: n=40.

Communication about the guidelines

Fifteen of the 23 respondents (59%) familiar with the OECD Guidelines actively communicate these to their employees.[19] The most important communication channels are an internal web site for employees (57%) and a general (external) website (50%). About 20% of respondents with active implementation of the OECD Guidelines include them in labour contracts.

Implementation of the Guidelines

Respondents familiar with the Guidelines were asked how the OECD Guidelines were implemented. Most companies (68%; 15 respondents) responded that the Guidelines were implemented in existing procedures. Three companies (14%) mentioned they have active policies to implement the Guidelines. One company stated that the Guidelines were not relevant for their company.

3.2.3 Other sources

The Dutch Association of Investors for Sustainable Development (VBDO) received in September 2014 the assignment of the Ministry of Foreign Affairs for a research among Dutch owned stock listed companies to assess company commitment to the OECD Guidelines (VBDO, 2014). Their report showed that about 30% of the investigated companies already adhered to the OECD Guidelines, while another 40% of the companies planned to do this in the near future. Out of 60 companies investigated in this research, only two companies belong to the oil and gas sector: Shell and Vopak.
Both companies were on the white list of companies that publicly announced to adhere to the OECD Guidelines - a result that was restated during an interview.[20]

The VBDO research did not analyse to what extent these companies were successful in their application of the OECD-Guidelines nor the content of their policies.

3.3 Chapter III: Disclosure

3.3.1 OECD Guidelines

Disclosure of information is crucial to improve public understanding of the enterprises and their interaction with society and the environment. Enterprises should be transparent about their policies and responsible to the public's increasingly sophisticated demands for information.

Disclosure is addressed in two areas. The first set of disclosure recommendations calls for timely and accurate disclosure on all material matters regarding the corporation, including the financial situation, performance, ownership and governance of the company. The OECD Guidelines state that enterprises should ensure that timely and accurate information is disclosed on all material matters regarding their activities, structure, financial situation, performance, ownership and governance. (Chapter III, Paragraph 1). Moreover, reporting about these material matters should be subject to an independent, competent and qualified auditor (Chapter III, Paragraph 4).

[19] This implies that 28% of all respondents in the questionnaire actively communicate the OECD Guidelines report to their employees.

[20] The VBDO research did not include an objective test to identify to what extent these companies indeed adhered to the OECD Guidelines.

A second area of disclosure is about areas where reporting standards are yet evolving. The OECD Guidelines advocate companies here to take an active stance. Enterprises are encouraged to communicate additional information that could include: value statements; codes of conduct, performance, internal audits and risk management, relationship with workers and stakeholders (Chapter III, Paragraph 3). In doing so, they should apply high-quality standards (Chapter III, Paragraph 4). In this respect, the Global Reporting Initiative is mentioned in the OECD Guidelines, but other initiatives may also be relevant.

3.3.2 Questionnaire

We have asked the companies about their reporting. About 18% of the respondents answered that they do not respond anything and company size does not matter much to this figure. Only two respondents (5%) have an annual frequency in reporting both a financial and CSR report. Almost 30% of the companies reports a CSR report in a lower frequency. 50% of the companies only provides a financial report.[21]

Table 8 - Does your company provide a publicly available annual report?

	Total	Small	Large
Yes, only a financial report	49%	80%	29%
Yes, a financial report and an annual CSR report	5%	0%	8%
Yes, a financial report and an incidentally recurring CSR report	28%	7%	42%
None of the above	18%	13%	21%
Total	100%	100%	100%

Note: n-39.

The conclusion is that non-financial reporting is not yet standard in the oil and gas sector. About 1/3 of the companies provide a(n incidentally recurring) CSR report. Most of them (85%) publish this information online.

We also asked about the guidelines that were followed in reporting. Most of the companies that provided a CSR report followed the GRI guidelines. A few other guidelines were also mentioned in application. Table 9 shows the reporting guidelines applied by the respondents.

Table 9 - Which reporting guidelines does your company use for its CSR report?

CSR reporting guidelines	#
GRI (3&4), using the specific oil & gas guidelines	6
GRI (3&4), not using the specific oil & gas guidelines	3
Global compact	2
Integrated Reporting (IR)	1
AA 1000	1
EU 'Non-Financial Reporting Directive'	1
ISAE 3000 (verification	1
IPIECA guidance 3rd edition oil and gas industry on voluntary sust reporting	1
RJ richtlijn 400 voor bestuursverslagen	1
UN Guiding Principles on Business and Human Rights Reporting Framework	1
Guidance on Voluntary reporting from the American Petroleum Institute and the International Association of Oil and Gas Producers	1
Don't know	3

[21] In most cases, companies are legally enforced to do so because they are public limited companies (NV's) or Private limited liability companies (BVs) parented by public limited companies.

3.3.3 Other sources

The Ministry of Economic Affairs in the Netherlands publishes the *Transparency Benchmark*, a framework for evaluating the content and quality of corporate social responsibility reports of Dutch companies. Through the Transparency Benchmark the participating companies contend for The Crystal prize, a leading price in the area of social reporting in the Netherlands. The Transparency Benchmark is performed every year and specifically addressed for larger companies. In 2014, the criteria of the Transparency Benchmark have been adapted to international developments such as changes in the guidelines of GRI-4, the OECD Guidelines for multinational enterprises and the EU legislative proposal and focus on materiality, value creation and impact. These new criteria encourage integrated reporting (integrating financial and non-financial information about people, planet and profit).

Table 10 gives an overview of the average score of Dutch companies on the Transparency Index and the companies that are active in the Oil and Gas sector in the Netherlands that also feature in the list of companies used for the survey. It appears that the companies in our sample in general have higher scores than the average scores of the companies in 2016. We also investigated this historically. It appears that many more companies from our sample are listed in the Transparency Benchmark, but not annually. Periodic reporting seems to be much more common than annual reporting.

Table 10 - Overview of number of companies and their scores in the transparency benchmark in 2016

	Number of companies	Average scores*
All companies in the Benchmark	477	49
Companies classified as 'Energy' in the benchmark	17	52
Companies included as 'Oil and Gas' in this research (see Annex A)	7	97

* Source: www.transparantiebenchmark.nl. Computed average scores in which the companies scoring a '0' have been included as companies. Note that the transparency benchmark themselves excludes such companies from average scores.

Although this may be an indication that the quality of reporting in the oil and gas sector in the Netherlands is adequate when CSR reports are constructed, it does not reveal to what extent the sector in the Netherlands produces such reports. In order to analyse this, we have consulted the GRI database. The GRI database lists companies that have produced a sustainability report. The reports are then classified if they correctly have been submitted according to the standards or not (see Box 1).

Box 1 - GRI reporting requirements over time

GRI reports are sustainability/Integrated reports based on the GRI Standards that have been developed since 2000. Over time, the GRI reporting requirements have been extended and improved. For the present analysis, the following GRI requirements are relevant.
The field 'Report Type' indicates the version of the GRI Guidelines applied in the report

1. GRI – G3 (published in 2006).
2. GRI – G3.1 (published in 2011).
3. GRI – G4 (published in 2013): valid until 30 June 2018.
4. GRI – Standards (published in 2016): currently valid.

Overall one can safely state that newer requirements provide more inclusive and transparent reporting. The database classifies the CSR reports according to:

- proved conformity with the standards;
- GRI-referenced indicates CSR reports that make explicit reference to being based on the GRI standards but lack formal approval;
- non-GRI: CSR reports that have been based on other standards.

For this research, we have investigated the GRI database and scored a total of over 200 European and Northern American companies for their sustainability reports in the last five years. For every year that a sustainability report was produced according to the latest standards in GRI reporting, the company would receive two points. A report produced against the older standards would receive 0.25-point reduction, and a report produced without an official accreditation, would receive 0.5-point reduction. Reports produced with other standards received 1-point reduction. In total companies could thus receive a maximum of 10 points if every year a sustainability report according to the GRI standards was produced. The minimum point would be 1: inclusion in the GRI database with one report in the last five years not according to the GRI standards.

In the GRI database, the oil and gas sector is not identified as an individual sector. Most of the oil and gas companies would feature in the 'Energy' sector, which also includes, e.g., power producers. However, there are also oil and gas companies found in other sectors (e.g. Utilities, Other). We have executed a dedicated search excluding SMEs, and identified in total over 200 companies that fall under the Energy sector. From these, we have identified almost 70 companies as companies primarily active in the oil and gas industry.

Table 11 gives the overview of the results.

Table 11 - Scores of companies with headquarters in Europe or Northern America for their reporting according to the GRI standards, 2013-2017 in a score 1-10; in brackets number of firms that are prevalent in the GRI database

Scores	HQ in Europa/NA	HQ in NL	Office in NL	O.w. responded to questionnaire
All energy companies	5.4 (202)	7.1 (6)	n/a	n/a
Oil and gas industry	6.0 (69)	7.4 (4)	6.5 (15)	6.6 (9)

Note: Own calculations based on database.globalreporting.org.

It appears that the average score of all energy companies is 5.4. Companies in the oil and gas sector tend to have a higher score of 6.0. We want to emphasize here that a higher score is likely given the higher risks associated with their operations. Four of these companies had their headquarters in the Netherlands. These companies scored considerably higher than their foreign competitors with an average score of 7.4. If we also include all companies that are featuring in Annex A as being part of the oil and gas sector, we conclude that 15 companies have their headquarters or a subsidiary in the Netherlands. The average score of the 'oil and gas industry in the Netherlands' is than 6.5: a half point higher than the higher than the average score in Europe and North America. However if we exclude the scores of the companies that have headquarters in the Netherlands, the scores drop to 6.1 - almost the same as the average score of European and North-American companies in the GRI-database.

Finally, we could investigate if the responses to the questionnaire are biased towards GRI-reporting. Nine of the fifteen companies that constitute the oil and gas sector in the Netherlands according to the GRI database have filled out the questionnaire. If we calculate their average scores, we see that this is with 6.6 points close to that of the whole oil and gas industry in the Netherlands that is featured in the GRI database.[22] Therefore, we have some indication that the questionnaire is not biased towards GRI reporting: the scores of the companies that filled in the questionnaire seems to be similar to the companies that have not filled in the questionnaire - at least as far as they feature in the GRI database.

[22] In the calculation of the average scores we have counted companies that completed the questionnaire as a whole, and companies that only partially filled in the questionnaire as a half.

3.4 Chapter IV: Human Rights

3.4.1 OECD Guidelines

According to the Guidelines enterprises “should seek ways to prevent or mitigate adverse human rights impacts that are directly linked to their business operations, products or services”, “even if they do not contribute to those impacts” (Chapter IV, Paragraph 3). The should have “policy commitment to respect human rights, carry out due diligence as appropriate to their size, the nature and context of operations and the severity of the risks of adverse human rights impacts” (Chapter IV, Paragraph 4 and 5).

Companies are expected to respect human rights in their own operations and through their supply chain; to prevent any adverse impacts on human rights and mitigate any adverse impacts. The chapter starts with an explanation that States have the duty to protect human rights. Nevertheless, companies should address Human Rights in their activities. In absence of an effective government or “in countries where domestic laws and regulations conflict with internationally recognised human rights, enterprises should seek ways to honour them to the fullest extent which does not place them in violation of domestic law”.

Companies should explicitly mention human rights in company policies and have an action plan in place to prevent impacting human rights. It should also play an important role in M&E activities, companies should frequently monitor if and how their activities and those of their business relations affect human rights of their workers and of the local population.

In addition, the OECD is expecting companies to take action when human rights are at stake. The Guidelines state “When enterprises identify through their human rights due diligence process or other means that they have caused or contributed to an adverse impact, the Guidelines recommend that enterprises have processes in place to enable remediation. Some situations require co-operation with judicial or State-based non-judicial mechanisms. In others, operational-level grievance mechanisms for those potentially impacted by enterprises’ activities can be an effective means of providing for such processes when they meet the core criteria of: legitimacy, accessibility, predictability, equitability, compatibility with the Guidelines and transparency, and are based on dialogue and engagement with a view to seeking agreed solutions” (Chapter IV article 46).

3.4.2 Questionnaire

More than half (54%) of the respondents has an explicit human rights policy (see Table 12) where respondents of larger companies have more often an official policy. About 40% of respondents indicated that the human right policies contained plans and procedures how to execute the policies. Most important components of the actively implemented policies are:

- appointing someone who is responsible for the execution of the policy (79% of 40%);
- explicitly including human rights in codes of behaviour (71% of 40%);
- monitoring of human rights policy (64% of 40%);
- human rights as a criterion in the procurement policy for raw materials and semi-finished products (57% of 40.5%);
- mapping of the risks around human rights (50% of 40.5%);
- conducting a human rights impact assessment (43% of 40.5%).

Table 12 – Does your company have an explicit human rights* policy?

	Small	Large	Total	Small	Large	Total
Yes	6	14	20	43%	61%	54%
No	7	6	13	50%	26%	35%
Don't know	1	3	4	7%	13%	11%
Total	**14**	**23**	**37**	**100%**	**100%**	**100%**

* Human rights includes general policies for employees as well as policies for people working around your company.

Human right policies are only in 30% of the respondents' companies publicly available. Eight (seven large; one small) respondents mention a website where more information about human rights can be found (e.g. sustainability report, separate webpages on human rights; financial report).

Only one respondent mentions an incident around human rights. Some companies mention other bottlenecks that hinder active human rights policies, e.g.:

- cultural differences in the guest country;
- no responsibility for human rights earlier in the value chain;
- no jurisdiction as a subsidiary of a parent company;
- no policies necessary because the company is only working in countries with sufficient human right policies.

We can conclude that, although the majority of respondents reports to have a human right policy, these policies seem to contain plans and procedures for only 40% of the respondents. Only 30% of the respondents actively shares these plans with their stakeholders. The respondents report that incidents on human rights aspects are relatively infrequent.

3.4.3 Other sources

To some extent, the results from the questionnaire are repeated in independent research. Table 13 shows the scores of companies that are active in the Dutch Oil and Gas sector with respect to their human rights due diligence according to the independent organisation CHRB (Corporate Human Rights Benchmark). This organisation has scored over 100 companies with respect to their human right policies and their response to allegations in the media. From the selected oil and gas companies, Total is the company that internationally has the highest score with respect to their benchmark, followed by BP and Shell. If we compare Shell against the other companies, then it becomes apparent that Shell, in comparison to other companies, is scoring well in the formulation of their human rights due diligence policies in the Sustainability Report and their website, which contains many elements that are relevant to due diligence according to the CHRB. However, the CHRB could not identify proper mechanisms for remedies in case serious allegations happened. This is not proof that such mechanisms do not exist, but that they are not publicly made available so that CHRB could not check their adequacy.

Table 13 - Overview of scores according to the Corporate Human Rights Benchmark of compliance of sectors towards a benchmark (100% provides optimal compliance towards the benchmark)

	Shell	BP	Exxon Mob	Lukoil	ENI	Total
A.1 POLICY COMMITMENTS	46%	14%	26%	14%	46%	66%
A.2 BOARD LEVEL ACCOUNTABILITY	34%	16%	0%	16%	0%	50%
B.1 EMBEDDING RESPECT FOR HUMAN RIGHTS IN COMPANY (	33%	8%	6%	0%	14%	75%
B.2 HUMAN RIGHTS DUE DILIGENCE	67%	17%	9%	0%	9%	59%
C. REMEDIES AND GRIEVANCE MECHANISMS	17%	45%	11%	0%	5%	22%
D. ENABLING FACTORS AND BUSINESS PROCESSES	32%	32%	25%	7%	19%	57%
E. PERFORMANCE: RESPONSES TO SERIOUS ALLEGATIONS	38%	100%	100%	100%	38%	38%
F. TRANSPARENCY	44%	48%	20%	8%	40%	56%
Average	38%	43%	32%	24%	21%	50%

Source: CHRB, 2016.

3.5 Chapter V: Employment and industry relationships

3.5.1 OECD Guidelines

This chapter addresses several issues related to employment and working conditions:

1. The possibility for workers to let others represent them or to support them in exerting labour rights e.g. by joining trade unions and representative organisations of their own choosing. (Chapter V, Paragraph 1a and 1b) Companies are expected to provide facilitation to trade unions to support their role and to provide workers with the proper information to engage in meaningful negotiations. (Chapter V, Paragraph 2 and 8).
2. Abolishment of child labour and forced labour. (Chapter V, Paragraph 1c and 1d).
3. Stimulate equality and avoid discrimination (Chapter V, Paragraph 1e).
4. Provide fair wages and apply labour standards in line with the local situation (if this does not conflict with international rights) (Chapter V, Paragraph 4a and 4b).
5. Safeguard health and safety in operations (Chapter V, Paragraph 4c).
6. Involvement of local workers (Chapter V, Paragraph 5).
7. Correct remuneration in case of e.g. lay-offs, relocation of operations, etc. (Chapter V, Paragraph 6).
8. Preventing unfair influencing of workers in negotiations on labour circumstances (Chapter V, Paragraph 8).

As can be seen the OECD Guidelines covers a wide range of labour rights related topics for which the ILO Declarations inspired the Guidelines. Many of these topics are covered by human resource management and laid down in human rights policies and addressed in the activities of human resource managers. In the Netherlands, the sector is considered to be an employer that provides a fair wage, and that has a very strong focus on Health and Safety related matters.

3.5.2 Questionnaire

About 91% of the respondents report that they have an *explicit* health and safety policy in place to safeguard their employees. Almost all (91%) of the respondents that have a human resource policy state that they take *active measures* to ensure the health and safety of employees. Most mentioned measures are:

- health and safety policies and procedures (97% of 91%);
- frequent internal audits/checks (93% of 91%);
- HSE manager (93% of 91%).

In half of the cases the active measures are companywide.

77% has a VCA certificate or a comparable certificate. In many cases occupational health and safety requirements require policy and measures.

Three-quarter of respondents (77%) report that they have a broader human resource policy. Respondents of larger companies are more likely to have such a policy.

Table 14 - Does your company has a group wide, active, human resource policy?

	Small	Large	Total	Small	Large	Total
Yes, group wide	7	12	19	58%	55%	56%
Yes, site-specific	1	6	7	8%	27%	21%
No	2	1	3	17%	5%	9%
Don't know	2	3	5	17%	14%	15%
Total	**12**	**22**	**34**	**100%**	**100%**	**100%**

70% of the respondents say they have a procedure for employees and others to ask question and to complain about discrimination, forced labour and child labour. Most mentioned measures are:
- option to ask questions and complain (100% of 70%);
- investigating complaints (87% of 70%);
- answering questions (74% of 70%).

Only 39% of the respondents has an independent, external complaint mechanism. No incidents on this issue have been mentioned.

3.5.3 Other sources

In the Dutch oil & gas sector the topic of employment seems to be properly addressed. Companies generally have human resource managers and provide good working conditions to their workers. In the Netherlands, workers and employers jointly develop a collective agreements between employers and employees (Collectieve Arbeidsovereenkomst, CAO) in which many of the aspects related to employment are integrated. Nevertheless, in some instances these agreements were subject to a long period of negotiations and sometimes strikes to bring the two stakeholders together.

We have considered this aspect to be fairly well covered by the Dutch sector and have not further elaborated here. It may be worth investigating the situation in other countries in which parts of the multinational companies are situated, although local legislation and circumstances play a significant role and hence may not be comparable to the Dutch context.

3.6 Environment

3.6.1 OECD Guidelines

The OECD Guidelines in Chapter VI, on the environment, are prescribing sound environmental management. This includes, amongst others,
1. Monitoring the environmental impact of existing operations by establishing and maintaining a system of environmental management appropriate for the enterprise.
2. Inform the public and workers in timely manner on the potential environmental, health and safety impacts with adequate, measurable and verifiable information on, e.g., improvements in environmental performance.
3. Strive for continuous improvement of the environmental performance of the company by exploring and assessing ways of improving the environmental performance of the enterprise over the longer term.
4. Paying due diligence to activities planned, by collecting timely information regarding the potential environmental and health effects of decisions over the full life-cycle and conducting an environmental impact assessment of the potential activities when the activities are subject to a decision of a competent authority.

The first principle refers to the importance of having a sound environmental management system in place. Such a system is an important part of sustainable development, and is increasingly being seen as both a business responsibility and a business opportunity. An environmental management system provides the internal framework necessary to control an enterprise's environmental impacts and to integrate environmental considerations into business operations. Having such a system in place should help to assure shareholders, employees and the community that the enterprise is actively working to protect the environment from the impacts of its activities. Improving environmental performance requires a commitment to a systematic approach and to continual improvement of the system.

The second principle refers to the (Aarhus) Convention on Access to Information. Information about the activities of enterprises and about their relationships with sub-contractors and their suppliers, and associated environmental impacts is an important vehicle for building confidence with the public. This vehicle is most effective when information is provided in a transparent manner and when it encourages active consultation with stakeholders such as employees, customers, suppliers, contractors, local communities and with the public-at-large to promote a climate of long term trust and understanding on environmental issues of mutual interest. Reporting and communication are particularly appropriate where scarce or at risk environmental assets are at stake either in a regional, national or international context; reporting standards such as the Global Reporting Initiative can provide useful references, according to the OECD Guidelines.

The third principle encourages enterprises to work systematically to raise the level of environmental performance in all parts of their operations, even where this may not be formally required by existing practice in the countries in which they operate. In this regard, enterprises should take due account of their social and economic effects on developing countries. For example, multinational enterprises often have access to existing and innovative technologies or operating procedures which could, if applied, help raise environmental performance overall. Multinational enterprises are frequently regarded as leaders in their respective fields, so the potential for a 'demonstration effect' on other enterprises should not be overlooked. Ensuring that the environment of the countries in which multinational enterprises operate also benefit from available and innovative technologies and practices, is an important way of building support for international investment activities more generally.

The fourth principle indicates that companies may have to carry out an ex ante assessment of the potential environmental impacts associated with the enterprise's activities and decision-making. Environmental assessments made by the enterprise may contain a broad and forward-looking view of the potential impacts of an enterprise's activities and of activities of sub-contractors and suppliers, addressing relevant impacts and examining alternatives and mitigation measures to avoid or redress adverse impacts. The Guidelines also recognise that multinational enterprises have certain responsibilities in other parts of the product life cycle.

3.6.2 Results from the questionnaire

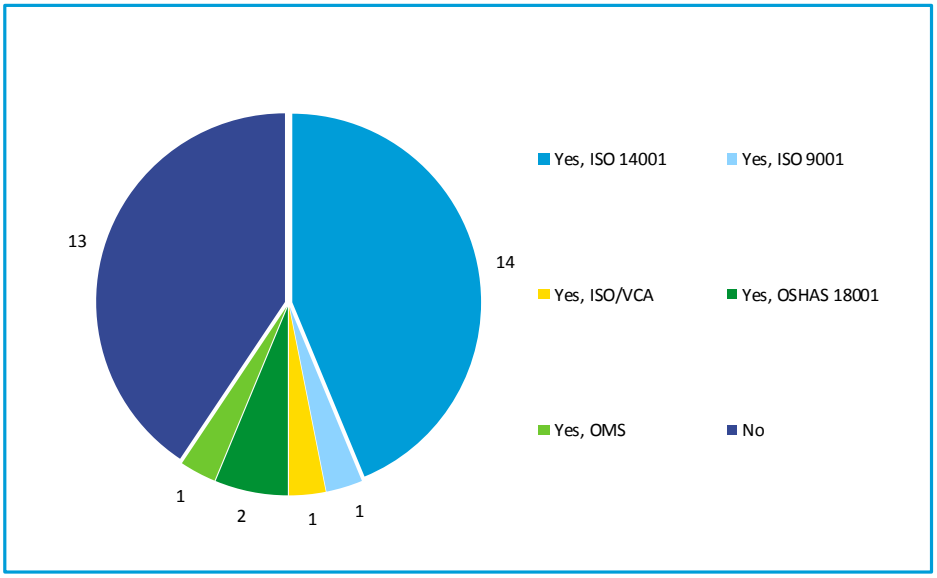
Most respondents (78%) have an Environmental Management System (EMS). Respondents of small companies more often have no system, or do not know whether they have or not. One respondent replies that an EMS is not applicable for the size of the business. Another one states that his company only executes trading activities and this requires no EMS.

Table 15 - Does your company has a functioning environmental management system?

	Small	Large	Total	Small	Large	Total
Yes, in NL, but not in all other countries		2	2	0%	10%	6%
Yes, in NL, but don't know about other countries		1	1	0%	5%	3%
Yes	7	15	22	58%	75%	69%
No	2	1	3	17%	5%	9%
Don't know	3	1	4	25%	5%	13%
Total	**12**	**20**	**32**	**100%**	**100%**	**100%**

80% of the EMS's of respondents of large companies are certified, against only 33% of EMS's of respondents of small companies. Certification is mostly done per installation, in a minority of cases companies report companywide certification.

Figure 6 - Is your environmental management system certified?



Around 84% of the respondents report that it is part of the company policy to improve the environmental performance, even when the government does not ask it. 53% of the respondents state that they do provide information about potential environmental, health and safety impacts to other parties than the authorities.

91% of the respondents state that foreseeable environmental, health and safety effects of processes, goods and services are weighted in the decision making process. This is mostly done by including environmental aspects as a KPI, environmental effect reports, and financial valuing of the environmental, health and safety impact.

Bottlenecks and incidents

We also asked the companies to what extent they experienced bottlenecks in complying with the OECD Guidelines in the environmental domain. Table 16 shows bottlenecks experienced by respondents. We categorized the answers. Differences between regions or cultures were most mentioned.

Table 16 - Bottlenecks experienced by respondents (open question)

Bottleneck	#
Differences between regions/cultures	5
Lack of support inside company	3
Impossible to influence	2
Technical and economic feasibility	2
Regulation in the Netherlands too stringent	1
No bottlenecks	3

Almost half of the respondents report environmental incidents, mainly large companies' respondents. Five respondents do not explain the type of incidents. Seven respondents mention oil spills or other emissions to air, soil and water. One respondent reports an occupation by an NGO. Finally, one respondent refers to 87 environmental incidents reported, including one oil spill. Respondents mention that incidents in the past have resulted in technical solutions and, in most cases, adjustments of procedures.

Table 17 - Have there been incidents in the past around environmental aspects?

	Small	Large	Total	Small	Large	Total
Yes	2	12	14	17%	60%	44%
No	9	5	14	75%	25%	44%
Don't know	1	3	4	8%	15%	13%
Total	**12**	**20**	**32**	**100%**	**100%**	**100%**

3.6.3 Other sources

The OECD Guidelines describe the necessary environmental management systems into place and the objectives of environmental policies of the companies adhering to the Guidelines. There is substantial literature that implementation of environmental management systems does lead to improvements of the environmental performance of a firm (Szymanski and Tiwari, 2004; McGuire, 2016). Certification of the environmental management system can assure that the environmental management system is in line with the OECD Guidelines. The ISO14001 certification scheme, for example, is an environmental management system that monitors the environmental impact of existing operation, strive for continuous improvement of the environmental performance and the content of the environmental management system and contains an independent verification mechanism to assure its quality. These are all elements that are at the core of the environmental chapter in the OECD Guidelines.

We have checked the answers from the questionnaire against the information publicly available in the SCCM database that registers the verified ISO 14001 and OHSAS certificates given by certification firms that are active on the Dutch market. It appeared that overall the information provided by the respondents could not always be verified against the publicly available resources: one respondent did not list their ISO 14001 qualification, while five other multinational companies listed that they had such qualification, but the certificate did not appear in the Dutch database.[23] If we orient on the publicly available information coming from the verifiers, we can make the following table with respect to compliance to the international standards (ISO 14001/OHSAS18001) in the oil and gas sector.

Table 18 - Companies that have for their Dutch company a certification scheme is place

	Total companies	Certified with ISO14001/OHSAS	% certification
Upstream	27	10	37%
Midstream (storage)	25	9	36%
Downstream production	15	5	33%
Trade and distribution	16	1	6%
Total	**83**	**25**	**30%**

[23] Reasons could be that the certificate was verified by a verificator that is not active on the Dutch market, that some installations of the company may be certified, and not the Dutch installation, or that the company has provided erroneous information.

It appears that overall 30% of the companies have put forward an EMS certified by ISO certification. This figure corresponds to a general finding that about 30-40% of the companies have active policies in place that substantiate their efforts to comply with the OECD Guidelines.[24] Table 18 furthermore provides the insight that ISO certification is less common further down the chain. Especially in the trade and distribution of fuels to customers, certification is rare as only one out of 15 listed companies has an ISO-certification.[25]

3.7 Combating Bribery, Bribe Solicitation and Extortion (chapter VII)

3.7.1 OECD Guidelines

The OECD Guidelines prescribe that enterprises should not, directly or indirectly, offer, promise, give, or demand a bribe or other undue advantage to obtain or retain business or other improper advantage. Enterprises should also not use third party services such as agents and other Intermediaries for channelling undue pecuniary or other advantages to public officials, or to employees of their business partners or to their relatives or business associates (Chapter VII, Paragraph 1).

Bribery is illegal in many countries and forbidden by law. However, in order to be successful in combatting bribery, enterprises should develop and adopt adequate internal controls, ethics and compliance programmes or measures for preventing and detecting bribery, developed on the basis of a risk assessment addressing the individual circumstances of an enterprise and risks with respect to bribery (e.g. geographical and industrial sector of operation). Such risks should be regularly monitored and re-assessed. Internal controls should include systems of financial and accounting procedures so to ensure that the financial system within the company cannot be used for bribery. Moreover, internal company controls, ethics and compliance programs should be established and disseminated in order to assure employee awareness of and compliance with company policies and programs or measures against bribery, bribe solicitation and extortion. Training programmes and disciplinary procedures should be part of the company policies.

The company should also ensure properly documented due diligence procedures regarding the hiring of agents to ensure that remuneration of agents is appropriate and for legitimate services only. Companies should also enhance the transparency of their activities in the fight against bribery, bribe solicitation and extortion by e.g. making public commitments and disclosing the policies and procedures that are in place. Measures could include making public commitments against bribery, bribe solicitation and extortion, and disclosing the management systems and the internal controls, ethics and compliance programmes or measures adopted by enterprises in order to honour these commitments. Enterprises should also foster openness and dialogue with the public to promote its awareness of and cooperation with the fight against bribery, bribe solicitation and extortion.

3.7.2 Insights from the questionnaire

Most respondents (75%) have a policy to prevent corruption. More than half of the respondents (54%) have a public available policy for combating corruption and bribe solicitation. 72% of the respondents promote awareness and compliance with their anti-corruption policy by training programmes and disciplinary procedures. 81% has a system for internal control, ethics and compliance.

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[24] See e.g. Paragraph 3.4 where it was concluded that 40% of the companies had substantiated their human right policies with plans and procedures and Paragraph 3.3. that almost 30% of the companies was involved in CSR reporting.

[25] We could not compare the Dutch Oil and Gas sector with companies from other countries, as there are no international data available on ISO-certification.

Table 19 - Does your company has a policy to prevent corruption?

	Small	Large	Total	Small	Large	Total
Yes	8	16	24	67%	80%	75%
No	3	1	4	25%	5%	13%
Don't know	1	3	4	8%	15%	13%
Total	**12**	**20**	**32**	**100%**	**100%**	**100%**

53% of the respondents states that they conduct a dialogue with public, governments, clients and/or suppliers about combating bribery, bribe solicitation and extortion.

Table 20 - Have there been incidents in the past around corruption?

	Small	Large	Total	Small	Large	Total
Yes	0	5	5	0%	25%	16%
No	11	7	18	92%	35%	56%
Don't know	1	8	9	8%	40%	28%
Total	**12**	**20**	**32**	**100%**	**100%**	**100%**

Only large companies' respondents reported incidents. Incidents include bribery, fraud and secondary activities of board members. Respondents stated they experienced bottlenecks in executing an anti-corruption policy, mainly due to *cultural differences.*

3.7.3 Other literature

As stated in Section 2.3.7, the oil and gas industry is listed as exposed to bribery, as reported by the Bribe Payers Index. However, there is no literature where individual companies have been can be ranked for their vulnerability to bribery or where an assessment has been made of the vulnerability of the Dutch oil and gas industry towards bribery. In the Netherlands, and in many other European countries, bribery is forbidden by law. Over the last ten years various lawsuits have been set up in which oil companies have been accused from bribery.

3.8 Remaining topics (Chapters VIII-XI)

We also asked companies about their policies about consumer interests, science and technology, competition and taxation. About ¾ of the respondents answered that consumer interests were primarily served by compliance to the governmental rules regarding product safety and product qualities. About 30% of the respondents was active in product labelling and standard settings for their products.

About 2/3 of the multinational respondents indicated that they undertake efforts to remain in touch with the knowledge developments in the countries where they are located. About half of the respondents indicated that they had specific programs for education of local employees.

Most of the respondents indicated that they comply with the local tax regulations to the letter and spirit. Almost 30% of the respondents reported that they had established policies for internal calculation of profits according to the length-arm principle, which is recommended by the OECD Guidelines as a means towards compliance. Two respondents reported past incidents on taxation. Afterwards internal procedures had been changed.

3.9 Conclusions and discussion

In this chapter we have investigated to what extent the Dutch oil and gas sector declares to work conform the OECD Guidelines. We have investigated this through a survey distributed to over 81 companies and have validated the answers from the respondents with independent research tackling topics relevant for the OECD Guidelines.

Our conclusions are as follows:

- Almost 40% of the selected companies have fully completed the survey: about 10% have additionally answered some questions without completing the survey.
- About 60% of the respondents indicate that they are aware of the OECD Guidelines. However, companies that are not familiar with the OECD Guidelines still may have developed policies, programs and activities that are in line with OECD Guidelines. Therefore, the mere knowledge of the OECD Guidelines is not a reliable indicator for compliance to these OECD Guidelines.
- The survey shows that for the majority of the respondents, policies and procedures are in place that correspond to the main topics covered by the OECD Guidelines. However, there is a substantive minority (about 1/3 of the companies) where no such policies were reported. Policies were more frequent available in the employment and environmental domains than in the human rights domain. For human rights, 54% of the respondents reports to have formulated policies but only 40% seem to have concrete procedures and plans on how to execute these policies.
- From the respondents that stated to have put internal policies in place that corresponds to the OECD Guidelines, about 2/3 of them seems to have substantiated these with procedures and plans. From these, another 75% have made these procedures and plans publicly available. All in all this implies that only about 35% of the respondents to the survey seem to have disclosed policy and plans regarding their CSR policies. Respondents of larger companies have more often made their CSR policies publicly available than respondents of smaller companies.
- Where we could substantiate the answers to the 80 questions with independent research, it was concluded that the survey was representative. When compared to GRI reporting, it was concluded that the response rate was not biased towards GRI reporting. When compared with ISO14001 reporting, it was concluded that the number of companies that have put an environmental management system in place corresponds to the 35%
- The company structure may be an important determinant in the formulation of CSR policies. Where the HQ is situated determines to a large extend whether and how policy was developed. Companies refer to HQ in some cases as a reason for absence or the content of policies and their implementation in the Dutch territory. When compared internationally, companies that have their headquarter in the Netherlands comply better to the international GRI standards than companies in other European and Northern American countries: they produce more often reports which more often are set up according to the most recent guidelines in the GRI standards.
- Overall the open answers demonstrate some recurring aspects that influence the activities of the respondents:
  - respondents sometimes mention that a lack of capacity is the reason for the absence of e.g. policies or non-compliance to a specific question;
  - respondents mention that the responsibility to comply with OECD criteria lays does not stretch towards the supply chain as they cannot monitor the suppliers;
  - respondents mention that the relevance of certain topics of the OECD Guidelines for companies that are specifically oriented towards the Dutch market (e.g. midstream activities transporting fuels) is relatively limited.

4 Application of the OECD Guidelines in practice

4.1 Introduction

In Chapter 3 we have investigated the application of the OECD Guidelines "on paper" in the oil and gas sector. We have investigated if there are plans and procedures in place in the oil and gas industry that evidence a degree of compliance to the OECD Guidelines. However, the mere presence of plans and procedures does not say anything about their effectiveness. The application of the OECD Guidelines has therefore been further investigated in relation to three dossiers. These dossiers provide a more practical view on application of the OECD Guidelines in concrete situations.

In consultation with the NCP and steering committee, three dossiers were selected in this research:
- the occurrence of methane emissions during the extraction and distribution of oil and natural gas;
- the delivery of fuels to Western Africa (also referred to as 'Dirty Diesel');
- the extent to which the Dutch oil and gas sector is featured in the complaint mechanism of the OECD Guidelines (also called the NCP cases) and the character of these cases.

In the Annexes C-E, these dossiers have been described in detail. Below we will summarize the main findings from these dossiers. Evidence further underlying the statements made here, can be found in the Annexes.

There are a few impacts that may have been worthwhile investigating in this study but that have not been selected as a dossier. One of these impacts are related to the earthquakes in the Groningen gas field. Here it can be questioned to what extent the oil and gas industry has done a proper risk assessment of these risks when first evidence was produced of the extraction induced earthquakes in the early 1990s. However, impacts here are primarily located in the Netherlands, and these may not be the first subject of an international CSR (IMVO) agreement, which is the background of the study (see Paragraph 1.1). Another risk where questions can be put forward to the compliance of the sector to the OECD Guidelines relates to the allegation of bribery of oil companies in African countries, in particular in Nigeria, that have been widely covered in the media last year. However, as bribery is forbidden in many European countries, it was perceived that *if* bribery has taken place, this would result in legal action and that a case study would be difficult to execute. As a matter of fact, Shell and Eni stand accused of handing out bribes during the 2011 purchase of an offshore oil field in Nigeria in front of the court in Milan.

Below, we will first describe the findings from the dirty diesel dossier in Paragraph 4.2; then next we will elaborate on the findings from the methane dossier (Paragraph 4.3), and finally we will focus on the NCP cases (Paragraph 4.4). In Paragraph 4.5 we will discuss if there are common patterns to be found among these dossiers and to what extent the findings can be generalized.

4.2 Main findings Dirty Diesel Dossier

4.2.1 What was the issue and how does the Dutch O&G sector relate to it?

In 2016, Public Eye published a report about the import by West-African countries of fuels with a high sulphur content (Public Eye, 2016). In several African countries, these high sulphur specifications are still allowed whereas in Europe they are considered illegal. Sulphur in fuels contributes to negative health impact of air pollution. The Public Eye report argues that traders are purposefully blending fuel components to create a fuel, which is as close as possible to the maximum allowed limits of the African fuel market. This gives refineries the possibility to create more value for lower quality fuel stocks or residues from the refinery output and to increase profit margins. The report mentioned that Vitol, Trafigura, operating behind Shell and Puma (an African distributor) are key players.

The Public Eye report showed that part of the African Quality Fuels (AQFs) were blended in Europe, including the ports of Amsterdam and Rotterdam.[26] Around 50% of the imported fuels come from Amsterdam, Rotterdam and Antwerp, the so-called ARA region. Public Eye mentions that Swiss and other Europe-based commodity traders are managing the blending processes.[27] In the process of producing these fuels and exporting these to the African continent several types of companies are involved: crude oil extractors, refineries, laboratories that create a recipe, storage terminals, transporters, traders and distributors. Traders receive an order and assign laboratories to develop a recipe for the specifications with stock available in terminals. The recipe is then handed over to an operator that creates the fuel blend as specified and pumps the various components into the ships. The Dutch O&G sector is involved in this dossier, the blending takes place in the ports of Amsterdam and Rotterdam, blend stocks that are stored in these ports are used to create the end blends and laboratories that test the recipe are situated in the ports. Most of the traders mentioned in the report are part of the Dutch Oil and Gas sector as they have offices in the Netherlands.

In this dossier, we aim to investigate whether and to what extent the OECD Guidelines were followed in activities that lead to the situation of “dirty diesel”. It will elaborate on the role of the Dutch Oil & Gas sector and whether and how the sector has adapted its practices by bringing them more in line with the OECD Guidelines.

4.2.2 Has the Dutch O&G sector identified this as a risk?

It is difficult to assess precisely to what extent the Dutch O&G sector has identified dirty diesel as a risk potentially compromising the OECD Guidelines. Since the World Summit for Sustainable Development in 2002, UNEP and IPIECA have joint forces in the Partnership for Clean Fuels and Vehicles (PCFV). IPIECA is the global oil and gas industry association who concerns itself with social and environmental issues. The partnership addressed pressing issues such as leaded fuels and the sulphur content of fuels. In several parts of the world (e.g. in the countries of the European Union) lead gradually was removed from fuels and sulphur specifications followed. The adverse impact of these components on public health were well known. Companies that are active in the production of the fuels must have been aware of these impacts as IPIECA was involved in mitigative actions.
We have not been able to find information that individual companies in the Dutch O&G sector have communicated about any risks involved in high sulphur fuels, but at the level of IPIECA there is much information available about the mitigative efforts that have been undertaken. These include the sources used in this study

[26] We use in this dossier the generalized term “African Quality Fuels” for fuels that have specifications that are allowed in most African countries. This term is used in trading.

[27] At present there is an on-going study undertaken by ILT (Inspectie Leefomgeving en Transport) on the issue of dirty diesel of which the findings are expected to be shared with the Dutch parliament in the first half of 2018.

4.2.3 What are companies doing to mitigate these risks and to comply with the OECD Guidelines?

IPIECA represents the global oil and gas sector. Through IPIECA and its participation in PCFV, the sector has committed itself to influencing the regulatory (governmental) bodies of the African countries to adjust fuel regulation on AQF's, to reduce the maximum allowed sulphur content. The standards that are set in Europe are used as ambition level.

Individual companies have not shown evidence of taking appropriate steps in mitigating their impact. The companies report that they cannot change the industry themselves without harming their own business profits. The sector states that creating fuels with less harmful impacts on human health requires a considerate investment for e.g. increasing the global desulphurization capacity.

UNEP has indicated that the local desulphurization capacity in Africa is not available. Changes in fuel specifications should therefore be made preferably with the countries themselves, to avoid possible competitive disadvantage between different regions in the world.

4.2.4 What are conclusions in reference to the research questions of compliance to the OECD Guidelines?

Conclusions in relation to the executed due diligence process

In relation to the steps of the due diligence process as depicted in chapter 2, we conclude the following:

1. Integrating responsible business conduct in policy and management systems
   Companies that play a role in the trade, production, transport and distribution of dirty diesels are expected to have a policy in place for due diligence related aspects such as human rights and environmental impacts. We focus on Dutch companies that play a role in this dossier. These companies seem to have policy documents on human rights in place. For the laboratories that develop the recipe for blends, we were not able to confirm due diligence policies are in place.
2. Identifying and assessing impacts
   That sulphur in fuel contributes to air pollution and that high concentrations for sulphur in fuels contribute to the negative impact on health is widely known for decades. The extend of the impact of air pollution on human health is also investigated and reported e.g. by WHO, ICCT and UNEP. The sector and the Dutch O&G companies should have been aware of the issue. We cannot ascertain that individual companies in the Dutch O&G sector have contributed to the impact assessment, but through the partnership for Clean Fuels and Vehicles, the sector at global scale was involved. The partnership for Clean Fuels and Vehicles (PCFV), is a global public-private initiative to promote cleaner fuels and vehicles in developing and transition countries. It brings together 72 organizations, representing developed and developing countries, fuel and vehicle industry, civil society and leading world experts on the matter, with UNEP as supporting secretariat.
3. Ceasing, preventing and mitigating impacts
   In this dossier this refers to reducing the sulphur content of the fuels developed for the African market and the expected improvements of public health (final positive impact). The OECD Guidelines mention that companies should use their leverage in the sector to prevent, cease and mitigate negative impacts. We cannot conclude that individual Dutch companies have contributed to preventing and mitigating impacts. Producing and exporting fuels with high sulphur specifications has not ceased as legislation African countries did not forbid it, and local African governments and companies continued to import high sulphur fuels. At the global level the sector, jointly with UNEP and other parties try to stimulate local governments to adjust fuel specifications, aiming for a global change while safeguarding a level playing field. The sector argues that if e.g. the Dutch government would prohibit companies in the Netherlands to blend/trade/export/transport AQFs, these would be produced elsewhere, not changing the situation for the better.

4. Tracking performance
   This refers to e.g. monitoring if the specifications for sulphur changed, tracking trade, tracing transport of fuel products and assessing the composition of the blends and origin of blending products. There are concerns about the transparency of specific composition of fuel blends and frequent sampling to assure that fuel blends are developed according to the allowed specifications as the paperwork accompanying fuel products can be incomplete and is not always updated when new blends are composed. Currently the sector lacks the proper systems to assure that maximum specifications are always met and is not transparent about inclusion of additives that are not in the legal framework of African countries.
5. Communicating transparently
   The OECD Guidelines state that enterprises are expected to communicate transparently about their due diligence policy and when relevant about the results of the process, e.g. risk assessments, improvement plans, etc. In this dossier this related to transparent communication about the efforts of individual companies and the sector to improve the situation and about the effectiveness of the actions taken; are the actions contributing to improved public health as a consequence of reduced air pollution? Much information is available about the progress of lowering sulphur specifications at global level and at specific country level (in West Africa). Information on the contribution of individual companies in the Dutch O&G sector to these developments is lacking.

Considerations with respect to the non-conformity with the OECD Guidelines
The dirty diesel case implies that fuels with considerable health impacts have been exported to African countries. This was discovered by independent research by Public Eye. The exact specifications of fuels delivered to the African market are not known and the components of these fuels have not been revealed by the companies delivering those fuels. This is not in line with the OECD Guidelines, and a potential violation of Paragraphs IV-2 and IV-3 on human rights, VI-3 on environment and VII-3 on consumer rights.

When companies have limited influence in preventing negative impacts and/or mitigation measures, or when these activities are not deemed realistic in relation to the context that businesses are active in, OECD Guidelines nevertheless expect companies to use their leverage in their business relations or sector wide to stimulate changes for the better. In this study we found that the sector (in the capacity of the IPIECA) is using its leverage to stimulate African governments to lower sulphur specs. However, the effectiveness of these efforts could not be assessed.

Another relevant issue is whether the sector has acted timely to prevent, reduce and mitigate the impact of high-Sulphur fuels on public health. The OECD Guidelines mention that companies are required to act in a timely manner. The negative health effects of sulphur were known, before 2002. It is unclear whether the sector was actively engaged in changing specifications before that or has waited until other stakeholders initiated a development towards lowering fuel standards for African countries. Anno 2018 it is clear that the sector at global level is working towards this change. At local level in Africa, there are challenges in involving local companies and governments that are affected by changes in specifications, e.g. because it requires significant investments, or e.g. because older refineries may have to be closed, resulting in unemployment of the workers. Whether the developments in this dossier can be considered timely or not cannot be concluded based on the OECD Guidelines.

Obstacles for compliance and improvement of conformity to the OECD Guidelines.
- There is in general a lack of transparency to the exact composition of the fuels, the components that are being used in blending and the origins of the blending stocks. That makes it difficult to exactly lay out the responsibilities in this dossier and to enforce regulations on the various parties involved

- For companies to remain competitive, they argue for a level playing field. If individual companies, or companies based in a specific country or region are expected to change their fuel specifications for their exports and in other countries this is not the case, companies may be faced with challenges in terms of competition. Within this research we did not find an objective standard against which such claims can be evaluated.
- Companies that play a role in this dossier are commercial enterprises. In their day-to-day operations decisions always include commercial considerations as they are profit driven. In absence of drivers for change such as legislation and public awareness/pressure, commercial considerations become more prevalent. To lower the specifications of fuels supplied to African countries as might be required in line with due diligence according to the OECD Guidelines, the sector indicates that investments are needed. The sector indicates that adjusting the African standards needs to be accomplished in a level playing field. In addition, the sector indicates that time would be needed for materializing these investments.

Therefore, future efforts to bring the sector's activities more in line with the OECD Guidelines could be enhanced with attention for commercial considerations and the required time needed to increase capacity and technical solutions. As specifications will have to be adjusted country by country, the specific contexts and complexities play an essential role in the pace in which changes are realized. The sector, UNEP and local governments acknowledge that the entire O&G sector should be involved including local governments set the specifications.

4.3 Main findings Methane Emissions Dossier

This section presents the main findings of the dossier on methane emissions. The dossier was investigated through extensive desk research, supplemented with six interviews that were conducted with a wide range of stakeholders in the oil and gas industry. For more detailed information on the dossier, please refer to Annex D.

4.3.1 What is the problem and how is it related to the Dutch oil and gas sector?

Natural gas consists of over 90% methane, which is a very potent greenhouse gas that results in global warming. Over a 100 year period it is a 34 times more powerful greenhouse gas than CO_2 and in a 20 year time scale it is even 86 times more damaging to the climate than CO_2 (IPCC, 2013). Globally, about 16% of greenhouse gasses come from methane emissions. The oil and gas sector is responsible for about 13% of the methane emissions worldwide (IEA, 2017).

Methane emissions from the oil and gas sector most frequently occur in the upstream activities of both oil and gas extraction. The issues surrounding methane emissions are of an international nature, not only because of methane's global warming effect, but also because oil and gas fields can be located in international waters. There are three types of methane emissions: continuous emissions, discontinuous emissions (planned and unplanned) and fugitive emissions. The unplanned discontinuous and fugitive emissions are particularly problematic. They originate from uncontrolled and unforeseen leakage and accidents in oil and gas operations, such as leaking valves and broken pipelines. With as little as 2.7% methane leakage a state-of-the-art gas power plant breaks even in terms of its environmental impact with a state-of-the-art coal power plant. Therefore, methane emissions from the natural gas industry seriously threaten the image of natural gas as a cleaner fuel.

Two sections of the OECD Guidelines are particularly relevant to this dossier, the sections in Chapter II on due diligence and Chapter VI on the environment. The principles of due diligence revolve around taking care to identify potentially damaging impacts of operations (e.g. methane leakage) and taking action to prevent and mitigate actual and potential adverse impacts of these operations. This process should be integrated in business decision-making and risk management systems. The chapter devoted

to the environment has three main pillars. Firstly, it emphasises the importance of monitoring the environmental impact of existing operations, e.g. though the use of a sound environmental management system. Secondly, workers and the broader public should be informed about the potential environmental, health and safety impacts in a timely manner, accompanied with adequate, measureable and verifiable information on e.g. improvements in environmental performance of the company. Lastly, the companies ought to strive for continuous improvement in the environmental performance of the industry.

Concern has been vowed that the disclosure of measurements is currently not fully transparent and that the methods of calculation are outdated and underestimate the true methane emissions. This may also be the case for the Dutch oil and gas sector, where methane emissions are reported to the RIVM. This dossier investigates to what extent this is the case, and whether the Dutch oil and gas sector complies with the OECD Guidelines.

4.3.2 Has the Dutch oil and gas sector identified this as a risk?

Since 2010 the issue of methane emissions has received increasing attention from the Dutch oil and gas companies. Although structural risk assessments were also carried out by the Dutch oil and gas industry prior to 2010, those risk assessments mainly considered methane a safety risk (as a flammable substance). In recent years the structural risk assessments consider methane a climate agent.

4.3.3 What are companies doing to mitigate these risks?

During the interviews we received the impression that the sector is increasingly paying attention to methane emissions and leakages. In many multinationals' annual reports entire sections are now dedicated to methane emissions reduction. A leak detection and repair program (LDAR) is in place at many of the large oil and gas companies (Shell, 2016) (ConocoPhilips, 2016) (BP, 2016) (Chevron, 2016) (ExxonMobil, 2016). Infrared cameras are frequently mentioned as an effective way of identifying these leaks quickly. Some companies have even experimented with the use of drone flyovers and satellite imaging for more effective and lower cost leak detection (ConocoPhilips, 2016). Although these technologies have not yet resulted in a practically applicable commercial solution to date, it is nonetheless promising that frontier technologies are being used to develop innovative solutions.

Measuring these efforts against the OECD principles of due diligence suggest that the sector is indeed taking efforts to mitigate impacts when they have taken place (i.e. repair the leaks), and trying to enhance the way in which this can be detected. Attempts to prevent emissions are also taken, e.g. through replacing high-bleed pneumatic devices with those that have lower emissions (ExxonMobil, 2016). The education of employees to detect and reduce methane emissions is also mentioned as a strategy to mitigate methane emissions (Total, 2016). This partially aligns with the environment chapter of OECD Guidelines, where one of the pillars is informing workers and the broader public about the health, safety and environmental impacts, although Total's policy only applies to workers. Communication and disclosure to the broader public is carried out through annual (sustainability) reports, where the section on methane emissions is usually limited to a paragraph.

Apart from actions that are happening at the company level, there is a development towards a sector wide partnership. The Oil and Gas Methane Partnership (OGMP) was launched in 2014 by the Climate and Clean Air Coalition (CCAC), with key technical partners being the Environmental Defense Fund, the US EPA Natural Gas Star program, the Global Methane Initiative and the World Bank's Global Gas Flaring Reduction Initiative. Companies in the oil and gas sector can join the partnership, current partners are BP, ENGIE E&P, Eni, Pemex, PTT, Repsol, Shell, Southwestern Energy, Statoil, and Total.

These companies have committed themselves to the following obligations for their participating operations:

- A survey of nine core sources that account for most of methane emissions in typical upstream operations (including process leaks and other fugitive sources of emissions). Partner Companies are encouraged to investigate sources beyond this list of "core" emission source categories to include other methane emission source categories. *This is regarded a step forward in compliance with Chapter VI of the OECD Guidelines both by increasing the number of activities that are registered and striving for continuous improvement of the method to ensure that as many emissions as possible are registered.*
- Evaluate cost-effective technology options to address uncontrolled sources. *Whether this leads to compliance with Chapter VI of the OECD Guidelines on striving for continuous improvement of the environmental performance of the company depends on how high the barriers are to determining cost-effectiveness.*
- Report progress on surveys, project evaluations and project implementation in a transparent, credible manner that demonstrates results. *This is regarded a step forward in compliance with Chapter VI of the OECD Guidelines on informing the public on environmental impact of operations.*

Apart from the fact that participation in the OGMP is voluntary, companies can currently also choose which of their operations they want to report on as there is no minimum scale requirement. Furthermore, external verification is voluntary instead of obligatory.

Therefore, although the OGMP is a big step forward in terms of addressing the problem of methane emissions, it will need to sharpen its standards over time to truly be effective across the entire oil and gas sector. Regarding the disclosure of information, the standards will also need to be sharpened in the future. The OECD Guidelines specify that the companies ought to provide the workers and the public with adequate, measureable and verifiable information. As long as external verification is voluntary, rather than mandatory, and companies can choose which operations to report on, this aspect of the OECD Guidelines is not completely fulfilled. Nonetheless, the OGMP has great potential to develop methods to disclose more information on emissions monitoring and emission reduction, provided that it maintains the pressure to act and is able to expand the coverage of the initiative, in particular in the upstream sector.

Overall, it appears that parts of the OECD Guidelines on the environment and due diligence are closely being followed by multinational enterprises, both through individual company action and collective action. However, other parts of the Guidelines are not given as much attention. Disclosure on methane emissions to the public could significantly be enhanced in the future in ways that go beyond national legislation. For the smaller companies in the oil and gas sector, we have reason to believe that methane emissions and the OECD Guidelines are receiving significantly less attention than they are for larger MNEs, largely because those companies are not as visible to the public.

4.3.4 Conclusions: to what extent does the sector comply with the OECD Guidelines

Our dossier revealed the following important conclusions (for more details please see Annex D):

- Most authorities demand that oil and gas companies conduct risk assessments, develop policies to reduce or contain these risks and implement these policies by means of activity plans. The results of these plans need to be monitored and reported to the authorities. This is the case irrespective of geographical location, although the risk assessments, policy development and reporting take place according to the standards of the local authorities, which may differ significantly between locations. Even if these authorities are in countries that support the OECD Guidelines, this does not inherently ensure that all methane emissions are monitored, reduced and reported as required by the OECD Guidelines.

- There are concerns whether the sector is doing everything within their possibilities to reduce methane emissions. This has several reasons:
  The awareness regarding methane as an important climate agent is relatively recent. The oil and gas industry structurally carries out risk assessments of operations.
  - However, before 2010 these risk assessments focussed on the safety risk of methane (as a flammable substance), rather than on methane as a climate agent. This situation is changing but awareness of the environmental impacts of methane has not landed everywhere yet.
  - Comprehensive and verifiable data on environmental impact is not publicly available and are not necessarily required by national/local governments. For example, the Dutch government accepts emission reports that are not verifiable by the public, even for onshore operations. The Guidelines recommend that taking into account concerns about cost, business confidentiality and intellectual property right protection, the public be provided with "adequate, measurable and verifiable (where applicable) and timely information … which could include reporting on progress in improving environmental performance" (p. 42, OECD Guidelines). This clearly suggests that as methane emissions are a part of environmental performance, reporting on methane emissions in a measurable and verifiable manner *should be carried out*. Although methane emissions are reported to the governments, this is *not* done in a measurable and verifiable manner, which appears to contradict with the OECD Guidelines.
  - Studies from both the ICF and the IEA show that reductions in methane emissions of 40-50% are still possible in the oil and gas industry at no net cost (ICF, 2015) (IEA, 2017). Since some of the parties that are active in the Dutch oil and gas industry are global market leaders, it is highly unlikely that none of this potential applies to their operations. If reductions in methane emissions can still be achieved at no net cost, then this is an indication that the best available technologies are not currently used.
  - The current bottom up methods for monitoring are based on standard emission factors. These are often insufficient, especially in locations that are difficult to access. For more information please refer to Annex D.
- The OGMP is a good first step to initiate an international partnership. However, the OGMP is still developing and will have to prove that it provides the right vehicle to spread these new industry standards. If that materializes it may be a way to strongly improve compliance with the OECD Guidelines, as it provides evidence that the sector is using its leverage and going beyond national regulation. It should be taken into account that participation to the OGMP is voluntary and that not all companies active in the Dutch extractive sector are participating at present. Without further development of the participation and scope of OGMP or more stringent national regulations the compliance of the oil and gas industry to the OECD Guidelines is not likely to significantly improve. This implies that:
  - overall transparency regarding environmental impact remains insufficient to verify the environmental impact of operations in an objective manner;
  - registration of environmental impact may vary strongly depending on the strength of institutions in a certain region;
  - reduction of emissions per operations may vary with the business opportunity of preventing the emissions, the strength of institutions in a certain region and the population density in an area.

4.4 Main findings NCP Dossiers

4.4.1 What is the issue and how does the Dutch O&G sector relate to it?

The Dutch National Contact Point (NCP) has dealt with several cases within the O&G sector since its existence. In this dossier we will give an overview of all cases related to the O&G sector which involved the Dutch NCP or Dutch O&G Multinationals in order to evaluate the extent to which these cases have indicated violations of the OECD Guidelines and in which the sector has learned from these cases. In this dossier we will provide a summary of selected cases, give an overview of the OECD Guidelines topics that were addressed, the background and the outcomes.

This dossier involves several cases about various issues: disclosure, human rights, environmental impact, health impacts.

Reviewing the cases it can be concluded there are three key players in the cases in the Dutch O&G sector:

- Royal Dutch Shell, as they have been involved in all the selected cases;
- Friends of the Earth, as they have acted as complainants in four cases, and have actively reported on most other cases;
- Dutch NCP, as they have been involved in all case, even though they were not required to always do so as the 'host country' had their own NCP.

Though insightful, the cases do not represent the overall Dutch Oil and Gas sector and its behavior regarding compliance with the OECD Guidelines worldwide. However, a few considerations can be made based on careful review of the cases, data research and interviews.

4.4.2 To what extent has the Dutch O&G sector identified this as a risk?

In cases where mediation took place, the issues that are addressed in the NCP cases were recognized by the companies. We could not retrieve information on whether these companies have identified these risks themselves, or as a result of filing the case at the NCP. In some cases the companies did not recognize the complaint, or decided not to cooperate with the case they were involved in parallel legal proceedings.

Risks that are addressed in these cases:

1. Risk on health impact as a consequence of e.g. oil spills, breaking pipelines and dumping waste.
2. Risk on environment as a consequence of presence of production facilities, oil spills and other activities.

Companies were accused of providing misleading or insufficient communication of impact assessments, keeping local population uninformed about any adverse impacts.

4.4.3 What are companies doing to mitigate these risks and to comply with the OECD Guidelines?

The cases refer to health & safety and environmental impacts and lack of transparent communication about due diligence activities and monitoring outcomes.

Mitigative actions were not always finalized during the process of an NCP case. In some cases these actions were realized after the case was processed, e.g. as a consequence of legal proceedings, or continuation of communications between the company and the complainant.

In the cases that were part of the present study and that were not concluded mitigative actions were not related to the NCP case itself. In two cases this was related to the outcome of legal proceedings and the company paid for compensation of the health and environmental impacts. Also the production location of one of the companies was closed.

Cases that were concluded show that parallel or subsequent legal procedures in some cases lead to mitigative actions, one company should be relocated as court decisions ruled. Involved parties mentioned that the NCP case improved the outcomes of the court case. In another case, despite the NCP indicating that the initiation of the project was not according to what OECD Guidelines expect, the company did not agree with the complaint, indicating that procedures have been improved far before the case was filed. It is not clear to us whether mitigative actions were taken.

4.4.4 What are conclusions in reference to the research questions of compliance to the OECD Guidelines?

The Chapters in the OECD Guidelines referred to in most cases mainly dealt with Human rights IV, Environment IV, and in some cases Disclosure. There are two main trends: Cases with a long history where the activities had a long impact on the communities and the environment (5 cases).
On the other hand, there are new upstream O&G activities (exploration), that mainly focus on Human rights and Environmental impact (3 cases).

In none of the cases the NCP concluded explicitly that the O&G sector was not compliant in line with OECD Guidelines. However, in some cases the mediation role of the NCP (and subsequent media attention) led to an improvement of the situation (E.g. case in Ireland and the Philippines).
The main company that plays a role in the cases is perceived by most stakeholders as 'open to discussion'. Also, the company has a clear company policy in place for the topics related to the OECD Guidelines.

Historical cases

Six of the cases have a strong historical background and deal with historical environmental and human health violations (the cases in Brazil, Argentina, Philippines, three cases in Nigeria). Local legal proceedings, ownership and liability, as well as compliance with local regulations at the time of the main operational impact make these cases more complicated. One can question how the OECD Guidelines can deal with historical cases and add value. The OECD Guidelines describe that companies are expected to apply due diligence in their supply chain (OECD, 2011)). The OECD Guidelines concern adverse impacts that are either caused or contributed to by the enterprise, or are directly linked to their operations, products or services by a business relationship. This means that companies are not only expected to avoid causing or contributing to harm, but that they are also expected to use their leverage in the value chain. This cannot be achieved when the sites are no longer (fully) operated by the company the case is against.

Upstream O&G

The cases concerning Russia and Ireland targeted consortiums in the upstream (gas exploration), an important topic several years ago when the natural gas market was booming. In the most recent case of Nigeria, which status is 'filed', there are no other Dutch companies in the Oil and Gas sector, especially upstream, that have a history and range as large Shell, covering Upstream, midstream and downstream worldwide for over 100 years. Upstream (exploration) has always been controversial, specifically regarding environmental issues in 'untouched' areas. Exploration contracts have a very strong global political pressure that can go beyond the scope and sphere of impact of one country or company. This makes this specific O&G sector harder to target with the OECD Guidelines, which also might explain that one of the cases was rejected, and another was concluded with a statement that mediation appeared impossible.

NGO's and large multinationals

During interviews, it was mentioned that NGO's tend to target in general the largest companies as they have the biggest impact. Royal Dutch Shell is one of the oldest and largest O&G multinational in the world. Most cases were already targeted by FOE in their earlier report 'Lessons not learned' (FOE, 2005) targeting Shell including all but one (Argentina) of the relevant OECD cases (USA, Brazil, Russia, Philippines, Ireland and Nigeria) before filing a complaint at the relevant NCP's. From 2006, FOE has

used the OECD framework trying to force Shell to act on specific cases (4 cases as complainant). However, during interviews it was indicated that due to the fact that the NCP's did not have the tools to enact considerable consequences on the companies, NGO's are less optimistic to use to OECD and the NCP's to file complaints in the future especially when mediation seems unlikely to solve the problem. On the other hand, two new cases have been filed in Nigeria involving the Dutch NCP and Dutch O&G sector.

4.5 Generalized findings

Above we have summarized and interpreted the findings from three dossiers. The full dossiers can be found in the Annexes C-E.

Although each dossier is unique in terms of its complexity, stakeholders involved and related OECD Guidelines we have identified some common considerations:

- The dossiers evidence that we cannot assure that the oil and gas sector fully complies with the OECD Guidelines. There seems to be some challenges, both upstream (methane and most NCP cases) as downstream (dirty diesel) where we observe that "best practices", as referred to in the OECD Guidelines, have not consequently been applied. We also observe a time-lapse of several years between observation of the problem and taking appropriate steps.
- On the other hand, the dossier NCP cases evidences that in none of the fourteen cases investigated there was explicit recognition of breaches of the OECD Guidelines. Answers to the question if the Dutch oil and gas sector complies with the OECD Guidelines probably cannot be answered with a straightforward "yes" or "no".
- The dossiers show that especially larger companies do organize themselves in international organisations addressing specific shortcomings in the execution of Responsible Business Conduct. This was the case in both the dirty diesel dossier as the methane emissions dossier where companies organized themselves in international bodies to increase their leverage. Such initiatives are in line with what can be expected from compliance with the OECD Guidelines and can assure that the sector in the future adheres better to the OECD Guidelines than has happened in the past. However, these initiatives do not apply to all relevant companies in the Dutch oil and gas sector as many (especially smaller) companies are not part of these international frameworks. In addition, the effectiveness yet cannot be fully assessed as these initiatives often have to be labelled as "work in progress".
- In applying due diligence to the problems involved, the dossiers show that especially disclosure of information and policies is a point of attention. Information was difficult to obtain and the considerations and policies in place in the sector are often not very transparent, or lack external verification. Transparency is an issue in all of the dossiers but particularly in the dirty diesel dossier where information on fuel specs that are delivered to African countries seem to be absent and not given to the sellers of these fuels in Africa.
- The NCP-complaint mechanism supports better stakeholder involvement and can act as an opportunity for mediation to prevent legal cases. However, as the legal route still stays open, companies are somewhat reluctant to disclose all relevant information. This finding can be generalized to the other dossiers as well.

5 Conclusions and observations

5.1 Conclusions

This study attempted to answer the following questions:

1. Are the activities of the Dutch oil and gas sector conducted in accordance with the OECD Guidelines for multinational enterprises?
2. If non-conformities can be identified, are companies working towards improved conformance to the OECD Guidelines and what are the adaptive activities?

The Dutch O&G sector has been defined as all companies with a representation (e.g. office or installation) on Dutch territory that conduct activities related to the exploration, extraction, refinement and adaptation, sale, trade and transport of (fossil fuel based) oil and natural gas products.

Overall, we conclude that the sector employs many activities that can be recognized as efforts to comply with the main topics covered by the OECD Guidelines. For most of these activities, the OECD Guidelines are probably not the leading framework. The question is to what extent the quantity and quality of these efforts are in line with the OECD Guidelines.

Firstly, regarding the quantity, our survey suggests that about 54% of the respondents to our questionnaire report that they have CSR practices in place for human rights, 75% for corruption and even higher for environment (78%) and employment (91%). However, only 2/3 of these policies seem to be substantiated with concrete measures and procedures. External auditing or disclosure of such policies is even less common. Our research indicates that on average 30-40% of the respondents active in the oil and gas sector disclose information on their CSR policies, for example through a sustainability report. A similar percentage of companies was found to have a certified environmental management system in place with valid certification. .

Analysis of the questionnaire, dossiers and independent sources of information furthermore indicate that the conformity to the OECD Guidelines becomes less towards the operational steps in the due diligence framework: tracking performance, communicating transparently and enabling remediation. Moreover, in the 'trading' and 'distribution to consumers' subsectors, our study suggests that CSR policies are less frequently implemented. In addition, CSR practices seem to be less common in smaller companies than in larger companies.

Secondly, on the effectiveness of the (CSR) policies in place, the study of the dossiers demonstrates challenges in implementing the corporate principles to concrete, real-life situations when companies operate in competing markets and short-term financial gains may dominate long term societal and environmental benefits. We also identified a tension between the individual responsibility of a company to adhere to the OECD Guidelines and effectively organizing (joint) leverage to change the existing situation. The dirty diesel and methane emissions dossiers showed non-compliance to the OECD Guidelines in certain aspects but also efforts of larger companies to organize themselves in international initiatives to address specific shortcomings in their individual execution of CSR principles. These initiatives can be considered a positive step towards better compliance with the OECD Guidelines in the future by organizing leverage. However, such initiatives do not dismiss individual companies from taking their responsibility in improving transparency or taking individual action to cease negative impacts. In both dossiers, we witnessed a lack of transparency from individual companies to report to the public on company-specific activities that relate to these dossiers. Moreover, these international initiatives have started only recently and we have not been able to be able to estimate their effectiveness and to what extent they have resulted in new standards in business operations that go beyond national legislation.

5.2 Considerations

To these conclusions, the following considerations apply:

- Transparent communication about the due diligence approach, progress and M&E results are a recurring issue in this research. We have seen that e.g. NCP cases also address the availability and transparency of information about due diligence results. In relation to companies' capacity and commercial consideration there is a challenge in providing full disclosure. Potential friction between profit maximising strategies and CSR is not reported by companies, as fears of potential claims dominate fear of disclosure. In this respect one should also consider that if we compare the GRI reporting of multinationals active in the oil and gas sector, it appears that companies with headquarters in the Netherlands have more frequent and more up-to-date GRI reporting in place than oil and gas companies from other European or North-American countries.
- We have noticed that there is a recurring tension between what companies are expected to do in terms of CSR (e.g. in voluntary standards) and which CSR activities are essential for business continuity. In several interviews it was indicated that the most effective drivers for change have a binding character, e.g. integrating CSR requirements in (local) legislation and standards. This is particularly true in areas where expected CSR efforts are challenging business profits in the short run and companies are not able to understand or believe that CSR may enhance their continuity and business profits in the long run as evidenced by academic research (see e.g. Orlitzky, et al., 2003).
- The Dutch oil and gas sector constitutes many multinational companies that operate in a wide variety of contexts, stand-alone or as part of a collaboration, and in many different corporate structures. The vast majority of the companies active in the sector in the Netherlands have their headquarters in other countries and this may limit their potential to influence improvement of CSR policies, as such policies are often made at headquarters.
- Due diligence based on the OECD Guidelines should be regarded as a process rather than a fixed standard. Due Diligence identifies several steps that represent a continuous process that aims to identify risks, prevent, reduce and mitigate impacts and to further increase transparency. This implies that it is important to investigate indicators for the process itself in assessing conformity. The outcomes of the process are also relevant, but are influenced by many other factors, many of which lie outside the sphere of influence of the company.

5.3 Observations

This study is not aiming at recommending a specific and most suitable approach to stimulate the oil and gas sector towards further compliance with the OECD Guidelines. Nevertheless, we present several observations that we consider relevant to further increase the conformity of the Dutch Oil & Gas sector to the OECD Guidelines.

International character of the sector is relevant

The Netherlands is a very important country for the international oil and gas industry. The availability of gas fields, major ports and large industrial complexes for refineries and petrochemicals make the Netherlands an attractive country for the international oil and gas industry. It is therefore not surprising that many of the international oil and gas multinationals are present in the Netherlands and employ trading activities, production activities or both here. This poses a challenge to increasing conformity with the OECD Guidelines for the Netherlands, because company policies are often made in locations where companies are headquartered.

Joint forces

As with many other initiatives to drive CSR further, adherence to the OECD Guidelines benefits from joint efforts between public and private actors and between companies and NGOs. The oil & gas sector is by definition a global sector that follows local, regional and international standards and legislative frameworks related to CSR. Hence, both governmental organizations and the sector itself may need to join forces in developing a realistic approach and that would suit the specific dynamics of the sector.

Sub-sector specific approach

A diversified approach on the level of sub-sectors, addressing sub-sector specific challenges, can be more efficient than a broad “oil and gas” sector approach. Examples of specific differences between the subsectors are the complexities at the level of mergers, acquisitions and consortiums that mark the global upstream market. For example, the national critical infrastructure upstream and midstream is very much embedded to the Dutch economy (e.g. NAM). Another specific subsector is the transport sector by road, which has a broader European reach.

Topic specific approach

The general framework of due diligence is all encompassing. However, for efficiency reasons, a joint policy solution could target one or more specific topics as a starting point. This can relate to specific themes such as corruption, environment or human rights. Each topic or theme is complex in itself and involves different stakeholders and highly specialized knowledge and expertise. Approaches that target too many topics or themes may lack the concreteness and depth to be effective.

Clear definition of the scope of the approach

A joint effort may benefit from a clear definition of the supply chain involved and identification of methods and approaches that make impacts throughout the value chain transparent. Key in this is that it should be clear which parties are being addressed by the efforts. This relates to previous considerations, where differences in subsectors were acknowledged (e.g., some have a strong national focus, whereas others have a strong global focus). Companies in the sector operate in quite different settings and may have various forms of collaboration such as joint ventures, consortiums or international sectoral agreements through which involved parties cover different nationalities.
For operations on Dutch territory commitment to the scope is clear, however, a clear definition of the (value chain) scope is essential when a Dutch O&G sector-wide covenant includes operations abroad.

The OECD Guidelines set expectations for responsible business conduct and due diligence beyond compliance to national legislation. The Dutch government expects Dutch companies to adhere to the OECD Guidelines. The guidelines can help companies in integrating CSR into the heart of the company and to develop a solid due diligence approach. However, to drive change, measures resulting in new regulation could be considered, especially since some sector representatives and experts have indicated that a binding framework could support a level playing field. Governments could seize this opportunity by making new regulation, e.g. by the inclusion of elements of the OECD Guidelines in governmental purchases, improvement in emissions monitoring, regulating possibilities to blend fuels more strictly, etc.

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A Overview of sector and companies

A.1 Companies addressed in the survey and/or interviews

Table 21 lists the companies that have been part of the survey and/or interviews.

Table 21 - Companies addressed in this research belonging to the oil and gas sector

Company name	Industry association	Location*	NACE
Altius Petroleum International B.V.	-	Amsterdam	4671
Auto Maas Tankstations B.V.	-	Geldrop	4730
Baker Hughes B.V.	-	Oudkarspel	610
Biopetrol Rotterdam B.V.	-	Botlek Rotterdam	1920
Bluewater		Hoofddorp	910
Botlek Tank Terminal B.V.	Votob	Rotterdam Botlek	52101
Bp Europa Se	VNPI	Capelle aan den IJssel	4671
Brb International B.V.	-	Ittervoort	4671
Calpam B.V.	-	Gorinchem	4671
Cebo-International B.V.	-	IJmuiden	910
Centrica Production Nederland B.V.	Nogepa	Hoofddorp	910
Dana Petroleum Netherlands B.V.	Nogepa	Den Haag	610
Dcc Energy Nederland B.V.	-	Putten	4671
De Haan Minerale Oliën B.V.	-	Oosterhout Nb	4671
Dyas Bv	Nogepa	Utrecht	610
Ebn B.V.	-	Utrecht	1920
Ellis Enterprises B.V.	-	Dordrecht	1920
Engie E&P Nederland Bv	Nogepa	Zoetermeer	610
Eni Algeria Production B.V.	-	Amsterdam	910
Eni G&P Trading B.V.	-	Amsterdam	910
Enviem Retail Holding B.V.	-	Harderwijk	4671
Esso Nederland B.V.	VNPI	Breda	1920
Euro Tank Terminal Rotterdam B.V.	Votob	Europoort Rotterdam	52101
Eurol B.V.	-	Nijverdal	1920
Eurotank Amsterdam B.V.	Votob	Amsterdam	52101
Expro Worldwide B.V.	-	Den Helder	910
Gasterra B.V.	-	Groningen	610
Gasunie	-	Groningen	3512
Gate Terminal B.V.	-	Maasvlakte Rotterdam	4612
Gazprom Ep International Services B.V.	-	Amsterdam	910
Geodynamics B.V.	-	Amsterdam	910
Gp Groot Brandstoffen En Energie B.V.	-	Heiloo	4671
Gunvor Petroleum Rotterdam	VNPI	n.a.	1920
Hes International B.V.	-	n.a.	52101
Ieoc Production B.V.	-	Amsterdam	910
Impala Terminals Group B.V.	-	Schiphol	4671
Koole Terminals	Votob	n.a.	52101
Kuwait Petroleum (Nederland) B.V.	VNPI	's-Gravenhage	4671
Lbc Rotterdam B.V.	Votob	Botlek Rotterdam	1920
Lukoil International Services B.V.	-	Amsterdam	4671

Company name	Industry association	Location*	NACE
Lundin Malaysia B.V.	-	's-Gravenhage	1920
M Restart B.V.	-	Rotterdam	910
Mellitah Oil & Gas B.V.	-	Amsterdam	5020
N. Van Staveren B.V.	-	Emmeloord	4671
N.V. Rotterdam-Rijn Pijpleiding Maatschappij	-	Rotterdam	4950
Nederlandse Aardolie Maatschappij B.V.	Nogepa	Assen	610
Neste Netherlands B.V.	-	Maasvlakte Rotterdam	910
Nrgvalue Tankstations Nederland B.V.	-	Rotterdam	4730
Odfjell Terminals (Rotterdam) B.V.	Votob	Botlek Rotterdam	5020
Offshore Drilling Services (Netherlands) B.V.	-	Amsterdam	910
Oiltanking Amsterdam B.V.	Votob	Amsterdam	52101
Oiltanking Terneuzen B.V.	Votob	Hoek	52101
Oranje Nassau Energie Bv	Nogepa	Amsterdam	610
Petrogas E&P Netherlands B.V.	-	Rijswijk Zh	910
Petronas Carigali Iraq Holding B.V.	-	Capelle aan den IJssel	1920
Primagaz Nederland B.V.	-	Deventer	4671
Royal Vopak	Votob	Rotterdam	910
Rubis Terminal B.V.	Votob	Rotterdam	52101
Saipem Contracting Netherlands B.V.	-	Amsterdam	910
Schenk-Papendrecht B.V.	-	Papendrecht	910
Schouten Olie B.V.	-	Alphen aan den Rijn	4671
Shell Nederland B.V.	VNPI	's-Gravenhage	620
Sonneborn Refined Products B.V.	-	Amsterdam	4671
Sterling Resources Netherlands Bv	Nogepa	Den Haag	610
Tamoil Beheer B.V.	VNPI	Ridderkerk	4671
Taqa Energy Bv	Nogepa	Alkmaar	610
Total (Btc) B.V.	Nogepa	's-Gravenhage	910
Trafigura Beheer B.V.	-	Schiphol	4671
Tulip Oil Netherlands Bv	Nogepa	Den Haag	610
Van Kessel Olie B.V.	-	Milheeze	4671
Varo Energy Inland Bunkerservice B.V.	VNPI	Rotterdam	5040
Vermillion Energy Netherlands Bv	Nogepa	Harlingen	610
Vesta Terminals B.V.	-	Utrecht	52101
Vissers Retail Zw B.V.	-	Horst	4671
Vitol E&P B.V.	-	Rotterdam	910
Vollenhoven Olie Groep B.V.	-	Tilburg	4671
Wijnhoff & Van Gulpen & Larsen B.V.	-	Druten	5040
Wintershall Noordzee B.V.	Nogepa	Rijswijk	910
Wintershall Petroleum (E & P) B.V.	Nogepa	Rijswijk	910
Zeeland Refinery N.V.	VNPI	Nieuwdorp	1920
Zenith Energy	Votob	Amsterdam	52101

* We contacted offices both through a letter and through e-mail. If n/a is indicated, only e-mail addresses were used.

A.2 Impacts of the sector in the Netherlands

A.2.1 Economic and social impacts

The oil and gas sector is an important sector to the Dutch economy. In the following subsections we will discuss the sector's importance with respect to employment, turnover and trade. It is important to note the differing level of detail for the sectors, some tables will have very detailed NACE codes (4 or 5 digits), whereas others are more broadly defined (2-digit NACE) as a greater level of detail was not available. For tables including 2-digit NACE codes it is important to keep in mind that these figures may also incorporate activities that are not directly included in the definition of the oil- and gas sector as outlined in Section 2.1. Unfortunately, more detailed figures are currently unavailable.

Table 22 illustrates some key statistics for the Netherlands as a whole for the time period considered. These figures will be used in combination with the figures in the tables in the next sections to illustrate the importance of the oil and gas sector in the Netherlands.

In the next paragraphs we elaborate on the sector's importance in terms of employment, turnover and trade in more detail.

Table 22 - Total employment and GDP figures for the Netherlands

	2009	2010	2011	2012	2013	2014	2015
Employed labour force (x 1,000)	8,361	8,278	8,280	8,330	8,266	8,214	8,294
GDP (x mln €) [28]	622,777	631,512	642,018	635,232	634,023	643,024	657,561
Exports of goods and services (x mln €) [29]	390,004	454,398	497,347	528,623	535,320	547,415	570,178
Imports of goods and services (x mln €) [30]	344,748	401,585	442,443	466,677	465,502	475,530	498,043
Average annual crude oil price ($/barrel)	60.86	77.38	107.46	109.45	105.87	96.29	49.49

Source: CBS (Approaches of domestic product (GDP); National Accounts), CBS Arbeidsvolume en werkzame personen, Statista (Average annual OPEC crude oil price), Eurostat (Goods & services, imports and exports).

Employment

CBS generally only provides figures for the number of jobs on the two-digit NACE-code, and for few sectors on the four- or five-digit NACE-code level. Table 23 shows the information available on the lowest available digit level for the time period 2009-2015. It is important to note that the figures for 2015 of the refining of petroleum sector (NACE 19201) aren't available.

In general, we can see that the employment in the oil and gas sector remained relatively constant between 2009 and 2015, although this is not the case for the petrol stations, the wholesale of mineral oils and the refining of petroleum (NACE 273, 4671 and 19201). For two of the aforementioned sectors (wholesale of mineral oils and petrol stations) we observe an increase in employment up until 2013/2014, after which employment levels drop to 2009 levels or even lower. This drop may in some ways be explained due to the falling oil prices that we observe in that same period (see Table 22). These lower oil prices have likely put a downward pressure on profits in the sector, which may have led to increased redundancies. A second factor which may have influenced employment figures over this period is an increased level of automation. This may be especially relevant for employment at petrol stations, which are increasingly becoming unmanned, and the refining of petroleum.

[28] GDP is expressed in 2010 prices.

[29] Exports are expressed in current prices.

[30] Imports are expressed in current prices.

Combining Table 22 and Table 23 shows us that 0.5% of Dutch employment was directly found in the oil- and gas sector in 2015 . In 2009 this was 0.6% of Dutch employment, showing that the percentage of direct employment in oil and gas has decreased slightly over time. This table only depicts direct employment. We have not investigated the number of jobs that indirectly are involved with the oil and gas sector, e.g. by selling machinery and equipment that is used in the oil and gas sector.

Table 23 - Number of jobs (in thousands of employees) per sector

Year	06 – Extraction of crude petroleum and gas	09 – Mining support activities	19201 – Refining of petroleum	4671 – Wholesale of mineral oils	473 – Petrol stations	521 – Warehousing and storage
2009	2.9	2.9	4.8	6.0	14.2	16.5
2010	2.9	2.9	4.9	6.7	13.5	14.5
2011	3.1	3.6	4.9	6.5	14.6	14.6
2012	3.3	4.0	4.9	6.7	14.7	14.1
2013	3.4	5.3	4.8	6.6	14.7	15.1
2014	3.7	5.4	4.6	6.6	14.7	15.8
2015	3.7	5.3	.	6.6	13.2	16.4

Source: CBS (Trade and industry; employment and finance per sector SIC 2008).

Turnover

Table 24 uses data from CBS to illustrate the net turnover and total operating returns of a number of activities in the oil and gas sector between 2009 and 2015. It shows that most, but not all, sectors have experienced an increase in net turnover between 2009 and 2015. More specifically, only the part of the sector concerning the extraction of petroleum and natural gas did not increase their turnover between 2009 and 2015. There we observe an initial growth up to 2013, followed by a sharp decrease in 2014 and 2015. In general, the oil and gas sector as a whole managed to increase their net turnover by 12.5% between 2009 and 2015.

As for the operating returns, we can see that all sectors, apart from the extraction of crude petroleum and gas (NACE 06), have increased their total operating returns between 2009 and 2015. For the sector responsible for the extraction of crude petroleum and gas operating returns and net turnover increased each year up until 2013. Both operating returns and net turnover dropped in 2014 and 2015. This is likely the result of announcements by the Dutch Ministry of Economic Affairs in 2014 and 2015 which limited the amount of gas which could be extracted from Dutch gas fields and falling oil prices over that same period (see Table 22). Correspondingly, turnover and operating returns fell for each of these years. All other sectors experienced growth in net turnover and total operating returns over the same period.

Table 24 - Net turnover & total operating returns (mln €) related to the oil and gas sector in the Netherlands

	Year	06 – Extraction of crude petroleum and gas	09 – Mining support activities	19201 – Refining of petroleum	4671 – Wholesale of mineral oils	473 – Petrol stations	521 – Warehousing and storage
Net turnover	2009	34,602	2,178	29,813	44,741	7,087	3,871
	2010	34,829	2,369	36,841	65,805	8,141	3,528
	2011	38,608	2,493	48,547	82,006	8,987	3,677
	2012	44,313	2,849	56,297	85,062	8,780	3,769
	2013	45,799	3,487	51,945	74,081	8,977	4,004
	2014	36,242	3,866	50,258	62,706	8,609	4,419
	2015	26,589	4,849	.	45,231	8,803	4,214
Total operating returns	2009	35,027	2,192	30,063	44,829	7,106	3,994
	2010	35,240	2,374	37,180	65,905	8,154	3,556
	2011	39,326	2,510	48,734	82,125	8,999	3,701
	2012	45,140	2,869	56,427	85,150	8,796	3,874
	2013	46,586	3,503	52,040	74,184	8,984	4,135
	2014	36,657	3,876	49,602	63,250	8,624	4,545
	2015	26,637	4,870	.	45,404	8,810	4,260

Source: CBS (Trade and industry; employment and finance per sector SIC 2008).

Trade

Table 25 uses data from Eurostat's COMEXT database to illustrate the trade volumes and corresponding financial value of (parts of) the oil and gas sector in the Netherlands in 2009 and 2016. Comparing the values from Table 25 to those in Table 22 shows us that the oil and gas sector is very important to the Dutch imports and exports, although its importance has fallen over time. In 2009, imports in the oil and gas sector comprised 12% of the total value of Dutch imports, and exports comprised 8% of Dutch exports. In 2016 the oil and gas imports are now worth 10% of the total value of all imports in the Netherlands, whereas the oil and gas exports comprise 7% of total exports.

Table 25 also clearly shows that the amount of crude petroleum imported has increased between 2009 and 2016. Its value has also increased, although not proportional to the increase in quantity. This can be explained by the oil price movements. The export of crude petroleum has fallen, both in quantity and in value. This echoes earlier findings showing employment in the crude petroleum industry has fallen over the same period. The table suggests that there were no imports or exports of natural gas in 2009 and therefore the Netherlands was entirely self-reliant, using only gas that was extracted from its own gas fields in e.g. Groningen. However, figures from Statistics Netherlands (CBS) seem to suggest otherwise. They suggest that we imported around 24 million m^3, and exported about 53 million m^3 in 2009 (CBS, 2017). In 2016, the COMEXT data is more aligned with figures from Statistics Netherlands, although the picture has changed quite a bit, with the Netherlands now having become a gas-importing country. This can in part be explained due to the announcements made by the Ministry of Economic Affairs in 2014 and 2015 which reduced the amount of gas which could be won from the gas fields in Groningen. Coupled with an increasing demand for gas, this led to the switch to a gas-importing country. As for the other two parts of the sector (refined petroleum products and the distribution of manufactured gas through mains), they both experienced increases in quantity and value of both imports and exports between 2009 and 2016. However, for refined petroleum products, the increase in the value of imports was proportionally higher (57%) than the increase in the value of exports (43%).

Table 25 - Import/Export of oil and gas sector in the Netherlands (2016)

	2009				2016			
	Import		Export		Import		Export	
	Quantity (kton)	Value (million €)	Quantity (kton)	Value (million €)	Quantity (kton)	Value (million €)	Quantity (kton)	Value (million €)
0610 - Crude petroleum	82,105.83	26,317.55	24,599.09	7,846.98	93,307.50	26,482.10	22,294.50	6,330.15
0620 - Natural gas, liquefied or in gaseous state	0	0	0	0	924.34	201.60	0.00	0.00
1920 - Refined petroleum products	44,683.55	15,312.35	68,158.48	24,650.42	76,216.79	24,093.12	96,962.33	35,185.24
352 - Manufactured gas; distribution services of gaseous fuels through mains	0.11	0.06	0.00	0.01	5.97	0.45	0.04	0.02

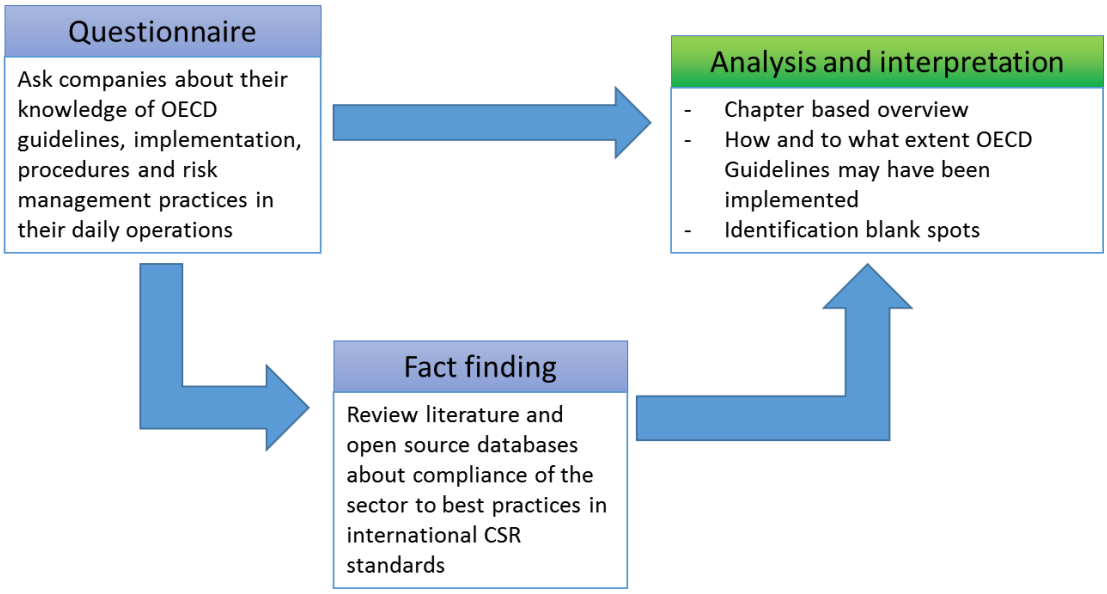
Source: COMEXT (EU trade by CPA_2008).

B Questionnaire design

B.1 Methodology used in Chapter 3

The methodology used in Chapter 3 in this report can be depicted by Figure 7.

Figure 7 - Overview of the methods used in Chapter 3



The analysis in Chapter 3, thus contains three parts. First, a questionnaire has been set up and distributed to the companies active in the Dutch oil and gas sector. This questionnaire contained over 90 questions on the application of the OECD Guidelines by the companies. Second, the results from this questionnaire are subsequently being compared with the existing literature and the open source databases that have been set up as part of the dissemination and promotion of CSR practices. Here we also aim to compare how Dutch companies active in the oil and gas sector score against foreign companies. We will use the international literature and the open source databases to investigate if the picture emerging from the questionnaire is correct. Third, both the questionnaire and the fact finding stage will lead to interpretation and some tentative conclusions about the application of the OECD Guidelines in the Dutch oil and gas sector. This preliminary overview will then feed into the case studies that are part of Chapter 4.

Hereafter we will provide technical detail about the questionnaire.

B.2 Questionnaire design and response

Content

An electronic questionnaire was being set up. The questionnaire consisted of 80 questions in Dutch. Next to some generalized questions about the size and business entity of the companies, specific questions were being asked on each of the chapters in the OECD Guidelines on Multinational Enterprises. Each chapter in the OECD Guidelines was being addressed by at least three questions. More precise questions were being asked on the four key themes: human rights, employment and industrial relations; environment; and combating bribery, bribe solicitation and extortion. We asked the companies on these if there was an explicit policy in place on these issues, what type of activities were being covered, if this policy was verified and if this policy was publicly available for stakeholders

Distribution

We used the NACE sector classification introduced in Chapter 2 to define the oil and gas sector.
We used the Amadeus[31] database to generate a list of companies in the oil & gas sector.
We completed this company list by adding members of industry associations (NOGEPA, VNPI, VOTOB) that were not in Amadeus and by suggestions from individual experts. From this longlist we excluded companies that had both a present annual turnover of less than € 20 million and every year since 2012 less than 50 employees. This resulted in a shortlist of 94 companies.[32]

These 94 companies were invited by email, by a physical letter or both, depending on the availability of contact details. If names were available, the questionnaires were send to directors and CSR managers of the respective companies. Companies were responsible to fill out the questionnaire. The companies were asked to fill out the online survey, using a personalized link. The survey was open from 26 June until 14 September. To increase response industry associations were asked to ask their members to fill out the survey. All companies that did not respond yet received a reminder by mail or email in July. Some companies were called by CE Delft and in August MinBuZa sent a reminder to 20 companies.

During the survey we discovered that the list of 94 companies included a few names that should not be on the list. In total 13 companies were removed from the list, this finally resulted in a list of 81 companies. Reasons to remove the companies were the following:
- company was subsidiary of another company that was already on the list (8 x);
- company proved that they were not part of the oil and gas sector and erroneously included in the database (3 x);
- companies proved that they were too small and fell under the threshold (2 x).

The survey was distributed in Dutch. Some companies indicated that the persons responsible for CSR aspects were non-Dutch speaking, or that headquarters had to be consulted to fill in parts of the questionnaires. It was decided not to translate the survey as this would take too much time and would delay the project further. Another reason is that RBC agreements are being written in Dutch. According to the NCP, companies operating in the Netherlands should therefore be able to

[31] Amadeus is a database of comparable financial and business information on Europe's largest 510,000 public and private companies by total assets. Amadeus is published by Bureau van Dijk/Moody's Analytics.

[32] This list may have been longer. Although the list of companies has been scrutinized intensively internally and externally, it appeared during the course of this research that a few companies were missing on this list. We have decided to approach some of these companies separately during the interview phase for the case studies. They are thus no part of the survey, but their experiences are included in other parts of this research.

understand guidelines in Dutch and should be able to fill out a survey in Dutch. Many companies proved in the end successful in finding a workaround. One company was not capable of doing this in time. This company did therefore not complete the survey (although parts of the survey was filled in).

Response

Table 26 summarizes the response rate. Almost 39% of the companies completed the survey. The average completion time was 56 minutes. Nine companies (representing 11% of our sample). Another 11% partially completed the survey.

Table 26 – Response rate

	#	%
Companies on list	81	100%
Completed survey	31	39%
Partially	9	11%
No response	40	50%

Table 27 shows the response results per industry association. VNPI and VOTOB had an above average response rate, whilst the response rate of Nogepa members and other companies was below average.

Table 27 - Response rate per industry association

	On list	Completed	Response rate
Nogepa	13	4	31%
VNPI	8	4	50%
VOTOB	12	7	59%
No IA	48	16	33%

We defined two groups of companies. Small companies have less than 200 employees worldwide. Large companies have over 200 employees. We only know the size of the companies that have (partially) completed the survey.[33]

Table 28 – Response by company size

	Completed	Partially completed	Total
Small (≤ 200)	12	3	15
Large (>200)	19	6	25
Total	**31**	**9**	**40**

The survey was distributed in Dutch. Some companies indicated that the persons responsible for CSR aspects were non-Dutch speaking, or that headquarters had to be consulted to fill in parts of the questionnaires. It was decided not to translate the survey as this would take too much time and would delay the project further. Another reason is that RBC agreements are being written in Dutch. According to the NCP, companies operating in the Netherlands should therefore be able to understand Guidelines in Dutch and should be able to fill out a survey in Dutch. Many companies

[33] We use this definition to see whether size matters in case of knowing and applying the OECD Guidelines.

proved in the end successful in finding a workaround. One company was not capable of doing this in time. This company did therefore not complete the survey (although parts of the survey was filled in).

Companies may link to the global market, and the OECD Guidelines, through ownership or through trade. The majority of companies active in the oil and gas sector were part of a multinational enterprise. 17 (43%) of the 40 companies that filled out this question, were foreign companies with a Dutch office. The other 23 companies were under Dutch ownership. Here most companies did not report to have foreign offices and would primarily link with the world market through trade.

Representativeness of the responses

The analysis above shows that one or more companies in each NACE-subsector are part of the questionnaire, with the exception of companies that only run petrol stations in the Netherlands. We can state with some confidentiality that the largest companies active in the oil and gas sector have completed the questionnaire and that the response rate of the smaller companies is lower. The 39% companies that have completed the survey represent in total an estimated 79% of the annual turnover in the sector and 69% of the employees. We therefore believe that the response rate is positively biased in company size.

Nevertheless, it is important to state that the firms that have completed the survey contain a sample of the oil and gas sector. It may be the case that our sample is biased towards companies that have active CSR policies in place. Therefore, we will refer in our treatment of the questionnaire often to the term ‘respondents’ which gives a precise account of what we have been measuring through the questionnaire. It is good to keep in mind that these respondents cannot be 1 to 1 translated to the oil and gas sector itself (see also the discussion in Sections 3.3 and 3.9).

C Dossier Dirty Diesel

C.1 Introduction

In 2016, Public Eye published a report of their investigation into what is called the Dirty Diesel scandal (Public Eye, 2016). The title of Dirty Diesel refers to the lower quality fuels supplied to West African countries. Most of these countries lacks the capacity to produce sufficient quantities of fuels for its own market. Several traders, among which two of the biggest Swiss traders, Trafigura and Vitol, are supplying to most of the African fuel markets. The specifications range of the African fuel market is different from the European fuel market and allows a higher content of different toxic elements among which sulphur, aromatics and a variety of additives. The Public Eye report argues that traders are purposefully blending fuel components to create a fuel which is as close as possible to the maximum allowed limits of the African fuel market. This gives refineries the possibility to create more value for lower quality fuel stocks or residues from the refinery output and to increase profit margins. The Public Eye report showed that part of the African Quality Fuels (AQFs) were blended in Europe, including the ports of Amsterdam and Rotterdam.[34] From here, the AQFs are exported to African countries.

In this dossier we investigate whether in the delivery of lower quality fuels to Africa, Dutch companies follow a due diligence process in compliance with the OECD Guidelines. Furthermore, should such a process be in place, in this dossier we explore any steps taken to remedy the situation and whether the companies act according to the OECD Guidelines. Fundamentally, we address the following topics/questions.

1. Why has the "Dirty Diesel Scandal" happened and what does it entail?
2. How do the OECD Guidelines relate to Dirty Diesel?
3. Does the due diligence process of companies adhere to the OECD Guidelines in this situation?
    - How does the due diligence process of companies impact decision making if companies encounter the occurrence of adverse impacts during the process?
4. How did companies respond to any discovered adverse impacts?
    - Did they change the due diligence process and/or their practices?
    - Have they since responded adequately?

Information was obtained from open sources and interviews with relevant stakeholders that represent different perspectives on this topic:

- the report from Public Eye (2016) and other open sources available on the internet;
- interviews with IPIECA, ARA, VNPI, ILT, OECD, UNEP, Delft University, Human Rights College.

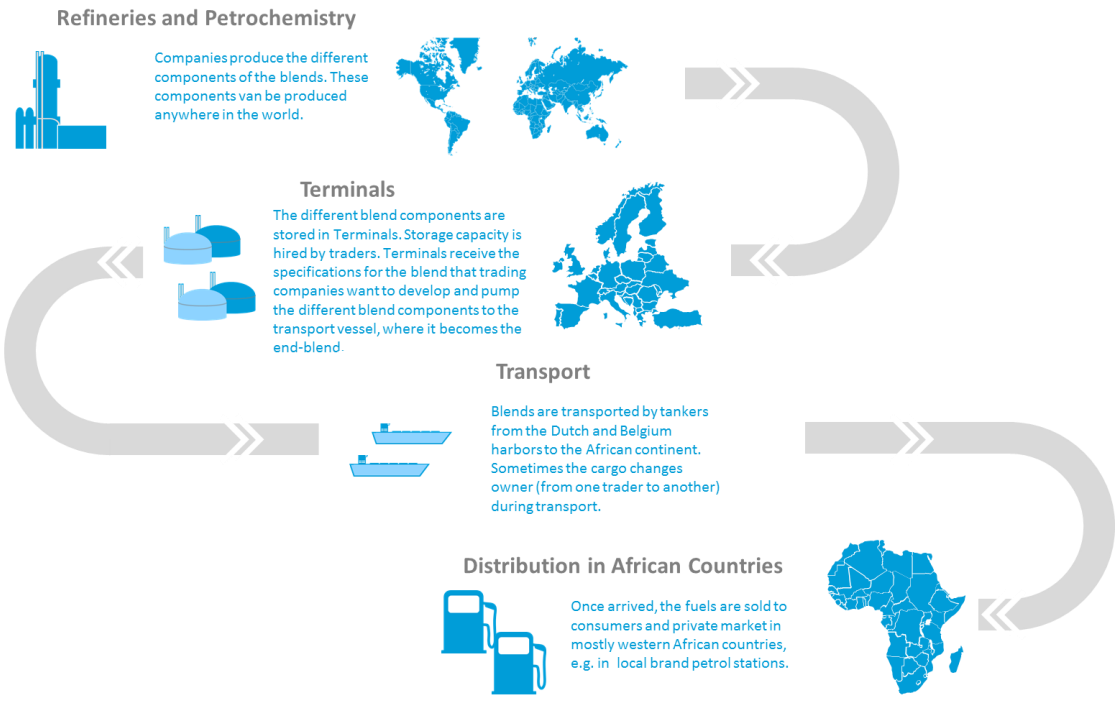
[34] We use the generalized term "African Quality Fuels" in this dossier to represent fuels that have specifications that are allowed in most African countries. This term is used in trading.

The Dirty Diesel Supply chain

The supply chain (Figure 8) for the African fuels is complex. Below we present a detailed description of this value chain, based on interviews with experts[35].

1. Fuels are always blends of different components. Refineries and petrochemical companies produce the various components of fuels. An average fuel consists of 6-10 components. These components can be a side product or primary product of e.g. refinery processes. These components are stored separately in terminals or as blend stocks where various components have already been blended.
2. Terminal storage capacity is hired by traders to store components and blend stocks. The terminal operator manages storage and also plays a role in the blending process. Once a trader receives an order for fuels with specific specifications (a process called 'blending on spec'), a recipe for a fuel blend is developed by a laboratory, using e.g. available stocks in terminals. Next, the recipe for the blend is shared with the terminal operator. The operator manages the blending process. In the present study we focus on the Dutch region of the ARA area (Amsterdam, Rotterdam, Antwerp), where blend stocks are stored and end blends are produced.
3. The end blend will be transferred into a transport vessel (e.g. oil tankers) and is transported with tankers from harbors and terminals in Europe, amongst which in Belgium and the Netherlands, to the African continent (Public Eye, 2016). Sometimes blends are adapted at sea or in the harbor by mixing loads from multiple ships.
4. The vessels transport the fuels to the African countries, where it is distributed by (1) local brands gas stations and (2) brands of two major oil companies (Public Eye, 2016).

Figure 8 - Overview of the value chain which supplies the African fuel market



[35] This description is based on information retrieved in interviews with the Inspectie Leefomgeving and Transport (ILT). This information will also be part of the ILT report forthcoming about the Dirty Diesel case. The ILT report will address issues such as the value chain composition, perspectives for action and encountered irregularities.

In this dossier we focus mainly on the activities in the Netherlands or activities by Dutch companies.

The structure of the appendix is split into five sections. Firstly we provide an overview of the situation (Annex C.2), proceed to the relation between the situation and the OECD Guidelines (Annex C.3). Consequently, the possibility is discussed if companies have not performed proper due diligence in respect of the OECD Guidelines (Annex C.4). The next part describes whether the companies have performed any remedial actions when their due diligence process failed (Annex C.5). Finally, in we present conclusions (Annex C.6).

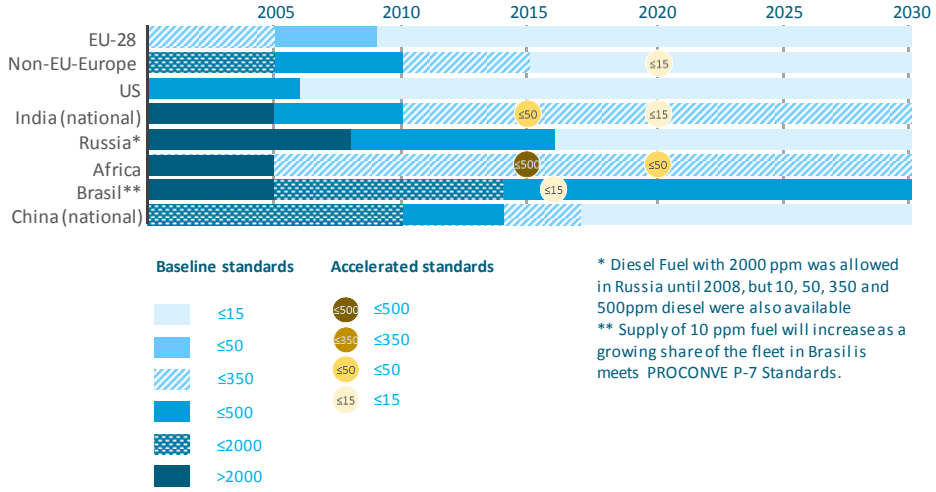
C.2 Description of the situation

The European Union has gradually lowered its sulphur specifications for fuels. In Western Africa this same development can be witnessed, but with a different pace, varying degree of success and under different conditions (see Figure 9). As in Western African countries high sulphur containing fuels (AQF) were and to a certain extent still are allowed the global fuel industry continues to produce fuels with these specifications and exports these to the African continent.

Since 2000, the European Union has restricted the content of several components of fuel that have an impact on human Health, including sulphur. It set the maximum allowed diesel sulfur content at 350 ppm in 2000 and 50 ppm in 2005, and maximum petrol (gasoline) sulfur content to 150 ppm in 2000 and 50 ppm in 2005. "Sulfur-free" diesel and gasoline fuels (≤ 10 ppm sulphur) was available from 2005, and became mandatory from 2009 (European Standards Organization). In the same time period, these restrictions in specifications were not applied in the African market. In general, AQFs compared to EU fuels contained:

- a higher sulphur content. Whereas in the EU the legal requirement is a maximum of 10 ppm sulphur, fuels in Africa have been recorded to contain as high as 3,000 ppm sulphur (Public Eye 2016);
- more polyaromatics (in diesel);
- a higher share of aromatics, including benzene;
- additives and traces of metals that contribute to higher emissions of pollutants.

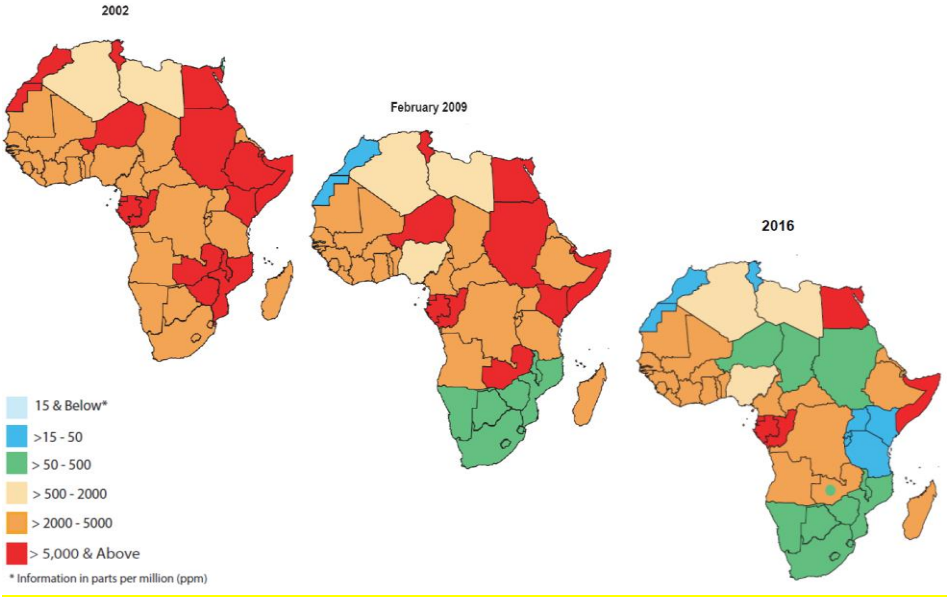
Figure 9 - Timeline for reducing diesel sulphur content in Baseline and accelerated timelines. Free from ICCT, 2013



Each of these elements can cause damage to human health and ecosystems. The higher sulphur content translates itself to secondary aerosol pollution, acid rain and smog. The higher share of polyaromatics and aromatics have been recorded to lead to carcinogenic impacts in humans and to cardio-vascular diseases. Some of the other additives in fuels contain elements of toxic substances that cause various human health issues.

In multiple countries in West Africa, such as Ghana, Nigeria, Guinea, Togo, Senegal, Mali, and Côte d'Ivoire, the market for automotive fuels and diesel aggregates required different fuel specifications than the EU fuel market, referred to as “African Quality Fuels” (AQFs) by the sector. The African continent is a large importer of used cars from e.g. Asia and Europe. As the engine technology improved, the current imported vehicles in African countries increasingly are suitable for fuels with low sulphur content. Africa is expected to be one of the regions with the highest demand growth of fuel in the medium term, partly due to a projected strong increase in vehicle population (OECD/IEA, 2015). Especially after 2002 specifications were changing towards reduced concentrations of harmful components. In Figure 10 the sulphur specifications in African countries are depicted anno 2002, 2009 and 2016. The African countries rely heavily on the import of fuels, as a consequence of the limited production/refining capacity in African countries. In 2015, 145.5 million tons of oil equivalents were imported. With increasing economic development and limited investment capacity the share of imported fuels may rise further (ICCT; CCAC, 2017).

Figure 10 - Overview of sulphur in Diesel in African Countries and changes in time (UNEP, 2016)



In 2016 Public Eye published its report about Dirty Diesel, demonstrating that fuels with high sulphur specifications were exported to Western African countries. In 2017 other investigations have been published which relate to this study. The Center for International Environmental Law (CIEL) published a study which suggests that the Dutch and Belgian governments are violating their international obligations by exporting AQF’s (CIEL, 2017). Parts of the fuels can be considered waste according to the authors and under the Basel Convention it is illegal to export waste to countries who signed the convention. According to CIEL, as many countries in West Africa signed this convention, the Dutch and Belgian governments are in violation of their international obligations by exporting the “waste” fuels. Key in this discussion is however the definition of waste products. From interviews and

communications with UNEP we noted that there are still concerns on whether the fuel blends that are provided to the African market do not contain components that can be considered waste.

Another investigation by BankTrack explored how the banks financing the traders have executed their due diligence process and whether they have confronted the traders on the adverse impacts caused by dirty diesel (Banktrack, 2017). In total, the investigation examined 26 banks who are lending money to either Trafigura or Vitol. According to the OECD, in the due diligence process of each of these banks, the Dirty Diesel case should have been discovered. About half of the banks replied to BankTrack's questionnaire and in some degree they all replied that they did not try to change the trader's behavior after they noticed the issue.

Both these additional reports demonstrate that the Dirty Diesel case is complex and requires careful examination. The studies of Public Eye (2016), BankTrack (2017) and CIEL (2017), all suggest that identified companies should take action to change the specifications for the African market to contain less sulphur and other harmful components.

As is depicted in the value chain, multiple stakeholders are involved. Each stakeholder group depicted in the value chain (Figure 8, above) consists of several companies with their respective stakeholders. Furthermore, the products are imported to and exported from multiple countries which have their own legislative authorities and local contexts. When a trader is supplying AQF's to the African fuel market, they must engage in a complex web of stakeholders. As such, the due diligence process can become a complex process.

A key initiative in the developments in the dirty diesel issue is Partnership for Clean Fuels and Vehicles (PCFV). The PCFV was initiated at the World Summit for Sustainable development in 2002. Its 73 members combine their resources and efforts to achieve cleaner air and lower greenhouse gas emissions from road transport (UNEP, 2002). Some of the major participants are the UNEP and IPIECA. As part of its objective, the PCFV aims to harmonize fuel qualities at global level, aiming at low concentrations of harmful substances such as Lead, sulphur and aromatic compounds. The European Fuel standard is one of the leading standards and the PCFV stimulates African countries to follow suit. At first, leaded petrol was targeted. A campaign was started to remove lead in fuels. In four years lead was phased out in African fuels. Second, the PCFV targeted harmonizing the African sulphur specifications with the European standards, reducing the high sulphur content of African fuels. From 2005, the O&G Sector engaged in a commitment with the UN and an increasing amount of African governments focusing on lowering sulphur specifications for African fuels.

As mentioned the IPIECA is important player in this stakeholder field, the International Petroleum Industry Environmental Conservation Association. It was formed in 1974 on request of the United Nations Environment Programme (UNEP). IPIECA is the global oil and gas industry association who concerns itself with social and environmental issues. Its main aim is to be the link between the oil and gas industry and the United Nations, governments and other global institutes. As a non-profit organization, it provides a forum which encourages improvement of the industry in regard to social and environmental problems such as climate change. In regard to the publications on the Dirty Diesel Case, IPIECA developed a guidance "*Fuel sulphur: strategies and options for enabling clean fuels and vehicles"* to assist developing countries to address the issues of the Dirty Diesel scandal. On other subjects, i.e. leaded gasoline, IPIECA has actively engaged the oil and gas sector in partnership with UNEP (www.IPIECA.org).

C.3 Relationship to the OECD Guidelines

The OECD Guidelines describe that companies are expected to apply due diligence in their supply chain (OECD Guidelines, 2011). In Chapter 2 we addressed how the OECD Guidelines can be interpreted and explained the due diligence process. The OECD Guidelines address adverse impacts that are either caused by, or contributed to, the enterprise, or are directly linked to their operations, products or services by a business relationship. This means that companies are not only expected to avoid causing or contributing to harm, but that they are also expected to use their leverage in the value chain in order to minimize potential harmful impacts.

In this dossier, the Netherlands are an important part of the value chain as described, as it involves the harbours of Amsterdam and Rotterdam where the fuels are stored, blended and shipped. Most of the traders have offices in the Netherlands and laboratories that compose and test the blend recipe are also operating on Dutch territory. These different players all play a role in the business of providing African Quality Fuels to the African Market[36]. The Dutch Government is adhering to the OECD Guidelines, and expects companies headquartered in the Netherlands to follow the OECD Guidelines.

The essential element in this study is the amount of sulphur in the fuels. This is a harmful substance for human health and affects the air quality (WHO, 2005). The OECD Guidelines refer to the human rights bill and the Ruggie framework as the framework for human rights (see also Chapter2). The Guidelines describe that businesses have a duty to respect human rights. This includes protection of citizens from unnecessary public health impacts. Therefore, this study focusses on the impact of 'Dirty Diesel' on human rights and relates this to the OECD Guidelines chapter IV: 'Human Rights'. Specific OECD chapters and guidelines that are relevant for this study:

- General policies: Chapter II, Paragraph A2,A10,A11,A12,A13,A14 and B2;
- Human Rights: Chapter IV, Paragraph 2, 3 and 5;
- Environment: Chapter VI, Paragraph 1a, 2a, 3 and 8.

In Chapter II of the OECD Guidelines companies are expected to respect internationally recognized human rights of those that are affected by their activities (Paragraph A.2) and keep from accepting exceptions not contemplated in the statutory or regulatory framework related to human rights (Paragraph A.5)

In Chapter IV of the OECD Guidelines it is stated that companies should avoid infringing on the human rights of others and should address adverse human rights impacts when they are involved (Paragraph 2). In addition, companies are required to seek ways to prevent or mitigate adverse human rights impacts that are directly linked to their business operations or services by a business relationship (Paragraph 3). Companies are expected to carry out due diligence as appropriate to their size, the nature and context of operations and the severity of the risks of adverse human rights impacts (Paragraph 5). In the commentaries (e.g. 42) of in the 4th chapter, the OECD Guidelines mention that companies should use their leverage where it has the ability to change the practices of an entity that cause adverse human rights impacts.

In Chapter VI of the OECD Guidelines, as part of due diligence, companies should collect and evaluate information regarding the environmental, health and safety impacts of their activities (Paragraph 1a). Companies should also inform the public about potential environment, health and safety impacts, which could include improving the environmental performance (Paragraph 2a). Adding to that, companies should integrate foreseeable environmental and health impacts into decision-making (Paragraph 3). The Guidelines also expect companies to contribute to the development of

[36] Based on Dirty Diesel report of Public Eye (2016) and interviews.

environmentally meaningful and economically efficient public policy, e.g. by means of partnerships or initiatives that will enhance environmental awareness and protection (Paragraph 8).

C.4 Due diligence with respect to Dirty Diesel

Due Diligence as depicted in Chapter 2.3.2 identifies six steps. In this paragraph, we elaborate on the steps and relate them to the dirty diesel dossier:

1. Integrating responsible business conduct in policy and management systems
   Companies that play a role in the trade, production, transport and distribution of dirty diesels are expected to have a policy in place for due diligence related aspects such as human rights and environmental impacts. We focus on Dutch companies that play a role in this dossier.
2. Identifying and assessing impacts
   Enterprises are expected to have a process in place to identify and assess impacts. In the case of Dirty Diesel this relates to the health impacts of air pollution and Sulphur as one of the drivers of air pollution. It is widely understood that there are health impacts of air pollution and that air pollution is severe in several African countries and cities (Source). In this dossier we focus on Sulphur which contributes to air pollution predominantly as SO_2.
3. Ceasing, preventing and mitigating impacts
   In this dossier this refers to reducing the Sulphur content of the fuels developed for the African market and the expected improvements of public health (final positive impact).
4. Tracking performance
   This refers to e.g. monitoring if the specifications for Sulphur changed, tracking trade, tracing transport of fuel products and assessing the composition of the blends and origin of blending products.
5. Communicating transparently
   The OECD Guidelines state that enterprises are expected to communicate transparently about their due diligence policy and when relevant also about the results of the process, e.g. risk assessments, improvement plans, etc. In this dossier this related to transparent communication about the efforts of individual companies and the sector to improve the situation and about the effectiveness of the actions taken; are the actions contributing to improved public health as a consequence of reduced air pollution?
6. Enabling Remediation
   When companies have identified adverse impacts to which the company contributes, they are expected to address these impacts through remediation efforts. In this dossier that implies that companies that contribute to the health impact of sulphur in fuels actively work on reducing the sulphur specifications.

According to the OECD Guidelines, if negative impacts occur, enterprises are expected to use their leverage (in their value chain) to influence the entity that is causing harm to prevent or mitigate its impact. In the situation of Dirty Diesel the answer to the question of who is causing harm can be complex. The health impact by air pollution is for the largest part influenced by the content of the fuels, but can be dependent also on the technical specifications of the engine of vehicles. Nevertheless, it is clear that sulphur (as SO_2 after combustion in engines) has a negative impact on air quality and hence on public health (UNEP and WHO).

There is a complex collection of stakeholders that plays a role here. However, that should not single out action of individual companies according to the OECD Guidelines. Even if key actors do not have the ability to stimulate change as a single company, they are expected to co-operate with other entities, for example in multi-stakeholder initiatives.

African fuel specifications for different countries are set at different levels (see also Figure 10 above). The traders that supply to these countries provide blends as required by and/or suited to this specific

market. The study of Public Eye (2016) demonstrates there are relatively more samples that had a sulphur content that is close to the maximum allowed concentration. In countries where the sulphur specifications were lowered, they encountered the same distribution in analysed samples. According to Public Eye this indicates that the traders are capable of lowering specifications, but that they follow the regulations that are set by local governments and that they can use the available room in the maximum allowed content.

The Due Diligence process as depicted in Chapter 2 implies that the companies that are involved in this dossier should transparently demonstrate the due diligence process they have in place and in case of any adverse impacts what actions are taken to mitigate this impact. First of all this is the responsibility of individual companies, but if individual companies cannot realistically manage it themselves, they should seek support and collaboration in their business relationships, in order to increase their (collective) leverage to change the situation.

C.5 Remedial efforts in the sector

From 2002 the Partnership for Clean Fuels and Vehicles (PCFV) worked at global level on lowering sulphur specifications in African countries. It is a collective effort of the fuel and automotive sector, UNEP holds the secretariat. UNEP mentions a transition should start with the fuels and engine specifications need to follow, 'cleaner engines'. Cleaner engines can be harmed by high sulphur fuels, and thus reducing sulphur should be the first step UNEP argues. Most vehicles in Africa are second hand and imported from first world countries which enable them to use higher quality fuels, especially in recent years. On the other hand the oil sector argues that the engines in African countries are not yet fit for clean fuels and a quick transition will lead to logistical issues.

Individual companies are reporting that they cannot change the industry themselves without harming their own business profits. Changes in fuel specifications should be made at global level or country level, and by respective governmental bodies, to avoid possible competitive disadvantage between different regions in the world; in short: to safeguard a level playing field. Furthermore, companies are reporting that this would raise fuel prices significantly and simultaneously African vehicles are not able to process higher quality fuels.

The ICCT has developed a roadmap (ICCT; CCAC, 2017) and The African Refinery Association is implanting its roadmap to bringing the standards to AFRI4-level by 2020 (ARA, 2016 and interview). The AFRI standards are inspired by the EURO standards for fuel and higher standards reflect reduced harmful substances in the fuels.

Both UNEP and IPIECA state that a further transition towards cleaner fuels is inevitable. IPIECA stresses that the transition pace should be based on the transition capacity of local economies in West-African countries. There are many issues that influence the pace at which this transition takes place:

- Limited local capacity for desulphurization and refining fuel components
  Local refineries have limited capacity to desulphurization fuels and to refine the components for fuels more in general (ICCT; CCAC, 2017). This is one of the reasons that many African countries heavily depend on imports. To improve capacity huge investments are needed. For example to transform a refinery in Côte D'Ivoire an investment of more than a billion dollars is required, a huge challenge to find investors given the local context (ICCT; CCAC, 2017). In countries that have the possibility to improve refining and desulphurization capacity, it will need several years before this will be effective. For example in Ghana, where specifications have been lowered, the country will need at least till beyond 2020 to transform its own refining capacity which will cover only 15% of the required fuels in the country. This was different when specifications for the European continent were lowered. The sector has been able to comply with the European regulations, that

changed drastically between 2005 and 2009. The desulphurization capacity has been developed to provide the European continent with diesel with low sulphur content.

- Stakeholder interests
  There are many local stakeholders involved in the transition process. If e.g. from global point of view it would be more efficient to close down a local refinery in order to support a short term transition because transforming local capacity would take more time and resources, that would mean that many local workers would be out of a job. Local companies that rely on the refinery could go out of business. From the point of local communities this is not the right solution. This example underpins that solutions are a balance between many different interests that have to be addressed before a solution is realized. UNEP mentions that at global level after the agreement in 2005, there was no push-back. At local level they encountered more resistance as there were many local interests that related to the matter. Corruption, with which local interests are protected, challenge progress.
- Country specific approaches
  Due to the large variety of local differences in culture, government, stability, economy, etc. country specific approaches are needed that include a multitude of local stakeholders. These parallel courses each require different speeds and inputs.
- Exchange between countries
  If in a country the specifications would be changed, but the local population does not support it or in case infrastructure (vehicles, distribution) is not sufficiently available local population will acquire fuels from neighbouring countries, smuggle fuels across the borders.

Some examples that demonstrate this complexity:

1. In Nigeria, the government has attempted to create a roadmap for the coming years to switch to low-sulphur fuels. Due to 3rd party interference and lobbying, this plan has not yet come to fruition. It was not disclosed whom this concerned, other than that this involved local stakeholders.
2. In Côte D'Ivoire, a refinery supplies to 16 countries in the region. The refinery, the government and UNEP are all trying to switch to low-sulphur fuel production, but currently there are insufficient funds for them to enable this themselves.
3. In Mombasa, Kenya, a refinery was closed due to a lack of support to make an upgrade possible.

Several West-African countries changed their fuel standards and lowered the sulphur content. Ghana, Nigeria, Benin, Togo and Côte d'Ivoire are amongst these countries. In Ghana and Nigeria the sulphur standards were lowered to a maximum of 50 ppm. According to Public Eye traders were able to continue supplying the local markets with these lower specs fuels. These changes were led by governmental actions. In Ghana a joint activity between, amongst others, the government and the national petroleum authority stimulated a reducing sulphur limit. Local desulphurization capacity was to be increased by 2020 (UNEP 2016), which accounted for 15% if of the fuel used in the country. 85% of the fuels was imported and hence was also subject to these lower standards.

There is debate on whether the fuel blends of African Quality Fuels (AQF) contain components that can be considered as waste products that are blended in. Both Public eye and UNEP indicated that this can be a point of concern. In some instances, the low-quality fuels are purposefully blended with what they consider waste products to create even lower quality fuels. However, these fuels are still legal in the countries they are exported to but exporting fuels with blended waste products and alleged risks to human health and ecosystem (and without disclosing information on the content of these fuels) potentially leads to breaches of the OECD Guidelines.

The European fuel quality guideline regulates the quality of gasoline and diesel for the EU market, however not the quality of fuels meant for export. In case of exporting waste, the Waste Framework Directive is in effect and limits possibilities for exporting materials. Although CIEL is of the opinion that

elements in Dirty Diesel should be interpreted as waste and should not be allowed to be used in blending, the regulations regarding what is waste and what is not, are more complex. Currently, there is no clear definition that could be applied to the various components of the blends that constitute AQFs that determine it to be waste and therefore these blends cannot be interpreted as waste.

According to the UN Guiding Principles on Business and Human Rights (UNGP's), nations have the obligation to protect civil rights which include the right for good health. Therefore, the Dutch government stresses the importance for other nations to develop their own legislation which impedes importing lower quality fuels. If this is not the case and EU legislation would also affect the criteria for export, the oil and gas sector argues that blending could be moved to other territories. This would not solve the problem but shift it to different countries.[37]

C.6 Conclusions

The role of Dutch Companies in relation to the OECD Guidelines

Most companies that play a role in the Dutch part of the supply chain of Dirty Diesel appear to have a policy in place for human rights. However this cannot be concluded for the laboratories as they were not part of the primary investigation.

The dirty diesel case implies that fuels with considerable negative health impacts have been exported to African countries. This was discovered by research by Public Eye. The exact specifications of fuels delivered to the African market is not known and the components of these fuels have not been revealed by the companies delivering those fuels. This is not in line with the OECD Guidelines, and a potential violation of Paragraphs IV-2 and IV-3 on human rights, VI-3 on environment and VII-3 on consumer rights.

The Due Diligence process mentions that enterprises as part of the Due Diligence process should frequently assess their negative impacts on the society and the environment. New insights that help organizations to understand their impacts, should be considered in mitigative efforts. The results of the World Summit on Sustainable Development, the actions of the Partnership for Clean Fuels and Vehicles and many studies about the negative effects of air pollution and the contribution of sulphur to air pollution can be considered as information that should stimulate action to mitigate the negative impacts on health. That the sector was able to create the technical feasibility and capacity was demonstrated when the European Union dramatically changed its specifications between 2006 and 2009 and the sector was able to change its blends accordingly and create sufficient desulphurization capacity. This was a sector wide action, driven by changed specifications at European level. The sector states that to be able to provide the African countries with low-sulphur fuels, requires an additional capacity that may not be available and would require time and costly investments. African countries that have refining capacity, struggle to organize the required desulphurization capacity to be able to produce required qualities for their own country and for export.

There are multiple scenarios to be considered in relation to the actions that companies can take in relation (1) efforts of the sector itself and (2) compliance driven efforts. As member of the Partnership

[37] The Dutch government has taken an active role in the debate and works towards actions. The Dutch former Minister of Trade and Development Liliane Ploumen, the Nigerian Minister of Environment Amina Mohamed, and the Government of Ghana have been taking action to address the situation. Recently the Dutch government and the extractives sector launched EITI Netherlands (Extractives Industries Transparency Initiative). This is an initiative that aims to increase transparency of trade in the extractives sector. This demonstrates the involvement of the Dutch government.

for Clean Fuels and Vehicles, the IPIECA, together with the UNEP engage in stakeholder dialogues, including with the governments of African countries and local companies to work towards a global adjustment of the specifications that are applicable to all these countries. The local governments have the power to change these specifications. This would be the most suitable and realistic scenario according to the sector In countries where the specifications for fuels have been lowered, such as Ghana, and as a consequence of action of the local government in combination with other (local) stakeholders, the sector follows by providing fuels with lower sulphur concentrations evidencing that such qualities can be delivered provided that the level playing field is guaranteed.

The sulphur specifications for the African market define a maximum allowed concentration. The ICCT states that the automotive industry can manage lower specifications for sulphur. Hence it seems that there is a choice that can be made to lower the sulphur content of fuel that is exported to the African continent. Most relevant actors in the supply chain that have a role in the composition of the blends would be the traders and the laboratory that determine the composition of the blends. In view of what Due Diligence as described in the OECD Guidelines should entail, certainly these actors should put effort mitigating negative impacts, which can be achieved by lowering the specifications. In the present research we have not witnessed such activities.

The sector argues that changing the specifications e.g. only in The Netherlands, or in Europe will lead to other companies taking over the production of AQFs. This claim has not been investigated in the present research. Essentially there is a conflict between the required mitigative actions as required by the OECD Guidelines and business continuity of the sector when individual companies are expected to take action. The OECD Guidelines leave room for interpretation in relation to what is considered to what realistically can be expected from a single company (in relation to size, context, region, etc.) and what is considered as timely.

The OECD Guidelines expect companies to transparently communicate about their due diligence policy, actions to prevent and mitigate impacts and to demonstrate improvements. On sector level there is much information available about the developments to reduce the sulphur content of fuels in various countries. Organizations such as IPIECA, UNEP, ARA and ICCT, but also local governments communicate about the achievements. However, communication to the general audience of the specifications of the fuels delivered to African countries is largely lacking.

We conclude that some of the mitigating efforts at the sectoral level can be regarded as in line with the parts of the due diligence framework of the OECD Guidelines. It is debatable whether the timeline of achieving lower specifications is in line with the description of ‘timely’ as used in the OECD Guidelines, but as many organizations confirm (e.g. UNEP, IPIECA, Amsterdam municipality), due to the complexity of the matter, a long breath is needed.

Monitoring and the dirty diesel dossier

Lowering the specifications should lead to less sulphur in fuels and other components and reducing the negative impact on air quality in West-African countries. An important aspect of due diligence is to monitor changes as to confirm that the chosen approach has the desired positive effect. To be able to monitor changes information needs to be available from the start of the fuel production (composition, origin) to the final emissions from vehicles. With respect to the availability of this information we encountered some challenges:

- In several African countries there are no emission standards applicable for vehicles or poorly enforced and technical solutions to reduce air pollution are not always applied. Emissions are not monitored regularly and hence limited information is available about the reduced contribution of sulphur and other components to air pollution as a consequence of the changed specifications. This was confirmed in interviews.

- The composition of the different components of end blends and blend stocks is not known. The required accompanying documentation can be unavailable and is not updated when blends are mixed. There is no information delivered to consumers about the content of the fuels that are put in the cars.
- The composition of fuels is not sampled regularly when the fuels enter local markets and are distributed. The final composition of the blend is hence not known. Results from sampling by Public Eye demonstrate that the composition can vary hugely.

In relation to transparency we cannot conclude that the systems in place are sufficiently functional to comply with the requirements of the OECD Guidelines. Whether changes in specifications result in the desired reduction of sulphur in fuels cannot be guaranteed as frequent sampling and proper documentation to be able to follow the paper trail are not in place.

Challenges for improving the situation

- The Dirty Diesel case demonstrates that commercial considerations can challenge compliance to the OECD Guidelines. To support companies that are based in the OECD countries, their respective governments could stimulate and promote international activities that help to bring the sector towards more conformity with the OECD Guidelines in case of any non-conformities while protecting a global level playing field.
- Any new developments will take time to be realized such as increasing desulphurization capacity, especially at local level. In the meantime companies can be considered acting not conform the OECD Guidelines when zooming in on single issues, certainly when there is lack of transparency about the continuous efforts to improve the situation. It is relevant to take into account if the non-conformity has led to proper mitigative or preventive actions and is hence in line with the process of due diligence.
- Dutch O&G companies, either being refineries, terminals, laboratories, transporters, traders and all other stakeholders in the value chain contribute to the existing situation of Dirty Diesel. It is difficult to analyze which parties are directly responsible for the delivery of dirty fuels to Western Africa. In any case it is a combination of the private sector players and (local) governments. Reasonably any mitigative actions should involve the value chain or the majority of the sector, by definition in an international area.

D Dossier Methane Emissions

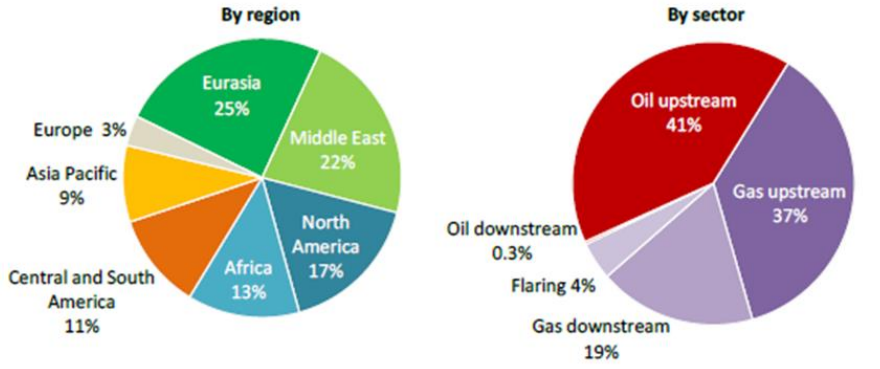
D.1 Description of the situation

Despite rapid growth in renewable energy worldwide, natural gas still finds wide application in different energy sectors such as heating, electricity generation, the petro-chemical industry and transport. Because of its high-energy content, one unit of electricity produced through gas combustion releases about half of the amount of carbon dioxide compared to coal. This factor often endorses natural gas as a possible 'transition fuel' toward a low-carbon economy.

The environmental advantage of natural gas over other combustible fossil fuels is reinforced when considering the emissions of the main air pollutants, including fine particulate matter ($PM_{2.5}$), sulphur oxides, mainly sulphur dioxide (SO_2), and nitrogen oxides (NO_X). These three pollutants are responsible for most of the widespread impacts of air pollution, according to the World Energy Outlook Special Report on Energy and Air Pollution 2016 (IEA, 2016). Gas combustion produces significant levels of nitrogen oxides (NO_X), with around 10% of global NO_X emissions coming from the use of gas. However, it produces virtually no SO_2 emissions and negligible levels of $PM_{2.5}$ (IEA, 2017).

Despite all the benefits of natural gas, it is accompanied by one important caveat: Natural gas consists of over 90% methane. This in itself is not a problem, but when methane leaks from natural gas installations, it has significant environmental effects. Methane is a highly potent greenhouse gas (GHG), far more potent than carbon dioxide (CO_2). Once emitted to the atmosphere it persists for approximately a decade, after which it decays to form additional CO_2. Therefore, the global warming potential (GWP) of methane is 86 times higher than the same amount of CO_2 over a 20-year period and 34 times higher over a 100-year period (IPCC, 2013). This implies that the reduction of one kilogram of methane emissions is 86 times more effective than the reduction of one kilogram of CO_2-emissions on a 20-year scale, and is 20 times more effective in a 100 year period. The concentration of methane in the atmosphere is currently around two-and-half times greater than pre-industrial levels, which has important implications for climate change. In 2012, the latest year for which comprehensive data are available, global methane emissions were estimated to be around 570 million tonnes (Mt). This includes emissions from natural sources (around 40% of emissions), and from anthropogenic sources (the remaining 60%). The largest source of anthropogenic methane emissions is agriculture, responsible for around a quarter of the total, closely followed by the energy sector, which includes emissions from coal, oil, natural gas and biofuels (IEA, 2017). In the WEO 2017, IEA estimates there were 76 Mt of methane emissions from oil and gas operations in 2015 (IEA, 2017).

Figure 10.7 ▷ Regional and sectoral breakdown of methane emissions from oil and gas operations, 2015



Natural gas operations account for around 55% of our estimated 76 Mt methane emissions in 2015, with Eurasia and the Middle East the largest emitting regions

Source: IEA, 2017.

The concept of methane leakage seriously threatens the image of natural gas as a 'transition fuel' towards a low carbon economy. Studies have shown that the breakeven point between a state-of-the-art gas power plant and a state-of-the-art coal power plant in terms of their environmental impact is 3.2% methane leakage (Alvareza et al., 2012). These calculations are based on older and lower estimates of the GWP of methane. Since then, the authors have rerun the calculation based on the GWP-20 value of 86 and GWP-100 value of 34 and concluded that the breakeven point is actually lower at 2.7% (Hamburg, 2013) (Howarth, 2014). This indicates that the concept of methane leakage deserves significant attention within the industry, governments and the broader public.

Despite methane's high impact on the climate system, the extent of methane emissions along the fossil fuel supply chain is still poorly understood, and is very likely to be underestimated (Schwietzke et al., 2016). In support of this, two recent reports published by the European Commission (European Commission, 2015) and Ricardo Energy (Ricardo Energy and Environment, 2016) concluded that natural gas could in fact be more carbon intensive than diesel and kerosene when taking into account methane leakages that are not sufficiently investigated during production, distribution and final utilisation, especially in countries overseas.

In this dossier, we delve into the issues surrounding methane emissions from the oil and gas industry, where they come from, what is currently being done about it and how it links to the OECD Guidelines. This dossier was examined through extensive desk research, supplemented with six interviews that were conducted with a wide range of stakeholders in the oil and gas industry.

D.2 Relationship to the OECD Guidelines

There are two chapters in the OECD Guidelines that are most relevant to the methane leakage dossier: Chapter VI on the environment and the due diligence principles outlined in Chapter II. Chapter VI on the environment can be summarised into three actions relevant for the issue of methane emissions:

1. Monitoring the environmental impact of existing operations.
2. Informing workers and the public in a timely manner on the potential environmental, health and safety impacts with adequate, measurable and verifiable information on, e.g., improvements in environmental performance.
3. Striving for continuous improvement in the environmental performance of the company.

The first principle refers to the importance of having a sound environmental management system in place. This is an important part of sustainable development, and is increasingly being seen as both a business responsibility and a business opportunity. An environmental management system provides the internal framework necessary to control an enterprise's environmental impacts and to integrate environmental considerations into business operations. Having such a system in place should help in assuring shareholders, employees and the community that the enterprise is actively working to protect the environment from the impacts of its activities. Improving environmental performance requires a commitment to a systematic approach and to continuous improvement of the system.

The second principle refers to the (Aarhus) Convention on Access to Information. Providing information about the activities of enterprises, the associated environmental impacts and relationships with sub-contractors and suppliers is an important vehicle for building confidence with the public. This vehicle is most effective when information is communicated in a transparent manner and when it encourages active consultation with all stakeholders (e.g. employees, customers, suppliers, contractors, local communities and the broader public). This way, it promotes a climate of long term trust and understanding of environmental issues that are of mutual interest. Reporting and communication are particularly appropriate where scarce environmental assets are involved. Reporting standards such as the Global Reporting Initiative provide useful references.

The third principle encourages enterprises to work systematically to raise the level of environmental performance in all parts of their operations, even where this may not be formally required in the countries they operate in. In this regard, enterprises should take due account of their social and economic effects on developing countries. For instance, multinational enterprises often have access to technologies or operating procedures which could, if applied, help raise environmental performance overall. Multinational enterprises are frequently regarded as leaders in their respective fields, so the potential for a "demonstration effect" should not be overlooked. Ensuring that the environment also benefits from innovative technologies and practices, is an important way of building support for investment activities more broadly.

In Chapter II, the principles of due diligence are outlined, implying care should be taken to identify, prevent and mitigate actual and potential adverse impacts of business activities. A more detailed discussion of the due diligence principles can be found in Paragraph 2.3.2. In relation to methane emissions this implies taking concrete efforts to minimise methane leakage.

D.3 Situation in the sector

D.3.1 Types of methane emissions

The oil and gas sector distinguishes between three types of methane emissions:

1. **Continuous emissions:** These are emissions that are a necessary part of operations and take place continuously when the operations take place. They are regulated by the licences of the oil and gas company.
2. **Discontinuous emissions:** These are both planned and unplanned emissions. Most of them are the planned emissions that occur in preparation of maintenance (e.g. when a piece of pipeline must be vented before the pipe can be welded). Unplanned emissions occur when an accident happens, e.g. a pipe that breaks due to defrosting of the permafrost layer it is built on.
3. **Fugitive emissions:** This is the amount of methane emissions that cannot be explained by the continuous and discontinuous methane emissions and that should be considered as uncontrolled and unforeseen leakage.

Continuous emissions are usually burned in a vent stack assuring that 90-99%[38] of the emissions are converted to CO_2. As CO_2 is a less potent GHG than methane the impact of the continuous emissions of the operations are significantly reduced when they are burned. For planned discontinuous emissions, gas can be bagged, flared (burned) or vented through a vent stack to prevent emissions. If provisions that allow for bagging or burning of methane are not provided, the gas is released into the air (vented). Clearly, in terms of its environmental impact this is an inferior option to flaring. Unplanned discontinuous and fugitive emissions are by nature untreated by the oil and gas sector. This results in methane escaping into the atmosphere unnoticed.

The amount of methane emitted from continuous and planned discontinuous emissions tends to vary with the license the company gets for its activities. Operations in countries with weaker institutions tend to emit higher emissions than similar operations in countries with stronger institutions, simply because the permitted amount is higher. This has an important consequence as it reduces the incentive for companies to invest in lower emission technologies for activities in those countries.

D.3.2 Reporting methane emissions

The continuous and discontinuous emissions are normally reported by the oil and gas company as part of the licence obligations. The reported emissions can be determined in the following ways:

- Measuring the flow and the composition of the gas in a (semi-)continuous way and calculating the emission as the product of these values. The accuracy of this method depends on the accuracy of the flow and composition measurement. When carried out professionally and (semi) continuously this method is very accurate.
- Calculating the flow and the gas composition by modelling the process used for construction and control of the plant. The accuracy of this method depends on the quality of the modelling and on how often the model is validated by taking measures to control the model calculations.
- Estimating the emission per type of equipment. The estimate per type of equipment is normally based on key figures provided by the supplier, multiplied by the number of pieces in use. For larger operations this method can be used by repeating this process per type of equipment and adding the final results together. The accuracy of this method depends on the accuracy of the equipment count, the correct application of the equipment and the correct estimate of the probability distribution of the chances of an emission of a certain magnitude occurring. Interviews revealed that the equipment count and the probability distribution of emissions are particularly problematic for the accuracy of this method.

[38] This high burning efficiency is only realised when the flow of methane corresponds to the flow the tip of the venting stack is designed for. At significantly higher or lower flows the burning efficiency is lower.

- Estimating the emissions per type of operation using key figures. Under UNFCCC guidelines companies are allowed to estimate the emissions per type of operation using key figures determined by an industry association (RIVM, 2015). The accuracy of this method depends on the way in which the key figures are determined and how recently they have been validated by systematic measurement of the actual emissions occurring in the given operation.

All these four approaches are so-called bottom-up approaches. Bottom-up approaches identify a source and then either estimate or measure the amount of emissions that are caused by this source. Critical parameters to the accuracy of bottom-up approaches are the completeness of the identification of the emission sources, and the accuracy of the emission measurement or estimate.

The scientific literature is scattered with articles underlining the importance of methane emission reporting and reduction. Articles frequently suggest that the traditional ways in which the oil and gas industry monitors and reports emissions is likely to underestimate actual emissions. The following aspects are mentioned as indicators for this underestimation:

- variations in methane emission levels between countries are large and cannot be explained by underlying infrastructure or the type of operations alone (e.g. fracking vs. no fracking, focus on oil extraction or gas extraction) (Cremonese & Gusev, 2016) (Zavala-Araiza et al., 2015a);
- when measurements are carried out the values measured often indicate significantly higher emissions than reported according to the officially approved reporting methods over the whole production chain.

Therefore, there is relatively robust evidence that methane emissions are likely to be significantly higher than the ones reported to the UNFCCC. This is supported by studies using two types of methods:

- Reports that use direct measurements of methane emissions from operations from the ground or the air (Lyon et al., 2016) (Marchese et al., 2015) (Subranian et al., 2015) (Zimmerle et al. , 2015) (Mitchell, 2015) (Lan, 2015) (Kang et al., 2014).
- Reports that measure methane concentrations in the upper atmosphere and combine that with data on atmospheric transport support this hypothesis (Röckmann et al., 2016) (Bergamaschi et al., 2015) (Turner et al., 2016) (Peischl et al., 2015) (Schneising et al., 2014) (Brandt et al., 2014) (Schwietzke et al., 2014) (Jeong et al., 2014). This method allows for comparison of the reported methane emission to the methane emissions required to realise the measured concentration in the air. If these measurements are subsequently combined with methane concentrations in the atmosphere or isotopic measurements, the share of methane emissions from the oil and gas industry can be calculated.

The scientific literature underlines the discrepancy between reported emissions from the industry (based on estimates/calculations) and the measured emissions by scientific studies. Thorough analysis of direct measurements of emissions from the air and on the ground showed there are four main causes of the underestimation of emissions. The following four points were also all reinforced by the interviewees.

- Calculation and estimation of methane emissions is more common than direct measurements. The last measurements of methane emissions resulting from oil and gas activities in the Netherlands were carried out 23 years ago (TNO, 1995).
- The calculation of emissions is based on key figures which have not recently been validated. A consequence of this approach is that an emission factor for e.g. a tank vent is assumed to be constant, whereas in practice it may vary strongly with the production speed and may show high emissions in the first months of commissioning a new source (Lyon et al., 2016).
- Calculations are based on emissions per type of equipment, whereas the equipment lists often appear to be incomplete (Zavala-Araiza et al., 2015a). This strongly underestimates the number of certain types of equipment, resulting in an underestimation of total methane emissions.

- Calculations are based on the assumptions that the occurrence of emissions has a normal distribution (i.e. the highest occurrence represents the average), while in practice the distribution is far more skewed. This implies that the emissions of the highest occurrence is far lower than the average, because the distribution of emissions has a “fat tail” (Zavala-Arraiza et al., 2015b) (Lyon, 2015)

D.3.3 Differences between locations

Previously, we discussed that, in general, reported methane emissions are likely to be lower than actual emissions. However, there are certain characteristics based on geography, culture of political climate that may lead to large differences between production locations. In this subsection we discuss some of these major differences between production locations and what they are characterised by.

Political climate can have a major impact on companies’ consideration of the environment. In North America, there was some momentum to make considerable progress in reducing methane emissions for a period of time. The Climate and Clean Air Coalition (CCAC) successfully triggered a change the parameters used to determine methane emissions from the oil and gas industry under the Obama administration. The previous monitoring standards underestimated the methane emissions.
In addition, it was estimated that a large part of these emissions can be avoided at a low cost, providing the industry with the unique opportunity to save both money and the climate. The ICF estimates that US oil and gas companies can reduce methane emissions by nearly 40% using available methane mitigation technologies at a net annual savings of $ 0.62 per thousand cubic feet of gas (Mcf) reduced on federal lands, and a net annual cost of $0.25 per Mcf reduced on tribal lands (ICF, 2015). Based on this insight, a US climate law was finalised under the Obama administration, stipulating a reduction of 45% in methane emissions from oil and gas operations, compared to base year 2012. Similar preparations were made to realise comparable law in Canada and Mexico. The IEA estimates that the situation also holds outside the US, implying that 40-50% of global methane emissions from the oil and gas industry could be avoided at no net cost (IEA, 2017).

Although the developments in methane legislation were slowed down when the Trump administration came to power, they could not be fully stopped. The Trump administration attempted to abolish the methane emission regulation for the oil and gas industry but did not succeed. Subsequently, they made clear that following up on this regulation was not a priority to the national government. This may potentially lead to huge differences in compliance between companies, with leaders complying to regulation although it will not be enforced, and laggards seeing the lack of enforcement as an incentive to not comply with the regulation.

Similar differences in methane emissions may also be observed in Europe, although the underlying reasoning for it will be different. Structural differences in operations (e.g. onshore vs. offshore) may also result in differences in methane emissions. A good example is the Groningen gas field in the Netherlands, the largest gas field in the European Union. The NAM (50% Shell/50% ExxonMobil), with Shell leading) is the long term operator of the Groningen gas field. The uniqueness of this situation is characterised by a very large onshore gas field located close to a relatively densely populated area and being operated by the same company over multiple decades. This has some unique consequences for the operations onshore:

- The maintenance and design are optimised for long term gas exploration.
- There are no unattended operations.
- There are only few new onshore sources, allowing for overall controllable and predictable gas flows.
- There is a direct connection to the electricity grid ensuring very high degree of electrification of operations.

- NAM's business processes (e.g. design, maintenance and renovation) are aimed at preventing or at least reducing methane emissions from gas extraction, gas treatment and transport. In this respect, methane leakages can, in principle, lead to unsafe situations and loss of turnover.

NAM's reported methane emissions for the Dutch onshore operations are rather low. Interviews revealed that their own estimates suggest 0,025% methane emissions. Although the top-down measurement of methane indicates that onshore methane emissions in the Netherlands are significantly higher than reported to the UNFCCC (Bergamaschi et al., 2015), similar research which includes isotope data suggests that the deviations may largely be of biogenic origin and not from the Dutch oil and gas industry (Röckmann et al., 2016). Therefore, it is likely that methane emissions from onshore operations may be in line with reported emissions.

Although it appears that the oil and gas sector carefully considers the methane impacts of their onshore operations, significantly different results may be observed when looking at offshore operations. In general, offshore operations have higher emissions of methane per unit of gas produced. This can partly be explained due to obvious differences with onshore production. Firstly, offshore explorations have taken place for a shorter amount of time than explorations in the Groningen gas field and are therefore not yet optimised for long term gas exploration. Secondly, the locations are less accessible, resulting in some operations being left unattended for longer periods of time. Thus, there is a higher chance of leakages being undetected for a longer period of time. Thirdly, the lack of access to the electricity grid implies many of the operations are not electrified. Lastly, in some countries there are concerns about bird wildlife where laws limits the time period during which flaring is allowed. This is the case in the Netherlands[39]. Therefore, companies may resort to venting, which is more harmful to the climate. It is currently unclear how much methane is vented in offshore operations in the Netherlands.

Despite the obvious differences between onshore and offshore operations, there are two concrete examples that suggest methane emissions from offshore operations do not receive as much attention as methane emissions from onshore operations. These two examples are FPSOs and Forties pipeline system.

A floating production storage and offloading (FPSO) facility is usually a converted oil tanker that is used for extraction at sea in places were a gas-drilling rig is unfeasible. The emissions from these ships are largely unknown, except for the calculated emissions based on registered fuel use and registered flaring. However, since these ships operate small gas sources at sea they should flare methane in strongly changing flows at considerable amounts. Interviews revealed that in doing so, they are likely to exceed their maximum permitted amount. In addition, they are likely to have the necessary emissions from cargo venting. There are indications that both of these potentially significant sources of methane emissions are not being measured. Instead, the figures being reported are the permitted flare emissions and those of fuel use. These figures are likely to be lower than the actual emissions, given that FPSOs have large deviations in fuel emissions depending on the load during manoeuvring and have a limited flare tip whilst gas flow may vary strongly during operations. Although the emissions per hour may be small, this is a typical example of a small discontinuous source of emissions that is overlooked in the current reporting methodology.

Another example is the Forties pipeline system, the pipeline network connecting 40% of the UK oil production with processing facilities onshore. In principle, the oil and gas industry set a very high standard for the Forties pipelines. Each pipeline was put inside a larger pipe, with a sensor between the two pipes. This way, if the inner pipe cracks, the sensor system locates that crack in the inner

[39] See point 11 at http://vergunningenbank.overheid.nl/wp-content/uploads/2015/02/Natuurbeschermingswet-1998_vergunning-voor-boringen-AME-206-en-AME-207.pdf

pipeline. This principle is known as the pipe-in-pipe principle, implying that the location of the breach in the pipeline can immediately be deduced and can be repaired in a swift and safe manner before leakages occur. However, in the last 10-15 years maintenance of the Forties has been at an absolute minimum, allegedly due to financial reasons and frequent change in ownership. In some places breaches in the inner and outer pipelines have been ignored and repairs have been postponed. Ultimately, this resulted in a branch of the Forties pipeline being closed down for repairs for over 16 days in December 2017. The most likely explanation for it being closed down entirely for such a long period of time is that both the inner and outer pipelines are broken, filling the space between the two pipes with oil and making the location of breach in the inner pipe much harder to find. Since the Forties pipeline transports 40% of the UK's oil production, the financial implications of this shut down are huge.

Although the second example applies to the transport of oil rather than gas, it challenges the assumption that the oil and gas industry takes good care of their infrastructure. This is particularly important if the implications of not taking adequate care, in terms of environmental effects, are severe. However, we acknowledge the fact that frequent changes in ownership complicate justification for extensive maintenance. The situation regarding the Forties pipeline network occurred under the auspices of the Scottish Environmental Protection Agency (SEPA), which is known to have a good reputation. One can only imagine that the problem of long overdue maintenance may be even more urgent in regions in the world with weaker supervising institutions.

D.4 Remedial efforts in the sector

The importance of undertaking measures to reduce methane emissions has been recognized by the sector. This is aided by two parallel developments: increased attention for climate change mitigation and the GWP of methane, and the development of LNG. In locations where methane emissions were simply a by-product of oil that had no value because there was no on-site demand for it (e.g. locations in Africa), the development of LNG has made methane valuable. LNG technology makes it possible to extract gas in places that *lack* a local gas market, liquefy it on site and transport it to markets where there *is* demand. Transporting natural gas this way is much than leaving it in gaseous form, as pipeline transport is generally more expensive.

> Deirdre Michie, chief executive of Oil and Gas UK: "We hope this can be resolved safely and as quickly as possible. The shutting down of the Forties pipeline does cause significant issues for our industry, financially, operationally and commercially - 40% of oil production is now shut in and the resulting lost production is worth around £20m per day at current oil prices to industry."
> (BBC News - 12 Dec 2017)

D.4.1 General remedial efforts at company level

In recent years, oil and gas companies are increasingly paying attention to methane emissions and leakages. In many companies' annual sustainability reports entire sections are dedicated to information regarding their approach to methane emission reduction.

The most frequently cited method to reduce methane emissions is implementing a leak detection and repair (LDAR) program. Infrared cameras are used to pinpoint methane leakages swiftly and accurately by numerous large multinationals (Shell, 2016) (ConocoPhilips, 2016) (BP, 2016) (Chevron, 2016) (ExxonMobil, 2016). Other frequently reported methane reduction strategies include the replacement of high-bleed pneumatic devices with those that have lower emissions (ExxonMobil, 2016) and the education of employees to detect and reduce methane emissions (Total, 2016).

The use of frontier technologies are also used to reduce methane leakage. ConocoPhilips is investigating new technologies for more effective and lower cost leak detection, such as using satellite

imaging and drone flyovers (ConocoPhilips, 2016). Unfortunately, these pre-commercial evaluations have not yet resulted in a practical solution to date, it is promising that such frontier technologies are being used to combat the problem of methane emissions.

Furthermore, interviews revealed that although it is preferable that methane emissions that are structural and cannot be avoided are fed back into the process (e.g. through use of off gas compressors) this may not always be feasible. In that case the best remedial effort is to burn the emissions in a vent stack such that the methane is converted to CO_2, which has a lower GWP.

Currently third party certification is used to assure that companies strive for continuous improvement in the reduction of methane emissions from all their activities. This system has been proven to work for organizations that are willing to improve. However, there are indications that there are 'laggards' in each sector that doubt the importance of structural environmental impact reduction. For the oil and gas industry this is the case for operations where gas is an unwanted by-product. Clearly there would be a perverse incentive if operations where methane is an unwanted by-product were exempt from reducing their methane emissions. However, the fact that this internal discussion in the oil and gas industry exists, is an indication that at least part of the sector is not currently applying the best available technologies.

In addition, the question can be put forward whether third party certification is a sufficiently strong instrument to reduce the environmental impact of the oil and gas industry. Since third party certification auditors financially depend on the parties they audit, industry experts are concerned that this forms a significant weakness in the definition of third party certification. However, we were not able to investigate or substantiate such opinions further.

D.4.2 The Oil and Gas Methane Partnership

In September 2014, at the UN Secretary General's Climate Summit in New York the Climate and Clean Air Coalition (CCAC) officially launched the Oil & Gas Methane Partnership (OGMP) to create a global standard to control methane emissions in oil and gas systems. The partnership provides companies with a credible mechanism to systematically and responsibly address their methane emissions, and to demonstrate this systematic approach and results to stakeholders. Key technical partners include the Environmental Defense Fund (EDF), the U.S. EPA's Natural Gas Star programme, the Global Methane Initiative, the World Bank's Global Gas Flaring Reduction Initiative as well as partners from the oil and gas industry. The initiative currently has the following partner companies: BP, ENGIE E&P, Eni, Pemex, PTT, Repsol, Shell, Southwestern Energy, Statoil, and Total (Climate & Clean Air Coalition, 2017). Three of those companies (Shell, BP and Eni) are active in the Netherlands. In order to further promote this new standard and realize increased methane emission reductions, the CCAC invites additional committed oil and gas companies to join the Partnership on an ongoing basis. Gazprom and Chevron, both active in the Netherlands, have expressed interest in joining the OGMP.

A company joining the CCAC Oil & Gas Methane Partnership voluntarily commits itself to the following[40] in its participating operations:

- A survey of nine core sources that account for most of methane emissions in typical upstream operations (including process leaks and other fugitive sources of emissions). Partner Companies are encouraged to investigate sources beyond this list of "core" emission source categories to include other methane emission source categories. *This is regarded a step forward in compliance with Chapter VI of the OECD Guidelines both by increasing the number of activities that are registered and striving for continuous improvement of the method to ensure that as many emissions as possible are registered.*

[40] The description of the commitment is rather short, the OGMP provides on the website of CCAC extensive guidelines for each of these aspects.

- Evaluate cost-effective technology options to address uncontrolled sources. *Whether this leads to compliance with Chapter VI of the OECD Guidelines on striving for continuous improvement of the environmental performance of the company depends on how high the barriers are to determining cost-effectiveness.*
- Report progress on surveys, project evaluations and project implementation in a transparent, credible manner that demonstrates results. *This is regarded a step forward in compliance with Chapter VI of the OECD Guidelines on informing the public on environmental impact of operations.*

A crucial question in order to evaluate the effectiveness of the OGMP is what makes this initiative different from existing structures used to report on emissions. Aspects that are unique to the OGMP are the following:

- The hands-on experience of the key technical partners combining both top-down and bottom-up measurement to control whether significant leakage is overlooked.
- The focus on the importance of transparency, with a clear preference for publishing both measurement methods and outcomes.
- The financial independence of the CCAC and the EDF, both of which are not reliant on companies in the oil and gas sector for their funding. Moreover, they do not accept payments or donations from companies in this sector, unlike third party auditors who are normally paid by the parties they audit.

Despite the OGMP's efforts, it is important to acknowledge that the OGMP is no silver bullet. A current feature of the OGMP is that member companies can choose which operations they report on. In addition, there is no minimum requirement for the scale of partners' participation to join the OGMP. Partner companies themselves decide the share of their assets for participation, although they are expected to expand this share over time. In order to reach full effectiveness, and in the interest of promoting transparency, choices regarding which and how many operations to report on should not be left to the company itself, but should be made mandatory. Otherwise, companies will only report on a bare minimum of relatively clean (non-methane-leaking) operations. Nevertheless, the OGMP in its current form is a necessary first step. Potential future steps could involve governmental regulation forcing all companies in the oil and gas sector to take the steps that are currently being taken voluntarily in the OGMP.

The worldwide application of the new standards of the OGMP may have a huge impact on compliance with the OECD Guidelines. Although many of the largest oil and gas companies are taking steps to reduce methane emissions, it is important to remember the industry is characterised by a lot of operators, subcontractors and state owned companies. These are likely to have significantly lower levels of information and organisation regarding the registration and mitigation of methane emissions than the larger multinationals. The OGMP could enhance support for these smaller parties in taking their responsibility for their own emissions. However, as indicated above, the OGMP will remain limited in its effectiveness as long as companies can choose which of their activities are included in the OGMP, and which ones are not.

D.4.3 Remedial efforts in the Netherlands

When it comes to the specific situation of companies in the oil and gas sector in the Netherlands, the following can be observed:

- Only a few companies active in the Dutch oil and gas sector participate in the OGMP initiative.
- Other companies' Dutch operations fall under the auspices of the Dutch government.
- According to NAM, methane emissions have already been reduced by over 80% in the last 20 years, mainly due to recovery (recompression) and the use of process emissions as fuel. In addition, diffuse emissions are measured once every 6 years for both onshore and offshore production sites. Critical installations, the ones that are generally larger and older, are measured once every three years.

NAM focuses on a further reduction of methane emissions, both in the production of natural gas on land and at sea. Particularly for the offshore platforms, reductions can still be achieved for a number of sources by modernizing offshore platforms (and associated infrastructure). NAM has already adjusted some of these platforms, with one of their motives being the reduction of methane emissions. For the onshore locations, the environmental benefit that can still be achieved is small because methane emissions from these locations are already very limited.

As a daughter company of Shell, NAM participates in the CCAC and is expected to comply with the OGMP standards in the near future. Furthermore, NAM participates in the Long term Energy Efficiency Agreement (MEE). The calculation method used in this agreement considers methane reductions to 'energy efficient'. All methane emission reduction measures with a payback period of less than 5 years at a 7% interest are deemed feasible. Lastly, the CEO of Shell, 50% lead owner of NAM has publicly announced that Shell is aiming to lower its carbon footprint by 50% by 2050 compared to the current situation. Interviews with NAM reveal that for the time being they do not know how they are going to realise this, but that they are actively searching for possible ways. *All of the above seems to suggest that NAM's operations comply with the OECD guideline that requires continuous improvement of operations to reduce environmental impact.*

The registration of methane emissions from the Dutch oil and gas industry takes place using bottom-up methods under the auspices of the Dutch government. To further enhance compliance with the OECD Guidelines, more attention could be paid to the aspect of providing verifiable data on the environmental impact to the public. The current reporting method between oil and gas industry and the Dutch government does not provide sufficient information to independently verify NAM's claim of 0.025% methane emissions in production. Verifying this claim is complicated for two reasons. Firstly, the reported data are highly aggregated making it impossible to link reported emissions to production locations. Secondly, all reporting is based on bottom-up reporting. There is no current methodology to measure top-down in a way that identifies whether emissions from certain areas are overlooked. The experience gained by the OGMP shows that a combination of bottom-up and top-down measurements are required to verify that no significant emissions are overlooked.
This suggests that although the oil and gas sector conforms to Dutch legislation, the sector currently does not meet the OECD Guidelines in providing the public with comprehensible and verifiable data on their environmental impacts.

If the OGMP standards are applied this leads to improvement in compliance to the OECD Guidelines. Following the OGMP principles would lead to more comprehensive studies, resulting in countries developing a more accurate understanding of the current state of their methane emissions.
The studies could then be used to highlight opportunities for improvement, to draw relationships between results and the practices, and to deduce what practices on the ground result in good results. Based on peer reviewed studies that will be published later this year, the EDF expects to be able to show that emissions in the Netherlands may be higher than reported. However, they will still be significantly lower than in other parts of the world. The EDF expects that a comprehensive study combining bottom-up and top-down measurements in the Netherlands would present a huge opportunity to the Dutch oil and gas industry. The study is likely to show that operations are well developed and have limited methane leakage compared to the rest of the industry. Therefore, it appears to be the case that companies operating in the Netherlands have all the reason to proudly show the world what is possible and to invite them to learn from the experience gained in the Netherlands. However, this can only be proven if a comprehensive study combining bottom-up and top-down measurements is conducted.

D.5 Conclusions

In general, we can conclude that methane emissions are a significant threat to global warming and that the oil and gas industry is increasingly paying attention to the issues surrounding methane leakage. The dossier examined here seems to suggest that Dutch onshore operations have relatively low methane emissions in comparison to the rest of the worldwide oil and gas industry. However, this is unlikely to be true for offshore operations. Answering the question to what extent the Dutch oil and gas industry complies with the OECD Guidelines is complicated, but when using the Guidelines as a framework for due diligence (described in Paragraph 2.3.2), the following aspects become apparent:

- Most authorities demand oil and gas companies to conduct risk assessments, develop policies to reduce or contain these risks and implement these policies by means of activity plans. The results of these plans need to be monitored and reported to the authorities. This is the case irrespective of geographical location, although the risk assessments, policy development and reporting take place according to the standards of the local authorities, which may differ significantly between locations.
- Even if these authorities are located in countries that support the OECD Guidelines, this does not inherently ensure that all methane emissions are monitored, reduced and reported as required according to the OECD Guidelines. There are several reasons for this:
    - The awareness regarding methane as an important climate agent is relatively recent. The oil and gas industry structurally carries out risk assessments of operations. However, before 2010 these risk assessments focussed on the safety risk of methane (as a flammable substance), rather than on methane as a climate agent. This situation is changing but awareness of the environmental impacts of methane has not landed everywhere yet.
    - The standards of the local authorities are often lower than the standards in the OECD Guidelines. E.g. in the Netherlands the government accepts emission reports that are not verifiable by the public. Comprehensible and verifiable data on the environmental impact of the oil and gas sector is not publicly available and is not required by the Dutch government.
    - It appears to be the case that the best available technologies are not always applied. This is supported by studies from both the ICF and the IEA, which show that huge reductions in methane emissions are still possible in the oil and gas industry at no net costs (ICF, 2015) (IEA, 2017). Since some of the parties active in the Dutch oil and gas sector in the Netherlands are global market leaders it is very unlikely that none of this potential applies to their operations.
    - The current bottom-up methods based on key figures are shown to be often insufficient for accurate estimation of methane emissions, especially in locations that are difficult to access.

The CCAC's OGMP has great potential to significantly reduce methane emissions from the oil and gas sector and develop methods to disperse information about methane emissions to the public, provided that it is able to maintain its momentum and become a global player. However, it is currently still in an early stage, without apparent security checks to keep the development going. Over time, the partnership will have to show that it is committed to further spreading these new industry standards, such that the industry's laggards will also be forced to reduce their methane emissions. If such future developments are made it would strongly improve compliance with the OECD Guidelines. Without further development of the OGMP compliance to the OECD Guidelines are not likely to significantly improve in the near future. Implying that:

- overall transparency on environmental impact remains insufficient to verify the environmental impact of operations;
- registration of environmental impact may vary strongly depending on the strength of institutions in a certain region;

Reduction of emissions per operations may vary with the business opportunity of preventing the emissions, the strength of institutions in a certain region and the population density in an area.

E Dossier: NCP cases in the Dutch O&G sector

E.1 Introduction

The Dutch NCP has dealt with several cases within the O&G sector since its existence. In this dossier we will give an overview of all cases related to the O&G sector which involved the Dutch NCP or Dutch O&G Multinationals in order to evaluate the extent to which these cases have indicated violations of the OECD Guidelines and in which the sector has learned from these cases. In this dossier we will provide a summary of selected cases, give an overview of the OECD Guidelines topics that were addressed, the background and the outcomes.

Objective of this dossier is not to re-evaluate individual cases, but to address the following topics/questions.

1. Which relevant cases raised by civil society organizations at National Contact Points (NCP)exist within the scope of the overall report?
2. Are there specific OECD Guidelines that can be seen often in the O&G sector cases?
3. What can we learn from the proceedings and, if relevant, from the outcome of the cases?
4. Is there a positive effect seen on the O&G sector adherence to the OECD Guidelines in relation to the cases?

Information was obtained from open sources and interviews with relevant stakeholders that represent different perspectives on this topic:

- OECD watch website;
- open sources available on the internet;
- interviews: Handling the cases: Dutch NCP & SOMO;
- interviews: Filing a case: Friends of the Earth;
- interview Sector: Shell - VNPI.

These interviews comprise opinions, thoughts, suggestions and in some cases emotions, however: in this dossier we aim to extract facts and trends to create understanding of the sector and its relation with the OECD Guidelines and the actual NCP cases that have been filed.

E.2 Cases overview

Which relevant OECD Guidelines cases raised by civil society organizations at National Contact Points (Hereafter OECD Cases) exist within the scope of the overall assignment? The applicability of the OECD Cases for this study is based on one of the following criteria (OECD Watch, 2017a):

1. O&G related cases with an impact in the Netherlands.
2. The Dutch NCP is involved in O&G related case abroad, usually in case the 'host country' (the country where the alleged problems caused by the company are occurring) does not have an NCP.
3. A case handled by a foreign NCP dealing with a Dutch O&G company.

A careful review of the cases lead to the following conclusions on relevant cases for this study:

- in total over 280 cases have been filed since the acceptance of the first cases in 2001;
- over 250 cases have been filed in total up to 2015, of which at that time around 15% was related to the O&G sector (OECD Watch, 2015);

Which relevant cases?

A careful review of the cases lead to the following conclusions on relevant cases for this study:
- no cases were filed about an impact on Dutch territory in the O&G sector, nor in any other sector;
- the Dutch NCP has been involved in a total of 30 cases since its existence;
- 14 of these cases were related to the Oil and Gas sector, of which;
- 9 of the cases related to the Oil and Gas were unique, as the same case was filed against the different parties of a consortium, or a case was submitted twice for different violations;
- 8 of these 9 cases involved the main Dutch multinational Oil and Gas company Royal Dutch Shell, 1 involved the Italian company Eni and its Dutch subsidiary Eni International BV;
- out of the 8 cases 4 cases involved the NGO Friends of the Earth directly, and 2 cases indirectly;
- 2 cases had a strong geo-political background with consortiums consisting of different national entities and involved other NCP's, of which the Dutch NCP only dealt with the Dutch companies' involvement;
- 1 case was initiated by an individual and was eventually considered not substantiated;
- 2 cases have been added recently (at the time of publication of this report) but have not yet been accepted or substantiated by the Dutch NCP.

The following paragraphs will give a more detailed overview of the seven relevant cases. A summary will be given, and a review on the background and current status of the topic, regardless the outcome of the NCP case.

Are there chapters in the OCED guidelines that are prevalent in the relevant NCP cases?

The Chapters in the OECD Guidelines referred to in most cases mainly dealt with Human rights IV, Environment IV, and in some cases Disclosure. There are two main trends: Cases with a long history where the activities had a long impact on the communities and the environment (five cases).
On the other hand there are new upstream O&G activities (exploration), that mainly focus on Human rights and Environmental impact (three cases).

The following paragraphs will give a more detailed overview of the seven relevant cases. A summary will be given, and a review on the background and current status of the topic, regardless the outcome of the NCP case.

Of the seven unique cases three were concluded, three were rejected and one was blocked. Two new cases have been filed during the writing of this report, which have not been reviewed by the NCP.
The following paragraphs will go a little deeper into the specific cases, identifying trends, commonalities or proof points for an impact of the OECD Guidelines on the operations of O&G sector in the Netherlands.

E.2.1 Rejected cases

Rejected cases are cases that did not pass the initial assessment (right NCP, legitimate Complainant, case material and substantiated), or were rejected at a later stage because remediation was deemed unlikely.

Rejected Case: Alleged issues related to the activities of Shell Plc. in US
Complainant: Individual
Company: Shell PLC (US Operations)
Year: 2012
Host country: USA
Involved NCP: Dutch and US
Relevant Chapters OECD Guidelines: not substantiated

Case overview
Not much data is available on this case, other than that the complaint was unsubstantiated and not accepted.

Reason for Rejection
The case was transferred to the US NCP (Host country US). This NCP has reviewed the request to initiate the specific instance process in relation to these alleged activities and has determined that the request must be dismissed for a number of reasons that were not substantiated.

What can we learn from this case?
Not much data was available about his case (ask NCP about his), and it seems to be a stand-alone case.

Rejected Case: Violations Sakhalin-II complex
Complainant: SEW (Sakhalin Environmental Watch) & Stroitel
Company: Royal Shell
Year: 2012
Host country: Russia
NCP: Dutch and UK
Relevant Chapter 2011 OECD Guidelines: I, II, III, IV

Background
The Sakhalin-II project is an oil and gas development in Sakhalin Island, Russia. Sakhalin-II comprises the first liquefied natural gas plant in Russia. The development is situated in areas previously little touched by human activity, causing various groups to criticize the development activities and the impact they have on the local environment. The project that started in 1984 and started exporting is managed and operated by Sakhalin Energy Investment Company Ltd. (Sakhalin Energy), in which Shell owned the major share. The consortium Sakhalin Energy Investment Company ("SEIC") had a contract to produce gas without a local partner. However, in 2005–2006 the consortium was heavily criticized due to environmental issues and legal proceedings on violation of the Russian environmental regulations were initiated. In the result, The Russian government ordered to terminate the project in September 2006. Under legal and political pressure, the consortium was forced to sell a majority stake to Russian owned Gazprom. On 21 December, Gazprom took control over a 50%-plus-one-share stake in the project by signing an agreement with Royal Dutch Shell.

Case overview
According to the complaint, Shell, RBS, Standard Chartered and Barclays have a business relationship with the project operator, Sakhalin Energy Investment Company ("SEIC") and have a financial interest in the Sakhalin II project. Each of them failed to use their influence on SEIC to correct the

environmental and human rights abuses associated with the Project. The UK and Dutch NCPs decided to handle the cases separately, with the UK NCP handling the three complaints against the UK banks, and the Dutch NCP handling the complaint against Shell.

Complainants have initiated the case on behalf of residents living close to the Sakhalin II Prigorodnoye Production Complex (the "Project") a liquefied natural gas ("LNG") plant and oil and gas export terminals on Sakhalin Island. They allege that Shell and three of the largest UK banks have severely harmed community members, endangering their health, jeopardizing their food security and polluting and destroying local environmental resources. Additionally, their properties have been devalued by the Project to the point that they cannot sell them and buy other homes in safer locations. Despite these significant adverse impacts, community members have not been resettled or justly compensated.

Reason for Rejection by the Dutch NCP
- mediation seems unlikely as Shell lost its major share at the time the case was filed;
- the applicability of the 2011 guidelines were considered not material nor substantiated.

Outcome of the compliant
- One of the conclusions of the OECD watch was that with regard to complex cases, communities who may not have access to help from sophisticated partners for complex cases will be less likely to successfully filing and following through a complaint.
- The Accountability Council published a statement voicing their concerns on the reasoning for the rejection by the Dutch NCP, specifically related to the 2011 updated OECD Guidelines (Accountability Council, 2013).
- The case was filed after Shell lost its major share, cutting Shell's stake in half to a little over 20%. Russian owned Gazprom bought the major part of the shares after a, alleged environmental conflict between Shell and the Russian government, making it a political case; Russia has not committed itself to the OECD Guidelines.
- The cases against the 3 UK banks with the same complaint (consortium, banks have been handled by the UK NCP) were also rejected, for different reasons. No statements were made by the NCP's.

Considerations
There are a few items of significance that seemed to have played a role here;
This case is seen as a geo-political case, and the rejection of the NCP was considered flawed by the complainants[40].

Outcome and current status
- A report by the Dutch Government on Russia's Corporate Social responsibility (Ministry of Foreign Affairs, 2016) state that Sakhalin Energy is an example of a company that has developed environmental care initiative which can be found on their website. Sakhalin Energy has carried out comprehensive research into the influence of its activities on the environment and society.
  The report further states that 'current developments in the environmental policy and regulation in Russia are expected to result in various changes in 2017.
- It was claimed SEIC compensated the salmon fishers community through setting up Salmon hatcheries, though this was not confirmed at the OECD. Also reducing drilling activities during critical seasons for the whales was implemented in 2010, though no evidence exist this is still ongoing. Also, the website of SEIC indicates it invested over 1.2 Mio USD on 'social projects' the past 15 years, and is recognized by local authorities as such.
- A 'Sustainable development policy' dated 2016 and based on ISO 26000:2010 "Guidance on Social Responsibility" is available on the SEIC website. It aims to 'take a lead on sustainable development taking into account the Sustainable Development Goals of the 2030 Agenda for Sustainable Development, as well as to 'Be a participant of the UN Global Compact[3] (GC) complying with its ten

principles and promoting them. Finally, they commit to 'Be a member of UN GC LEAD demonstrating sustainability leadership in particular.

- For the second time in a row Sakhalin Energy has topped the Russian Environmental responsibility ranking of oil and gas companies in 2017. The company achieved excellent results in three categories: environmental management, impact on environment and disclosure of information. The project has been implemented by the World Wildlife Fund (WWF) of the Russian Federation and CREON Capital with the cooperation of the RF Ministry of Natural Resources and RF Ministry of Energy. Like in the previous years, the ranking was calculated by the National Ranking Agency.

Rejected Case: Shell and Exxon's chemical storage & health impact in Brazil
Complainant: CAVE & FOE
Company: Royal Dutch Shell and Exxon Mobil
Year: 2006
Host country: Brazil, Vila Carioca
Involved NCP: Dutch and Brazilian
Relevant Chapters 2000 OECD Guidelines: Chapter II and V

Background
Shell has already been operating the site for over 70 years and has disposed large amounts of residues in the soil for decades, which may ultimately be the source of soil, air and underground water contamination. The liability can reach significant values, as some specialists conclude that part of the land should be expropriated for cleanup and those populating the area should be relocated and compensated. However, the company claims that it followed all existing environmental laws and used the best technologies available, and that most of the material was disposed of long before the new environmental laws were passed.

Case overview
In January 2005, the government called on Royal Dutch Shell and Exxon Mobil to stop the practice of storing chemicals at and below their facilities in Brazil and to help workers and local residents with health complaints arising from the high concentrations of chemicals and heavy metals in their blood. In June 2006, the Brazilian NCP conducted an initial assessment and accepted the complaint as a specific instance. The Dutch NCP also wrote to the Brazilian NCP and "offered its assistance in the handling of the instance'' by providing suggestions on how it would handle the case and declaring it would closely follow the case. The case was initiated by NGO 'Friends of the Earth' simultaneously with the case against Shell in the Philippines.

Reason for Rejection
The case against Exxon was dropped as the NCP regarded Shell to be mainly responsible for responding to the allegations in the complaint. Shell responded to the complaint stating that the alleged violations were already being considered by domestic legal bodies and thus should not be considered under the NCP/OECD Guidelines process. In early 2007 the NCP decided not to "interfere" in the legal proceedings by further examining the issues and requested that the complainants make specific proposals for areas that could be negotiated with Shell that were not covered by any parallel legal proceeding. On 7 April 2007 the complainants provided suggestions, but Shell refused to agree to mediation, again claiming that the issues were under judicial review. The Brazilian NCP thus concluded that its involvement in the case would not be effective and decided to terminate the specific instance in the NCP framework on 20 March 2008.

Outcome of the compliant
The rejection of this case and the case in the Philippines (which will be discussed later in the 'concluded cases') sparked a reaction from the complainants that also resulted in a press release from Friends of the Earth[41].

Considerations
- The case was initially filed by Friends of the Earth (FOE) together with the case against Shell in the Philippines.
- The case was filed by Friends of the Earth (FOE) at the Dutch NCP initially as 'we (FOE) have little faith in an effective handling of the issue by the Brazilian NCP. We request the Dutch NCP to actively follow and participate in resolving the case, given the Brazilian NCP's poor past performance in handling cases'[42].
- The Dutch NCP did not formally respond (no correspondence can be found in the public domain of the OECD watch website).
- In March 2013 regarding a similar case in Paulina, Brasil, Shell (and BASF) both agreed to pay compensation that could reach 620 million reais ($316 million) to workers exposed over three decades to toxic chemicals (pesticides) at a Brazil plant as part of a settlement after a Brazilian court ruling. The Pesticide plant in Paulina used to be in Carioca but was relocated. Overal

Current status
Operation of the refinery and other plants at the side are still ongoing. No official statements or acknowledgments from Shell have been issued.
Both the public civil suit opened by the State Justice Department and the criminal suit by the Federal Justice Department seems to be still ongoing due to continuous appeals.

E.2.2 Blocked Cases

Blocked cases are considered not concluded, but also that no progress is seen in some time.

Case: Environmental and health violations in Argentina
Complainant: FOCO & Friends of the Earth Argentina vs. Shell Capsa
Company: Shell Capsa
Year: 2008
Host country: Argentina
Involved NCP: Dutch and Argentine (Lead)
Relevant Chapters 2000 OECD Guidelines: Chapter II, III and V

Background
Operation since 1931, oldest Argentinian Oil company. Shell's Argentine refinery was ordered "closed" back in September of 2007, due to a long list of violations of environmental safety codes, permits, as well as infraganti petrol contamination observed during routine inspections over a thirteen day period, by the Argentine Environment and Sustainable Development Secretariat, the SAYDS. During the closure Shell denied violations cited by the SAYDS, but the company finally capitulated, and promised to invest US$ 80 million in environmental improvements and clean-up. Local communities doubt the company is complying with its promises and want pressure on Shell to abide by the government resolution and their commitment to repair the environment, as well as address the social impacts the refining industry has had on residents.

[41] Environmental organizations file OECD complaints against Shell for worldwide violations of the OECD Guideline, 16 May 2006.
[42] Open letter from Friends of the Earth to Ministry of Foreign Affairs, 15 May 2006.

Case overview
FOCO and FoE Argentina filed a complaint against Royal Dutch Shells Argentine subsidiary, Shell Capsa, for violating domestic law and ignoring the Argentinean governments sustainable development campaigns and policies. The complaint alleges that the irresponsible actions at the company's oil refinery in the Dock Sud industrial area have put the health and safety of neighboring residents in danger. Despite the existence of parallel legal proceedings, in September 2008 the Argentine and Dutch NCPs accepted the case (with the former taking the lead). The Argentine NCP prepared a list of "considerations" and asked the parties to respond; both complied. In April 2009, three members of the NCP visited Villa Inflamable to interview residents and to see the conditions. However, Shell Capsa refused to participate in the process or even recognize the NCP as the appropriate body for addressing the concerns.

Reason for Blocked status
In May 2009, the Argentina NCP indicated that it may close the case, but offered the parties the possibility of participating in a roundtable meeting outside the specific instance process. The complainants indicated that they would be open to such a meeting. In November 2009, the Argentine NCP announced it would close the case and publish its findings, including the fact that the company refused to cooperate. However, the case remained pending and Shell Capsa refused to respond to the complaint until the court case against it is closed. In June 2012, the NCP again requested that Shell Capsa provide information about the actions it has taken in relation to the allegations and an update on the parallel court case. As of May 2016, still no action has been taken by the NCP in this regard. The complainants have repeatedly asked the Argentina NCP to make a determination on the allegations and issue a final statement.

Outcome
- NA

Considerations
- the allegations of the environmental and health issued concern several international companies operating in the area;
- the case is well known and documented.

Current status
- No prove of remediation can be found, nor the outcome of the case against Shell Capsa nor the other companies operating at Dock Sud. Operation is still ongoing, relocation of people or closure of the operation are seen is the only viable solution to deal with the public health issues.

E.2.3 Concluded cases

Conclude cases are cases which were accepted, and which led to a final statement from the NCP.

Concluded Case: Pandacan oil depot in the Philippines
Complainant: Fenceline Community and FoE NL
Company: Shell
Year: 2006
Host country: Philippines
Involved NCP: Dutch
Relevant Chapters 2000 OECD Guidelines: Chapter II, III & V

Background
The Pandacan Oil Depot is a 33-hectare compound founded in 1914 in Pandacan, Manila, Philippines. It housed the storage facilities and distribution terminals of three major players in the country's petroleum industry, namely Caltex (a petroleum brand name of Chevron Corporation), Petron, and Shell. The oil depot takes its roots from separate establishments by these oil companies.

Case overview
The complaint was filed by FOE together with the case against Shell in Brazil (see rejected cases). The complaint accuses Shell of withholding information from local residents and employees about the environmental, health, and safety impacts of its Pandacan oil depot, which is situated in the heart of densely populated Manila. The complaint also alleges that Shell's plans and procedures to mitigate potential hazards at its oil depot were insufficient and that Shell was improperly involved in local political activities.

Outcome
One result of the case is that Shell Philippines has initiated an "independent" risk assessment of the Pandacan depot and invited some local residents and stakeholders to participate. However, a large group of local citizens and community leaders have questions about the "independence" of the initiative. The questions were directly posed to Shell Philippines, but the company has declined to respond.

The Dutch NCP's attempts to get the parties together for mediation failed when the company refused to discuss the primary issue raised in the complaint. Nonetheless, the NCP proceeded with a field visit to the project site and published a final statement with a thorough analysis of the company's Guidelines compliance. While this public statement of the company's compliance with the Guidelines did not have an immediate or direct effect on the resolution of the dispute, it did play a supportive role in helping the parties to reach an ultimate solution through other strategies pursued in parallel to the NCP complaint process.

The case highlighted the flaws in current functioning of the OECD Guidelines' specific instance mechanism and highlights the urgency of strengthening and upgrading the Guidelines in the 2010 review. In this regard, the Dutch NCP's "Further Reflections" at the end of its final statement provided some constructive guidance.

Considerations
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Current status
Nearly nine years after the complaint was filed with the NCP, complainants have now obtained a court decision, confirming that Shell must relocate its oil depot by January 2016. Complainants have stated that the NCP process helped to shape the court case that ultimately resolved the issue. Although a

mediated resolution through the NCP process may have been less antagonistic and saved both parties time and resources, it is noted that the NCP did ultimately contribute to resolving the dispute however: a resolution might have been achieved in far less time and with fewer resources had the NCP been able to persuade the parties to engage in a dialogue process (OECD Watch, 2015).

Concluded Case: Shell-led consortium's gas pipeline project in Ireland
Complainant: Pobal Chill Chomain Community et al
Company: Shell
Year: 2008
Host country: Ireland
Involved NCP: Ireland (Lead), US, Canadian, Norwegian, Dutch
Relevant Chapters 2000 OECD Guidelines: Chapter II & V

Background
The Corrib gas project entails the extraction of a natural gas deposit off the northwest coast of Ireland. The project includes extraction of the Corrib gas field and construction of the natural gas pipeline and a gas processing plant.
In 2002, Enterprise Oil was acquired by Royal Dutch Shell who took over the operatorship of the project. Development of the project began in 2004, but it was delayed in 2005 when locals opposed the project. Shell announced the suspension of the project to facilitate further discussions with opposing parties. For a year, independent safety reviews were conducted to address various safety concerns in relation to the project.

Case overview
Pobal Chill Chomáin (People of Kilcommon) and two supporting NGOs filed a complaint concerning the Corrib gas project in North West County Mayo, Ireland run by a consortium of Shell E&P Ireland, Statoil Exploration Ireland, and Vermilion (which bought out Marathon Oils share in 2009). The project includes a gas processing plant and a pipeline to transport untreated gas from the sea to the processing plant. The complaint alleges the pipeline would pass too close to populated areas and go through an area prone to landslides, raising health and safety concerns. According the complainants, given the instability of peat in some areas, there is an increased likelihood of pipeline failure.
The groups also point to environmental concerns. The location of the refinery poses a risk to the only source of potable water for 10,000 people in the region. Furthermore, the pipeline would pass through three ecologically sensitive areas and represents a threat to wildlife. In addition, the groups allege the Corrib Gas project would violate many human rights espoused by the European Convention for the protection of Human Rights and Fundamental Freedoms.

Outcome
In September 2009, the NCPs summarized their findings in writing and asked the parties to react by the end of November. The NCPs surmised that mediation would be extremely difficult given the irreconcilable positions on the main issue: relocation of the planned processing plant. Shell has refused to discuss relocation, claiming it received all necessary government permits for the plant. There was also significant disagreement as to whether the consortium engaged in sufficient consultations with the community. In January 2010, the complainants agreed with the NCPs assessment that mediation appeared impossible and requested that the NCPs close the procedure with a final statement. The NCPs joint final statement focused on the issue of due diligence by the consortium, stating it was beyond its competence and mandate to draw conclusions on the validity of location of the processing facility. The statement concluded that in the early stages of the project, dialogue with stakeholders had not been in accordance with the spirit of the Guidelines.

However, since 2005, the consortium had improved its practices and shown willingness to address health and safety concerns. In response, the complainants expressed disappointment the NCPs had

failed to consult with residents before coming to its conclusion. The NCPs statement also advised that in general, enterprises have a responsibility to respect the rights of people impacted by their activities. Companies are expected to exercise due diligence in the broad sense of the concept, and they have a responsibility to consider going beyond what is legally required when it comes to consulting local communities. The case is a positive example of collaboration among NCPs.

Considerations
The project sparked vigorous protests and considerable media attention. Two novels and two documentary movies were made on the subject.

Currents status
The Shell website on the Corrib gas project shows no updates from 2014, and in July it reportedly sold its stakes in the Corrib gas project. The transaction is expected to close in the first half of 2018.

Concluded and Withdrawn case: Misleading disclosure on oil spills in Nigeria
Complainant: Amnesty International and Friends of the Earth vs Shell
Company: Shell
Year: 2006 - 2011
Host country: Nigeria
Involved NCP: Dutch
Relevant Chapters 2000 OECD Guidelines: Chapter II, III V & VII

Background
Oil production in the Niger Delta Area ran from the end of the 1950s until 1993. The UNEP report maintains that even though no oil production has taken place in the region since, the oil field facilities have not been decommissioned. Oil pipelines carrying oil from other parts of the country still pass through Ogoniland but are not being adequately maintained.

Case overview
Amnesty International and FoE allege that Royal Dutch Shell has breached the OECD Guidelines by making false, misleading and incomplete statements about incidents of sabotage to its operations and the sources of pollution in the Niger Delta. Specifically, the complainants are concerned by Shells repeated claims about the high proportion of oil spills in the Niger Delta that are due to sabotage committed by criminal gangs. According to the complainants, the company provides misleading information and omits mentioning relevant facts about the causes of oil spills. Additionally, they claim that Shell bases its communications on biased and unverified information, thus failing to provide reliable and relevant information to external stakeholders. The complainants are concerned that Shells use of inaccurate and misleading figures on sabotage has serious negative consequences for the communities of the Niger Delta. For example, when spills are classified as the result of sabotage, Shell has no liability or responsibility to pay compensation for damage done to people or their livelihoods. In addition, the complainants claim that Shell uses these figures to deflect criticism of its own environmental and human rights impact in the Niger Delta, misleading key stakeholders including consumers and investors.

Outcome
The complainants were disappointed in the outcome of that case, which convinced them that the Dutch NCP was incapable of contributing to a meaningful resolution to the dispute with Shell. The complainants thus decided to withdraw this case.

In September 2014, the Dutch NCP issued a final statement in the case despite the complainants' insistence that it was inappropriate to do so because they had withdrawn the complaint. In its final statement the NCP concludes that Shell does not deny that the complex situation in Ogoniland has a

very negative impact on living circumstances and the rights of many people and that Shell Petroleum Development Company was part of that problem. The NCP expects the companies to respect the rights of the people of Ogoniland and clearly and transparently provide access to remedy.

The NCP furthermore repeats the recommendations as stated in its former Final Statement in the Specific instance of January 2011 and remains open to playing a role in future dialogue between the parties.

Considerations
One of the cases was eventually withdrawn as the complainant did not see the value of continuing the complaint, having lost the faith in remediation through the Dutch NCP. Two new cases have filed by NGO's & local Nigerian organizations on Shell and ENI, an Italian O&G company and its Italian Subsidiary Eni International BV, for alleged past environmental impact and human right violations.

Current status
The current situation on the decommissioned oil field is that the company avoided a London high court case in 2015, when it paid a £55m settlement to separate communities affected by two oil spills it had caused. In parallel, there are two recent filed cases in Nigeria on historical spills that the complainants claim have not been remediated

Not directly related to the case, but also in Nigeria, is a current trial against Shell and Eni on alleged an alleged bribery scheme to secure a valuable oil field in Nigeria. In this case, complainants decided to go directly to court.

E.3 What can we learn from these cases?

Reviewing the cases it can be concluded there are three key players in the history of OECD cases in the Dutch O&G sector:
- Royal Dutch Shell, as they have been involved in all the relevant cases;
- Friends of the Earth, as they have acted as complainants in 4 cases, and have actively reported on most other cases;
- Dutch NCP, as they have been involved in all case, even though they were not required to always do so as the 'host country' had their own NCP.

Though insightful, the cases do not represent the entire Dutch Oil and Gas sector and its behavior regarding compliance with the OECD Guidelines worldwide as there is a limited number of cases and the cases relate to basically one company. However, a few considerations can be made based on careful review of the cases, data research and interviews.

In almost all cases the NCP did not conclude explicitly that the OECD Guidelines were breached by the O&G company. There are however three insights that light to the Dutch O&G sector specific challenges related to the OECD Guidelines.

Historical cases
Six of the cases have a strong historical background and deal with historical environmental and human health violations (the cases in Brazil, Argentina, Philippines, three cases in Nigeria). Local legal proceedings, ownership and liability, as well as compliance with local regulations at the time of the main operational impact make these cases more complicated. One can question how the OECD Guidelines can deal with historical cases and add value. The OECD Guidelines describe that companies are expected to apply due diligence in their supply chain (OECD Guidelines, 2011). The OECD Guidelines concern adverse impacts that are either caused or contributed to by the enterprise, or are directly linked to their operations, products or services by a business relationship. This means that

companies are not only expected to avoid causing or contributing to harm, but that they are also expected to use their leverage in the value chain. This cannot be achieved when the sites are no longer (fully) operated by the company the case is against.

Upstream O&G
The cases concerning Russia and Ireland targeted consortiums in the upstream (gas exploration), an important topic several years ago when the natural gas market was booming. In the most recent case of Nigeria, which status is 'filed', there are no other Dutch companies in the Oil and Gas sector, especially upstream, that have a history and range as large Shell, covering Upstream, midstream and downstream worldwide for over 100 years. Upstream (exploration) has always been controversial, specifically regarding environmental issues in 'untouched' areas. Exploration contracts have a very strong global political pressure that can go beyond the scope and sphere of influence of one country or company. This makes this specific O&G sector harder to target with the OECD Guidelines, which also might explain that one of the cases was rejected, and another was concluded with a statement that mediation appeared impossible.

NGO's and large multinationals
During interviews it was mentioned that NGO's tend to target in general the largest companies as they have the biggest impact. Royal Dutch Shell is one of the oldest and largest O&G multinational in the world. Most cases were already targeted by FOE in their earlier report 'Lessons not learned' (FOE, 2005) targeting Shell including all but one (Argentina) of the relevant OECD cases (USA, Brazil, Russia, Philippines, Ireland and Nigeria) before filing a complaint at the relevant NCP's. From 2006 FOE has used the OECD framework trying to force Shell to act on specific cases (four cases as complainant). However, during interviews it was indicated that due to the fact that the NCP's did not have the tools to enact considerable consequences on the companies, NGO's are less optimistic to use to OECD and the NCP's to file complaints in the future especially when mediation seems unlikely to solve the problem. On the other hand, two new cases have been filed in Nigeria involving the Dutch NCP and Dutch O&G sector.

Is there a positive effect seen on the O&G sector adherence to the OECD Guidelines in relation to the cases?
In none of the cases the NCP concluded explicitly that the O&G sector was not compliant in line with OECD Guidelines. However, in some cases the mediation role of the NCP (and subsequent media attention) led to an improvement of the situation (E.g. case in Ireland and the Philippines). The main company that plays a role in the cases is perceived by most stakeholders as 'open to discussion'. Also, the company has a clear company policy in place for the topics related to the OECD Guidelines.

The report 'Remedy remains rare' (OECD Watch, 2015) and the recently published 'Remedy is the Reason' identifies the potential and the weaknesses of the NCP system, amongst others suggesting stronger consequences to breaching the OECD Guidelines. According to these reports, these weaknesses must be addressed before NCPs can be considered an effective network for promoting adherence to the Guidelines or for addressing harm caused by corporate misconduct.

The O&G sector voices a similar concern, that as long as there isn't a material consequence or clear non-compliance for existing operations, the NCP's will have limited effectiveness. On the other hand, the O&G sector indicated that they see the mediation role of the NCP as a potentially very useful way to prevent (legal and political) escalation. According to the sector, open discussion and mediation however is only possible when there are no simultaneous legal proceedings against the same claim by the same party, as has been the situation in some of the relevant cases. Especially in relation to the 'Disclosure' chapter in the OECD Guidelines, this is a topic that was discussed during the interviews on the specific cases. Also, financial settlements and investments in the community have taken place outside of the influence of the NCP or OECD watch reports, which are subsequently not reported nor

acknowledged. On the other hand, there are cases where it seems the identified impact that led to the case has not been (fully) remediated.

F List of interviewed organisations

- Clingendael International Energy Programme
- Engineering bureau in the oil and gas industry
- Environmental Defense Fund
- Inspectie Leefomgeving en Transport (ILT)
- NAM
- Shell
- Roland Kupers Consultancy
- SOMO
- TNO
- TU Delft
- IPIECA
- ARA
- VNPI
- OECD NCP Dutch contact point
- UNEP
- College voor de Rechten van de Mens/Netherlands Human Rights Institute
- OECD
- Friends of the Earth
- Erasmus Universiteit Rotterdam
- Anonymous[43]

[43] One company was willing to submit information under the provision that the company would not be mentioned.