

# Sustainability Report 2020

Petrogas E&P Netherlands B.V.





## ABOUT THIS REPORT

Petrogas E&P Netherlands B.V. (PEPN) Sustainability Report provides a comprehensive review of the Company Mission, Vision, Core Values in the path to be an active protagonist of the Energy Transition in the Netherlands.

This document has been drafted following the IPIECA Sustainability Reporting Guidance for the Oil and Gas Industry <sup>[1]</sup>.

This report has been developed by the PEPN HSEQ Department with the active contribution of all operational Departments and the other sustainability Departments. The document has been reviewed and approved by the PEPN Societal and Ethics Committee and the Board of Directors.



# TABLE OF CONTENTS

|   |    |                                      |    |   |    |                             |    |
|---|----|--------------------------------------|----|---|----|-----------------------------|----|
| <b>1 ESG, THE JOURNEY</b>                 | 12 | <b>4 CLIMATE CHANGE AND ENERGY</b>   | 36 | <b>6 SAFETY, HEALTH AND SECURITY</b>    | 56 | <b>7 SOCIAL</b>             | 68 |
| 1.1 ESG, the Strategy                     | 16 | 4.1 Climate strategy                 | 37 | 6.1 Workforce Engagement                | 57 | 7.1 Human Rights            | 69 |
| 1.2 PEPN Ethical Principles               | 20 | 4.2 Technology                       | 37 | 6.1.1 Work Council                      | 57 | 7.2 Labour Practices        | 70 |
| 1.3 Materiality Assessment                | 21 | 4.2.1 Carbon Capture and Storage     | 37 | 6.1.2 Townhalls                         | 57 | 7.2.1 Contractor Management | 70 |
| 1.3.1 Context of the Organisation         | 21 | 4.3 Emissions                        | 39 | 6.1.3 Participation                     | 57 | 7.3 Community Engagement    | 71 |
| 1.3.2 Materiality Assessment              | 21 | 4.3.1 Methane Emissions              | 39 | 6.1.4 Prevention Officers               | 58 |                             |    |
|   |    | 4.3.2 Carbon Dioxide Emissions       | 39 | 6.1.5 Contractors Management            | 58 | <b>APPENDICES</b>           | 72 |
| <b>2 PERFORMANCE, AT GLANCE</b>           | 24 | 4.3.3 Other GHG Emissions            | 40 | 6.1.6 NOGPA                             | 59 | Abbreviations               | 73 |
|   |    | 4.3.4 GHG Intensity                  | 40 | 6.1.7 Training                          | 59 | References                  | 74 |
| <b>3 GOVERNANCE AND BUSINESS ETHICS</b>   | 28 | 4.4 Energy Use                       | 42 | 6.2 Workforce Protection                | 60 | IPIECA Indicators           | 74 |
| 3.1 Governance Approach                   | 29 | 4.5 Flaring                          | 44 | 6.2.1 Pandemic Management               | 60 | GRI Indicators              | 74 |
| 3.1.1 PEPN Board of Directors             | 29 |                                      |    | 6.2.2 Health and Well Being Initiatives | 60 | Pictures Credits            | 74 |
| 3.1.2 Societal and Ethics Committee       | 29 | <b>5 ENVIRONMENT</b>                 | 46 | 6.2.3 Legionella Prevention             | 61 |                             |    |
| 3.1.3 ESG Workgroup                       | 29 | 5.1 Water                            | 47 | 6.2.4 Naturally Occurring Radioactive   |    |                             |    |
| 3.1.4 Business Excellence Leadership Team | 29 | 5.1.1 Fresh Water                    | 47 | Material                                | 61 |                             |    |
| 3.1.5 Partner Engagement                  | 30 | 5.1.2 Discharged Water               | 47 | 6.2.5 Substances of High Concern        | 61 |                             |    |
| 3.2 Management System                     | 30 | 5.2 Biodiversity                     | 49 | 6.2.6 Safety Campaigns                  | 61 |                             |    |
| 3.2.1 Risk Management                     | 31 | 5.3 Air Emissions                    | 50 | 6.3 Occupational Safety                 | 62 |                             |    |
| 3.2.2 Review                              | 32 | 5.3.1 Nitrogen Dioxides and Nitrogen |    | 6.4 Process Safety                      | 64 |                             |    |
| 3.2.3 Improvement Plans                   | 32 | Deposition                           | 50 | 6.5 Security                            | 66 |                             |    |
| 3.3 Business Ethics and Transparency      | 32 | 5.3.2 Sulphur Dioxides               | 50 | 6.5.1 Cybersecurity                     | 66 |                             |    |
| 3.3.1 Conflict of Interest                | 33 | 5.4 Spills                           | 50 | 6.5.2 GDPR                              | 66 |                             |    |
| 3.3.2 Ethical Procurement                 | 33 | 5.5 Materials Management             | 50 |   |    |                             |    |
| 3.3.3 Public Advocacy and Lobbying        | 34 | 5.5.1 Waste Streams                  | 50 |   |    |                             |    |
|   |    | 5.5.2 NORM Waste                     | 52 |   |    |                             |    |
|   |    | 5.5.3 Use of Chemicals               | 52 |   |    |                             |    |
|   |    | 5.5.4 Recycling of Chemicals         | 52 |   |    |                             |    |
|   |    | 5.6 Decommissioning                  | 52 |   |    |                             |    |



## OUR COMPANY

Petrogas E&P started to do business in the Netherlands in 2014, with two companies, Petrogas E&P Netherlands B.V. (PEPN) and Petrogas Transportation B.V. (PT). The Company acquired a number of offshore assets and has allowed for the leveraging of the technical capabilities of its workforce to build a sustainable business, capable of withstanding adverse events such as global recessions, commodity price fluctuation and global pandemics. Following a path of innovative ideas and opportunities, PEPN is committed to the journey to become a leading company in the Energy Transition in the Netherlands. Our Vision, Mission and Core Values drive us in the effort to provide our local communities with more sustainable energy.

## OUR VISION

Natural Gas [²] has been promoted by the Dutch Government as a key resource to bridge the energy transition to carbon neutral by 2050. PEPN is the leading company in offshore shallow gas production and continuously seeks ways to minimise the impact of exploration and production activities in the mid-term. Whilst our oil production has declined and we are nearing cessation of all oil production, we working to upcycle our existing infrastructure into a Carbon Transportation and Storage facility and engaging with Stakeholders to find innovative solutions to reduce our local and global environmental footprint.

## OUR RESILIENCE

2020 has been a particularly difficult year for the whole World, the Netherlands, where we live and

operate and our People and Business Partners. We changed our way of living and working. It has been a difficult, testing and anxious period for all. Our work ethic, passion and drive throughout the organisation, offshore to onshore, with the help and support of our Partners, Shareholders and Stakeholders, contributed to creating a resilient working environment, where risks are addressed, and opportunities fostered.

## OUR RESPONSIBILITIES

Climate change and the global COVID-19 pandemic have starkly emphasised that we are all connected, and that we share gains and responsibilities with the Society we live in. In 2020, we started our journey to reshape our Management System to make the Environmental Social Governance aspects more evident in our day to day business to ensure PEPN will become more and more a partner for the sustainable future of our community. Our journey is built already on the success of our emissions reduction (~58% in Methane emissions, ~80% in NOx emissions) and GHG intensity improvements (~16%¹)

Finally, looking forward 2021 and beyond, with the economy slowly recovering and with the COVID-19 vaccination campaigns ongoing, I am confident that the Company's resilience built-in will allow us to thrive and adapt with the opportunity of the Energy Transition.

Sincerely,

**Nick Dancer**

*PEPN General Manager*

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¹ Reference year 2017





# PEPN Operated Assets and Production Overview



**A12 CENTRAL  
PROCESSING PLATFORM**  
Gas Fields  
Manned Facility  
Max POB 22



PRODUCING WELLS: **9**  
GROSS PRODUCTION: **4,516 BOED**

16" 10 km pipeline to NOGAT Extension

16" 26 km pipeline

12" 32 km pipeline

**A18A**  
Gas Fields  
Unmanned Facility  
Max POB 8



PRODUCING WELLS: **5**  
GROSS PRODUCTION: **10,199 BOED**

PRODUCING WELLS: **4**  
GROSS PRODUCTION: **2,615 BOED**



**B13A**  
Gas Fields  
Unmanned Facility  
Max POB: 8



# PEPN Operated Assets and Production Overview



PRODUCING WELLS: **2**  
GROSS PRODUCTION: **SEE HELDER**



**Q1 HAVEN**  
Oil Fields  
Unmanned Facility  
Max POB: 4

**Q1 HELDER**  
Oil Fields  
Manned Facility  
Max POB: 34

**Q1 HOORN**  
Under Decommissioning  
Unmanned Facility  
Max POB: 25  
Fuel gas transfer from Q4C to Helder

PRODUCING WELLS: **14**  
INJECTION WELLS: **1**  
GROSS PRODUCTION: **1,013 BOED**



**P9 HORIZON**  
Oil Fields  
Unmanned Facility  
Max POB: 16



PRODUCING WELLS: **9**  
GROSS PRODUCTION: **342 BOED**

**Q1 HELM**  
Under Decommissioning  
Unmanned Facility  
Max POB: 15  
Up and over Transfer



20" ~58 km pipeline to Ijmuiden  
20" ~21 km onshore pipeline to Oil Tanking Amsterdam



# ESG, THE JOURNEY

Since 2016, the Company has made increasingly significant steps to reduce its emissions, in line with our Safety and Environmental Management System (called Business Excellence Management System (BEMS), which already addressed world class Environmental Social Governance (ESG)

aspects, but were not explicitly recognized as such. A project started in 2020 (see Figure 1) to enhance the BEMS and to ensure the ESG aspects were more explicitly described and more visible to our internal and external stakeholders.

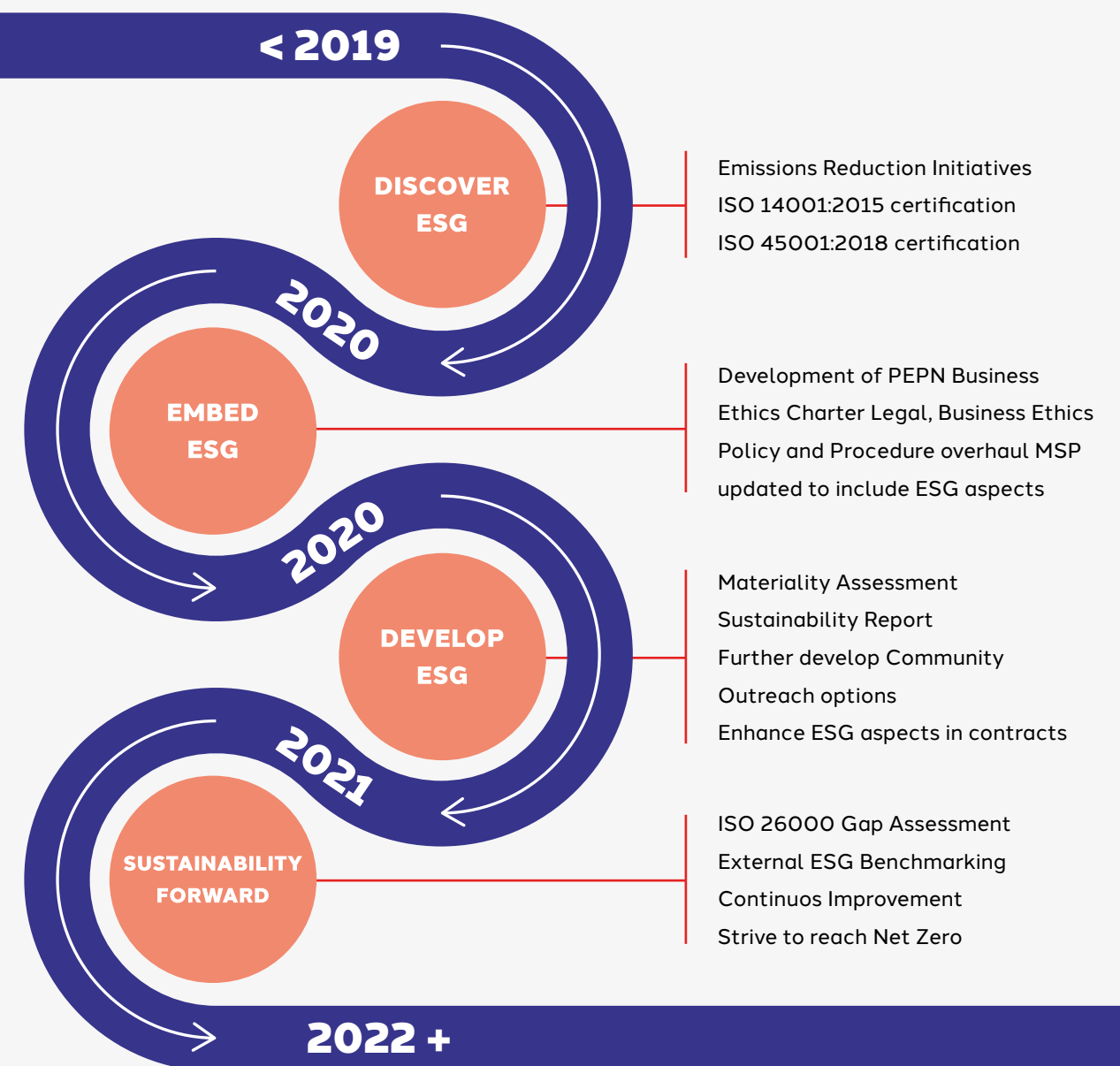


Figure 1 - ESG Roadmap



| Vision   | Differentiation   |
|--|---|
| <p>Being an independent E&amp;P company</p> <p>Being Resilient / Focused on Safety</p> <p>Coping with the changing need for energy and its mix</p> <p>Being environment and socially responsible</p> | <p>Diverse portfolio focused on an energy transition proof portfolio (focused on gas)</p> <p>Ensure late life assets will be safely decommissioned minimizing the impact on the environment and if possible utilized for the energy transition</p> <p>Disciplined and strategy focused capital allocation</p> |

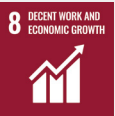
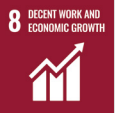






| Enablers   | Business Model  |
|--|---|
| <p>Skilled motivated diverse workforce</p> <p>Gas focused portfolio</p> <p>Partner of choice</p> <p>Smart use of technologies to produce energy safely whilst minimising emissions</p> | <p><b>Develop</b></p> <p>Develop gas fields around existing infrastructure</p> <p><b>Produce</b></p> <p>Produce in a safe, environmentally conscious manner</p> <p><b>Explore</b></p> <p>Add high grade value opportunities to the portfolio</p> <p><b>Decommission</b></p> <p>Decommission wells and infrastructure in a safe and cost effective way</p> |

| Strategy  |
|---|
| <p><b>Maximise</b></p> <p>Focus on maximising offshore domestic gas production as an enabler for the Energy Transition</p> <p><b>Reduce</b></p> <p>Reduce GHG emissions by adopting more efficient workflows and technologies</p> <p><b>Develop</b></p> <p>Develop and retain talent whilst continuing to attract diverse and innovative people</p> <p><b>Manage</b></p> <p>Manage and enhance the value of late-life assets in a sustainable way</p> <p><b>Decommission</b></p> <p>Decommission and upcycle key infrastructure to enable energy transition options</p> |





1.1 ESG, THE STRATEGY

| Materialities                                    | Current Status   | Looking forward  | United Nations Sustainable Development Goals  |
|--|--|--|---|
| Governance and Business Ethics                   |  |  |   |
| Compliance                                       | <ul style="list-style-type: none"><li>• ISO 14001:2015 and ISO 45001:2018 certification</li><li>• Annual Financial Audit</li><li>• Tax Audits</li><li>• Partners Audits</li></ul>  | <ul style="list-style-type: none"><li>• Maintain ISO certification;</li><li>• Compliance to ISO 26000 standard</li></ul>   |    |
| Transparency                                     | <ul style="list-style-type: none"><li>• Implementation in spirit of OECD BEPS / EU ATAD</li><li>• Participate in NL EITI and payment to government reporting</li><li>• Participate in Annual country-by-country reporting</li><li>• Annual Master File and Local File updates</li><li>• UBO / KYC / MDR (DAC6) / PWD</li><li>• Decommissioning Security Agreements</li><li>• Decommissioning Security Master Agreement with EBN (State Participation Company) (annual process)</li></ul> | <ul style="list-style-type: none"><li>• 3<sup>rd</sup> Party ESG audit</li></ul>   |       |
| Anti-corruption/<br>bribery/money-<br>laundering | <ul style="list-style-type: none"><li>• Developed PEPN Business Ethics Charter</li></ul>   | <ul style="list-style-type: none"><li>• Approve new Standard Service Contracts Terms and Conditions</li><li>• Personnel Training</li></ul>   |    |
| Climate Change and Energy                        |  |  |   |
| Air Emissions                                    | <ul style="list-style-type: none"><li>• Installation of Low-NOx equipment on diesel engines</li><li>• Reduced the number of diesel engines</li><li>• Decreased CH<sub>4</sub> emissions of 50% at the end of 2020 (baseline 2017)</li><li>• Established no-flaring policy</li></ul>  | <ul style="list-style-type: none"><li>• Further reduction of CO<sub>2</sub> and CH<sub>4</sub> emissions</li></ul>   |    |
| Energy Efficiency                                | <ul style="list-style-type: none"><li>• MJA-3 covenant</li><li>• Energy Directive</li><li>• ETS Scheme</li></ul>   | <ul style="list-style-type: none"><li>• Application of new energy directive requirements</li><li>• Electrification of A12-CPP</li></ul>  |    |
| Technology                                       | <ul style="list-style-type: none"><li>• Natural Gas production</li><li>• Investigate Q1 Carbon Transport and Storage (as part of the CCS project)</li></ul>  | <ul style="list-style-type: none"><li>• Maximise gas production as source of local gas with lower CO<sub>2</sub> footprint</li><li>• Electrification of A12-CPP</li><li>• Implement Carbon Transport and Storage</li></ul> |   |



| Materialities                | Current Status   | Looking forward   | United Nations Sustainable Development Goals  |
|------------------------------|--|---|---|
| Environment                  |  |   |   |
| Water Emissions              | <ul style="list-style-type: none"> <li>Monitoring of discharged water</li> </ul>   | <ul style="list-style-type: none"> <li>Decrease discharged water</li> </ul>   |       |
| Material Management          | <ul style="list-style-type: none"> <li>Separation and minimization of waste</li> </ul>   | <ul style="list-style-type: none"> <li>Improve separation streams</li> <li>Upcycling of material</li> </ul>   |    |
| Bio-diversity                | <ul style="list-style-type: none"> <li>Studies on underwater noise effect on porpoises</li> <li>Studies on artificial reefs</li> </ul>   | <ul style="list-style-type: none"> <li>Maintain Halfweg Gravity Base Structure (GBS) as areas of scientific interest for studying flora and fauna in artificial reefs</li> </ul>                                      |    |
| Decommissioning              | <ul style="list-style-type: none"> <li>Decommissioning strategy to decrease PEPN footprint</li> </ul>  | <ul style="list-style-type: none"> <li>Bring Helm in lighthouse mode at the end of 2021</li> <li>Plug and Abandon (P&amp;A) Hoorn wells to prepare platform for removal</li> <li>P&amp;A exploration wells</li> </ul> |    |
| Safety Health and Security   |  |   |   |
| Health and Safety Protection | <ul style="list-style-type: none"> <li>Enacting of working from home policies and practices</li> <li>Start implementation of Safety II / Resilience practices</li> <li>Health and Wellbeing Program supported by a Company Doctor</li> </ul> | <ul style="list-style-type: none"> <li>Further implementation of Psychosocial Aspects (PSA) improvement plans</li> </ul>  |    |
| Process Safety               | <ul style="list-style-type: none"> <li>Operations compliant with the Offshore Safety Directive (OSD) Requirements</li> </ul>   | <ul style="list-style-type: none"> <li>Improve Incident Investigation Process focus on Process Safety</li> </ul>  |    |
| Social                       |  |   |   |
| Labour Practices             | <ul style="list-style-type: none"> <li>Working From Home Survey</li> </ul>   | <ul style="list-style-type: none"> <li>Increase gender diversity and eliminate barriers to access</li> </ul>  |   |
| Community Outreach           | <ul style="list-style-type: none"> <li>“Connect” Activities</li> <li>Local charity initiatives</li> </ul>  | <ul style="list-style-type: none"> <li>Increase local footprint of Community Outreach</li> </ul>  |   |



## 1.2 PEPN ETHICAL PRINCIPLES

Based on the Petrogas E&P LLC Vision, Mission and Core Values, in 2020 we developed a set of Ethical Principles, which are going to be used as a driver for a more sustainable business in the Netherlands and Europe, at large. The PEPN Ethical Principles are incorporated into our Management System, which guide us on our daily activities to produce energy solutions to support the transition to a more sustainable life in the country we operate.



### ACCOUNTABILITY

To achieve the long and short-term goals of our company, it is important that all people within the company work together and share accountability. No matter the level of seniority, we all are equally accountable to complete our work to contribute to the success of our company.

In Petrogas we hold ourselves and our teams responsible to complete the tasks we are assigned or required for in our jobs. By being accountable, we make our business safer, more productive and efficient.



### INTEGRITY

We care a lot about honesty and integrity, because this not only creates value, it builds trust and confidence internally and with our stakeholders and business partners. Being honest means being fair, truthful and straightforward. Integrity is about possessing and sticking to high ethical principles.

In Petrogas, we expect from each other to act ethically and legally, with honesty, integrity and respect.



### PASSION

When passion is strong, it is possible to overcome barriers, achieve big things and have a big impact in the world. At Petrogas,

we experience that having a passion for our work is energising. We are doing what we are looking forward to every day. That makes us happy and motivates our colleagues.

We strive to radiate our passion also towards our business relations.



### THE WILL TO SUCCEED

In Petrogas, we stimulate each other to provide solutions to progress further without compromising on our integrity. We encourage and reward proposals of new ideas or procedures that either add value, reduce complexity or improve health, safety or our environmental footprint.

We have the drive, determination and commitment to succeed, but not at any price; we will stop an activity, if this is better for the safety of our workers, the community and the environment.



### OPENNESS AND DIVERSITY

In Petrogas, we are open, inclusive and value diversity amongst our workforce and the contractors we employ. We respect all opinions and beliefs without consideration of the person and his or her role.



### GIVING BACK

At Petrogas, we care about our each other and the communities we are part of. We encourage each other to support local communities, to volunteer, and we provide work experience to young people.



### WE LOOK AFTER EACH OTHER AND THE WORLD AROUND US

At Petrogas, we support and we take care of each other: there are short and informal communication channels (open-door policy), which reduce barriers for speaking out.

We do not tolerate harassment and / or questionable conduct. As a company, we have an appropriate 'Grievance Process' to ensure a safe workplace to all, no matter the position.

In dealing with contractors and third-parties, we seek partners who respect human rights and avoid child or modern-day slave labour. We restrict our activities to those who are not under international sanctions or trade controls.

A 'Whistle-blower Process' is in place to help anyone report on activities that are deemed to be illegal, unethical or dishonest. When we undertake our activities, we aim to minimise the impact to the environment, taking due care of stakeholders and applying appropriate technical solutions.

## 1.3 MATERIALITY ASSESSMENT

### 1.3.1 Context of the Organisation

PEPN operates one (1) gas manned platform in the A/B Blocks of the Dutch Continental Shelf, and one (1) oil platform in the Q1 Block; a total of other four (4) Normally Unattended Installations (NUI) are connected to the manned installations. Two (2) other platforms are not in production but are used for hydrocarbon transportation. The gas from the A/B block is compressed and transported via a dedicated trunk to the NOGAT extension after which it enters the NOGAT system. The oil is transported via owned offshore and onshore pipelines to Oil Tanking Amsterdam. As such, PEPN's production has a very limited footprint within any onshore community. PEPN offshore operations are supported by onshore personnel located in Rijswijk.

The business environment of PEPN is stable and mature. There has been a long history of oil and gas exploration and production in the Netherlands (PEPN celebrated 50 years of these operations in 2017), which has developed and maintained local expertise, in a stable legislative environment. This supports continuity in business and makes the area

attractive even in economic challenging times, such as it was in 2020. The Dutch Government confirmed the strategic importance of local gas resources in the energy transition incentivising the "small fields" developments in the Dutch Continental Shelf (DSC). Generally, PEPN develops oil and gas fields in consortia with other oil and gas companies and EBN, the "state-owned" Oil and Gas Company, under an Agreement of Cooperation (AOC). PEPN takes care for safe and reliable development, operation and ultimately decommissioning of our facilities, whilst the partner companies provide governance to their financial investment in our operations through a regular series of Joint Venture committee meetings (Technical Committee and Operations Committee). PEPN is part of the Netherlands Oil and Gas Exploration and Production Association (NOGEPa), which is providing HSE and operational support to all members, and NextStep, which is providing support for intelligent re-use of the existing infrastructure.

Engagement of Authorities is another key aspect of the PEPN operations; without the required permits and consistent demonstration of PEPN capabilities, the business would not be sustainable. In 2020, PEPN proactively engaged the Ministry of Economic Affairs and Climate (MEAC), the Ministry of Agriculture, Nature and Food Quality (LNV), State Supervision of Mines (SSM) and others in order to obtain the required nature and environmental permits required to continue operations and obtain new or extend permits. In 2020, we did not receive any official or unofficial findings ("complaints") from the authorities or from our governmental relationships.

### 1.3.2 Materiality Assessment

Based on the IPIECA Sustainability Guidelines and the GRI Sector Standard: Oil and Gas [3], a Materiality Assessment has been executed to map out the areas of significance for PEPN and our main stakeholders (Figure 2). The assessment is reviewed on an annual basis.



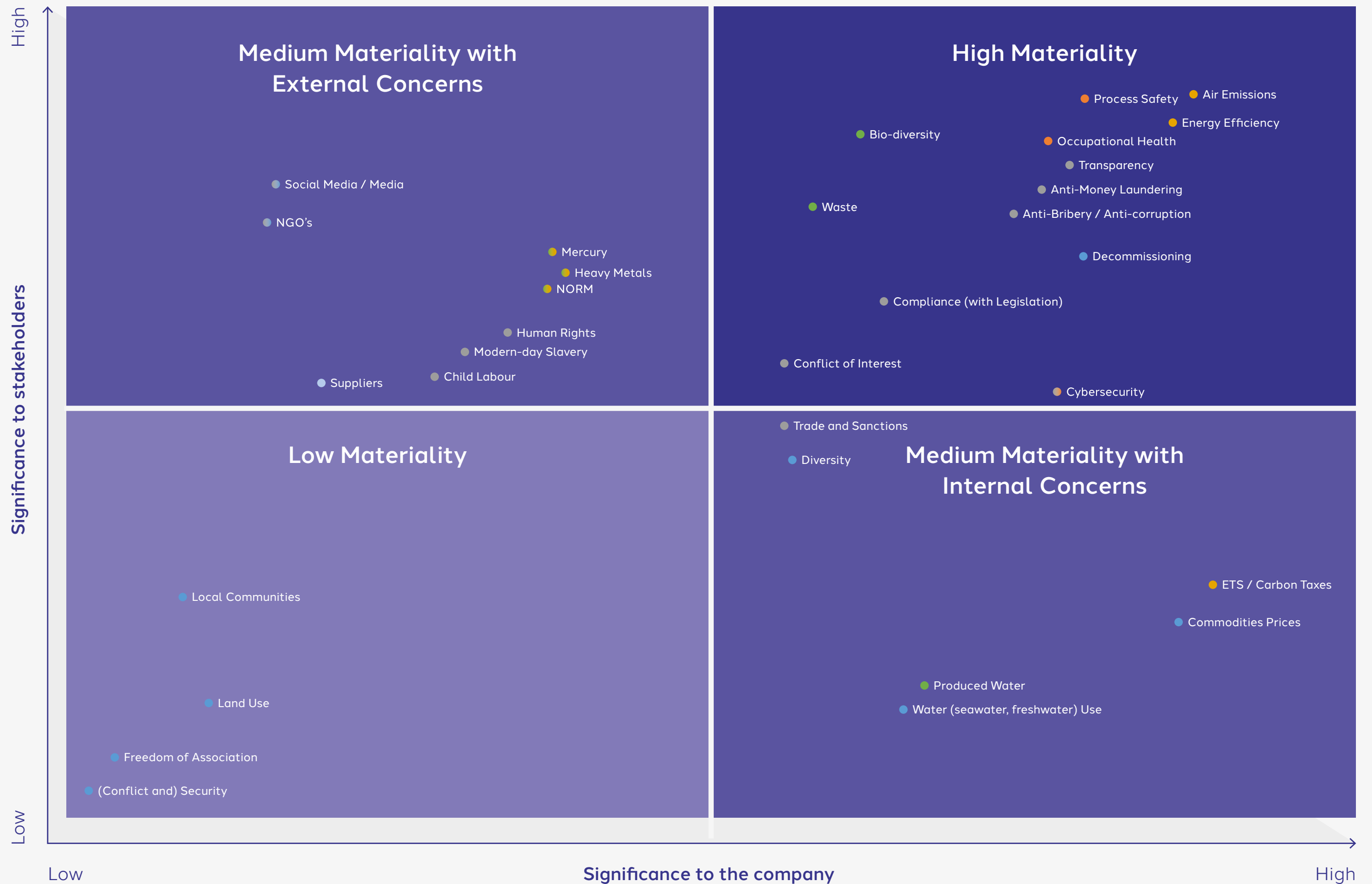


Figure 2 – PEPN Materiality Matrix



# PERFORMANCE, AT GLANCE

When looking at the performance of PEPN during 2020, the challenges created by the COVID-19 pandemic to the health and safety of personnel and the financials of the Company were profound and impactful: while our revenues and cashflow were impacted by the dramatic drop of commodity prices, the essential maintenance, critical inspections and safety measures (including NOx and CH4 emissions reduction) were completed and less critical maintenance activities were rephased, whilst still meeting our production targets.

In the course of the year, we negotiated and concluded a new gas sales agreement with ENGIE, which provided additional cashflow to sustain our present and future operations and investments. This included the successful drilling of the B13 A2 Sidetrack, a new development well as part of the longer UDS3 drilling campaign which carried over into 2021 with 2 new development wells on A12-CPP.

2020 Key Performance Indicators for PEPN are shown compared to 2019; additional details are also available through the following sections of this Sustainability Report and in the statutory Financial Annual Report.



# TOTAL RECORDABLE CASES FREQUENCY (TRCF)



# LOST TIME INJURY FREQUENCY (LTIF)



# GHG INTENSITY (TON CO2E / TOEQ)



# ENERGY INTENSITY (TJ / TOEQ)



# NO<sub>x</sub> EMISSIONS (TON)



# CH<sub>4</sub> EMISSIONS (TON)



# NET PRODUCTION (MBOE)



# PRODUCTION EFFICIENCY (%)



# RESERVES ADDITION (MMBOE)



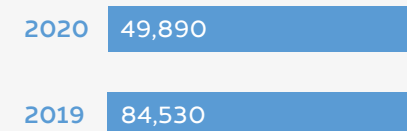
TRCF = (number of total recordable injuries x 1000000) / total manhours

LTIF = (number of Lost Time Injuries x 1000000) / total manhours

1 MM = 1 million

1 M = 1 thousand

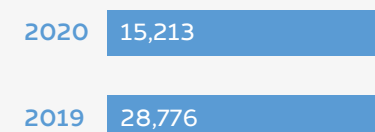
# REVENUE (€1M)



# REVENUE (€/BOE)



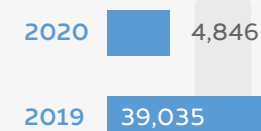
# OPERATING CASHFLOW (€1M)



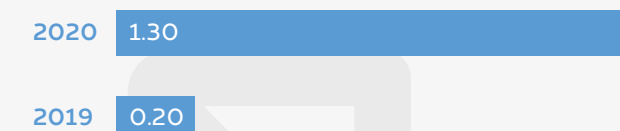
# CASHFLOW MARGIN (%)



# EBITDA(X) (€1M)



# NET DEBT TO EBITDA (X)



# NET DEBT (€1M)



# OPEX (€1M)



# OPEX PER BARREL (€/BOE)



# ABEX (€1M)



# CAPEX (€1M)



# CONCESSION RENTALS (€1M)



# RETRIBUTIONS (€1M)





# GOVERNANCE AND BUSINESS ETHICS

## 3.1 GOVERNANCE APPROACH

### 3.1.1 PEPN Board of Directors

The purpose of the PEPN Board of Directors is to direct and control the company's business, overseeing strategic and operational decisions, ensuring that the company meets its statutory obligations and that the company achieves its mission and objectives.

The current Board is composed by members who have significant international experience in the Oil & Gas (O&G) business and were selected for their strategic competencies; three different ethnicities are represented.



K. Sen



U al Barwani



N. Dancer



R. Koeleman

The Board of Directors meet every quarter to review the Company performance and alignment with the strategy, evaluating how the short-term operations effect the mid-term and long term sustainability of the company.

### 3.1.2 Societal and Ethics Committee

A Societal and Ethics Committee (SEC) was established in 2020 within PEPN to provide the right level of governance with respect to Environmental, Social and Governance (ESG) aspects; the Committee meets every quarter and reviews any open grievance either within the Company or outside the company, provide resources and monitor the progress of the ESG agenda, reviews / endorses Community Outreach initiatives.

The SEC is composed of the Petrogas CCO, as SEC Chairman, the PEPN General Manager, the General Counsel Representative, the Work Council Chairman, the Connect Team Chair and the HSEQ Manager as SEC Secretary.

### 3.1.3 ESG Workgroup

The ESG Workgroup also established in 2020 within PEPN to enact the ESG initiatives and ensure these are cascaded through the organisation. The Workgroup meets every month.

The ESG Workgroup is composed by the HSEQ Manager as Workgroup Chair, the Financial Compliance Analyst, the SCM Manager and the Legal Counsel.

### 3.1.4 Business Excellence Leadership Team

The PEPN Business Excellence Leadership Team is providing the governance to the PEPN BEMS and it is accountable for the safe and responsible execution of all activities in the Netherlands. The BELT is composed of the whole PEPN Management Team plus Legal Counsel, chaired by the General Manager and supported by the BELT Facilitator. The BELT meets on a monthly basis.

The BELT is composed by 13 members, 9 men and 4 women; four different nationalities are represented:





3.1.5 Partner Engagement

PEPN values its interaction with Joint Operating Partners by conducting recurrent Technical Committee Meetings (TCM) and Operational Committee Meetings (OCM); ad-hoc meetings may also be organised during the year to address specific topics of interest for all parties; the regular TCM/OCM meeting includes a HSEQ review, allowing for discussion of HSE / ESG aspects. PEPN has various joint operating agreements and multiple assets, with different equity levels, across the various licenses we operate in the Netherlands.



| Participation                 | 2019 | 2020 |
|-------------------------------|------|------|
| Technical Committee Meeting   | 25   | 24   |
| Operational Committee Meeting | 15   | 14   |

3.2 MANAGEMENT SYSTEM

PEPN Vision, Mission and Core Values are enacted through the BEMS; the BEMS is an integrated operating management system, which follows the ‘Plan, Do, Check, Act’ Deming Cycle (Figure 3).

The BEMS is an ISO 14001:2015 and ISO 45001:2018 certified Management System; in 2020, all the existing ESG aspects were re-organised to make them more visible and specific language was added in key documentation to better address those.

The BEMS is governed by the Management System Process (MSP), which is a step-by-step approach that guides leaders through the annual cycle of aligning forward-looking Business Excellence (BE) objectives with continual improvement to manage our business profitably in a socially, safe and environmentally responsible manner.

The BEMS consists of 12 different processes and 45 sub-processes specifically designed to manage the production and transport of oil and gas in the Netherlands. The 12 processes are divided in 3 groups:

| Management Processes     |
|--------------------------|
| General Management       |
| Operational Processes    |
| Major Capital Projects   |
| Operations               |
| Planning and Commercial  |
| Sub-Surface              |
| Well Engineering         |
| Sustainability Processes |
| Accounting and Finance   |
| Human Resources          |
| HSEQ                     |
| IT Management            |
| Legal Affairs            |
| Supply Chain Management  |

Each process is managed by a Departmental Manager, who is accountable for the execution of the PEPN policies and specific departmental policies and procedures within the requirements of local legislation, corporate requirements and international and national standards (e.g. ISO, EN, API, etc.).The Management Team (MT) is composed by 12 persons, 10 men and 2 women; three different nationalities are represented.

3.2.1 Risk Management

Underneath the MSP, resides the Risk Management Process, which scope is to identify Risks and Opportunities to prevent / mitigate negative and foster positive consequences. The MSP and the Risk Management Process are owned by the PEPN General Manager. The Business Risk and Opportunity Assessment Register, or BROA, is a live

document, where any threat or opportunity for the Company is addressed and assigned to a responsible party (usually a Departmental Manager) for follow-up; actions for closing gaps or explore positive circumstances may be assigned to the workforce for further follow-up.

In 2020, the BROA was reviewed and revalidated to include the COVID-19 (pandemic) broad impacts to personnel and our business.

A further comparison analysis between the BROA and the Materiality Assessment reveals that, among the 136 risks and opportunities identified, 40% were assessed to have a high ESG materiality, providing the Management Team with additional strategical and tactical insight on the PEPN business.

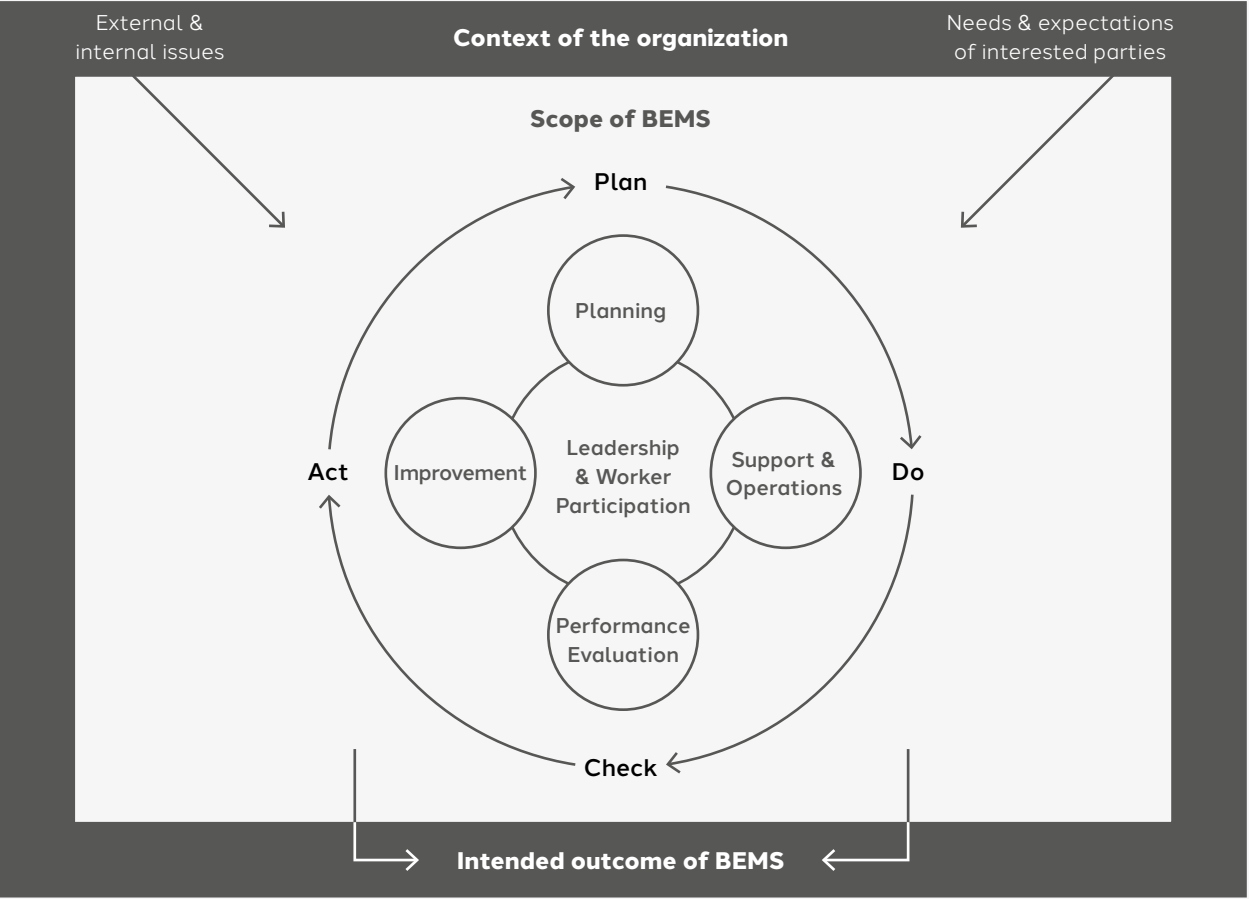


Figure 3 – BEMS Deming Cycle



### 3.2.2 Review

The BEMS functionality is constantly internally and externally reviewed and evaluated via active and reactive monitoring; audits, process self-assessments and BEMS Management Review. In 2020, 8 internal BEMS audits, 3 Corporate internal audit, 4 Contractors Management audits, 6 Finance and Tax audits, 1 ISO Audit, 1 Emissions Rights Audit and 2 SSM Inspections were executed.

The Process Self-Assessment is the tool used in PEPN to evaluate each process performance and address shortcomings and proposed improvements.

Each year the BELT gathers to evaluate the status of the management system in the BEMS Management Review; the objective of Management Review is to determine the continued suitability, adequacy, and effectiveness of the BEMS. The management review process ensures that all necessary information is collected and available to enable the BELT to perform an effective evaluation. The review also addresses the possible need for changes to policy, objectives and targets, and other elements of the BEMS considering audit results, monitoring activities, HSE performance data, regulatory action, changing circumstances, and PEPN's commitment to continual improvement.

The output of the Process Self-Assessment and the Management Review will be used as input for the BE Plan of the coming year. In 2020, all Processes, besides Accounting and Finance and Legal processes, were included in the self-assessment and management review. The Accounting and Finance Process is primarily engaged by external 3rd parties audits, tax audits and joint venture partners audits.

### 3.2.3 Improvement Plans

Based on scheduled and unscheduled reviews, performance evaluations, accidents and incidents investigations, audits, non-conformities, etc. improvement plans are drafted. Typically, PEPN addresses the main improvement opportunities

in the BE Plan for the coming year; mid-term and long-term actions are captured, as well, in order to set tactical and strategical objects. When required, other departments have additional Departmental annual plans (e.g. HSEQ Plan, HR Business Plan) to address additional lower priority opportunities.

Progress of the BE Plan is monitored in the BE Score-card, including any other BEMS improvement actions coming from incidents investigations, audits, compliance and permit requirements and HSE risk assessments.

### 3.3 BUSINESS ETHICS AND TRANSPARENCY

PEPN always ensures legal compliance and best business ethical practices; in 2020, PEPN enhanced this by unifying its own various legal and business ethical policies and procedures under one single policy statement, created a charter and reshape the Environmental Social Governance to improve the awareness of and promote the adherence to those business ethical practices. The charter was used as a basis for creating the "PEPN Business Ethical Principles" document, which is considered as the PEPN's Code of Conduct and used in all our service contracts with suppliers and contractors in order to make our commitments binding to our business partners as well.

A grievance and a whistle-blowers process are in place within PEPN; in 2020, one (1) occurrence was reported through the grievance process and addressed with no further follow-up required.

Other channels for internal resolution of conflicts are available within the company such as the Line Manager, the Prevention Officers and the Trusted Persons. The Company Doctor, as independent third party, is also available to act as recipient of complaints about the health and well-being of personnel.

As a due diligence process, the PEPN A&F Department is responsible for organising a self-

assessment of the status of compliance with Company policies and procedures and all the relevant legal obligations. Annually in Q2, the process requires every Departmental Manager to review the current status of affairs and sign-off all the relevant aspects in relation to the performed activities during the year and representation this was done in line with the requirements. The assessment is finally checked by the HSEQ Manager and General Counsel, before final sign off by the Manager A&F and the General Manager. The end result is the "PEPN Compliance Letter", a representation from PEPN to Petrogas International E&P (PIEP) Management on all activities performed by the company in compliance with the all the legal and business ethics requirements.

PEPN supports and welcomes transparency; PEPN submits an annual "Payments to Governments Report" to the Chamber of Commerce. The report outlines our contributions to Dutch state, including taxes, royalties and other related information.

PEPN also discloses information to the Extractive Industry Transparency Initiative (EITI) of the Dutch authorities. The Extractive Industries Transparency Initiative is a multi-stakeholder initiative between governments, companies and civil society, which promotes the open and accountable management of extractive resources. The EITI requires companies in the extractive industry to publish what they pay to governments, and governments to publish what they receive from companies; both are

independently verified by a third party auditor.

PEPN is part of an Omani multinational group (Multinational Enterprise or MNE), therefore information of PEPN is included in a country-by-country report that aggregates tax information of the MNE per country relating to the global income, taxes paid and other indicators for the MNE group. This report is submitted by the MNE, via its local surrogate group (i.e. PIEP), to the Dutch Tax Authorities.

During the year several audits are performed by external third parties (PWC, Tax authorities, etc) on the company financial statements and tax filings. PEPN's financial statements are audited by PWC and during 2020 also several tax audits were performed (BTW, Wage-tax and CIT/SPS). When auditing the financial statements, PWC also audits the processes around the financial statements and discuss the outcome with Petrogas. Based on the outcome of the audits, Petrogas can amend the business processes if needed.

### 3.3.1 Conflict of Interest

In 2020, the Corporate Conflict of Interest was updated and submitted to the whole PEPN workforce; at the end December 2020, ~95% of PEPN's staff read and signed off the updated policy.

### 3.3.2 Ethical Procurement

As part of Supply Chain Management Process, the Supply Chain Team is completing on an early basis an online training organised by CIPS [4] on



**Doreen de Niet-Ryan**  
Planning and  
Commercial Team  
Leader

*"I have had some employees come to me when they were confronted by behaviour that they felt was unwanted or to talk about circumstances they were not comfortable with. On all occasions it helped the employee to discuss the situation and get it off their chest. As a "Trusted Person", I provided guidance to help the employee resolve the issue or at least reach a level where the employee is comfortable again. All talks are highly confidential and not discussed further; on one occasion an employee provided approval to discuss a matter with the GM"*



Corporate Ethical Procurement and Supply. In 2020, the training was extended to the whole PEPN BELT. The training will be extended to other members of the organisation from 2021 onwards.

3.3.3 Public Advocacy and Lobbying

PEPN is not directly engaged in lobbying activities; PEPN is however an active member of NOGEPA, which acts as Public Advocacy agent for the E&P sector in The Netherlands in the effort to contribute to an open and transparent transition to sustainable energy supply. NOGEPA engages the various Dutch Ministries and Authorities at strategic level in order to ensure E&P interests are heard and issues concerning Health and Well Being of the Workforce

(e.g. hazardous materials), environmental and permitting requirements (e.g. Nitrogen deposition) and general exploration and production activities (e.g. Small Fields development) are discussed at policy level.

PEPN is neither directly nor indirectly contributing to candidates, politicians or political parties with resources. A process is in place to prevent and report potential acts of lobbying.

Besides contributions to local charities (see Section 7.3), here below are the fees PEPN paid in the period 2019 and 2020.

| Sponsoring                                   | 2019    | 2020    |
|--|---------|---------|
| Delftsch Studenten Corps (DSC)               | € 3.000 | € 1.200 |
| Utrechtsch Studenten Corps (USC)             | € -     | € 400   |
| Utrechtse Aardwetenschappen Vereniging (UAV) | € 500   | € -     |
| Petroleum Geologische Kring (PGK)            | € 750   | € -     |
| Society of Petroleum Engineers (SPE)         | € 2.000 | € 2.000 |



**Maaike Lanphen**  
Financial Compliance  
Analyst

*"I have noticed that transparency is becoming a more and more important topic every day. Transparency is important for a healthy company culture and makes compliance easier. Also, when employees have the full picture of the company's vision and core values, they are more likely to be loyal to the business moving forward. It is therefore good to see these are easily accessible for Petrogas employees through the BEMS system. To ensure PEPN is transparent, employees are periodically updated about the business through the newsletters, messages on SharePoint and town halls. I am ensuring Petrogas is transparent to the authorities by helping with audits, submitting requested information and checking if anything else is needed for the authorities to ensure they have all the needed information."*



# CLIMATE CHANGE AND ENERGY

## 4.1 CLIMATE STRATEGY

PEPN is actively pursuing short-term and long-term strategies to reduce the greenhouse gas (GHG) emission footprint and enhance energy efficiency. Every new project to be executed in PEPN goes through a Decision Review Committee (DRC), which makes inquiry about the viability of the projects from HSE as well as business and commercial point of view.

Environmental impacts in terms of GHG emissions and Energy Efficiency are discussed and analysed during the yearly Management Review session and strategic decisions may be taken for future development and / or follow-up.

As part of the Environmental Stewardship Process in combination with the Operations department, the emissions of GHG are monitored and reported as per statutory requirements. The PEPN Environmental Aspects Register is used to track environmental risks and opportunities and to explore improvement options.

## 4.2 TECHNOLOGY

In general, PEPN looks at the technologies available in the market that allows us to reduce our footprint and improve our operational efficiency. Where possible, we partner with Vendors (e.g. Solar) or Organisations (e.g. SNS Pool) to apply short-, mid- and long-term solutions (e.g. Methane abatement systems, logistics optimisations strategies, etc.).

We are pursuing the use of renewable power sources (e.g. windmills and solar panels) for our idle platforms and as well for future new developments. As a long-term strategy, PEPN is looking at electrification options for the A/B platforms.

### 4.2.1 Carbon Capture and Storage

PEPN has been pursuing participation in Carbon Capture and Storage (CCS) for an extensive number of years; the interest in this technology goes back 10-15 years, since we firmly believe that our licenced reservoirs in the Q1 Block and our existing

pipelines provide a very suitable infrastructure for transport and underground storage of CO<sub>2</sub>, making PEPN a strong candidate to participate in the various CCS initiatives in the country. In the past two years, due to renewed industry interest in the opportunity for CCS to reduce the overall CO<sub>2</sub> emissions, we have been actively engaging the Athos and the Porthos consortia in the Netherlands to gauge their interest in the re-use of our available infrastructure. In 2020, the PEPN Projects and Subsurface team, after engaging EBN and GasUnie (as part of the Athos consortium), updated its available information and data to perform screening studies to define the opportunity. Work on geological elements related to the safe storage of CO<sub>2</sub> and its long term retention within the formation (i.e. Vlieland Sand Stone) is currently ongoing. Our goal for CCS is to use the Q1 oil fields (Helder and Helm) and possibly the aquifer in the wider Q1 area for CO<sub>2</sub> storage and act as operator of these injection activities with offshore facilities. The Q1 block has a large capacity for CO<sub>2</sub> storage and is connected by a 20" pipeline to shore, which passes in close vicinity to Tata Steel and the Amsterdam industrial areas, it may well be the best option to store CO<sub>2</sub> in the Dutch offshore continental shelf.

Our current timeline for the project is:





| Location | Source              | Reduction measure  | Implemented |
|----------|---------------------|--|-------------|
| A12-CPP  | Compressor Seal Gas | Installation of Seal Gas Abatement System (re-use of seal gas as fuel gas)     | 2020        |
| A12-CPP  | High Pressure Vent  | Reduction of blow down events by process optimisation and maintenance planning | 2019        |
| Hoorn    | Crude Stabilisation | Re-routing of vent to fuel gas system (re-use of vent gas)                     | 2020        |
| Horizon  | Crude Stabilisation | Increase separator pressure to reduce associated gas to the vent stack         | 2019        |
| Helder   | Crude Stabilisation | Re-routing of vent to fuel gas system  | 2019        |
| Helder   | Blanketing / Purge  | Use of N <sub>2</sub> instead of fuel gas as blanket gas                       | 2020        |

Table 1 – Methane Emission Reduction Program 2019 - 2020

CH<sub>4</sub> EMISSIONS [TONNES]

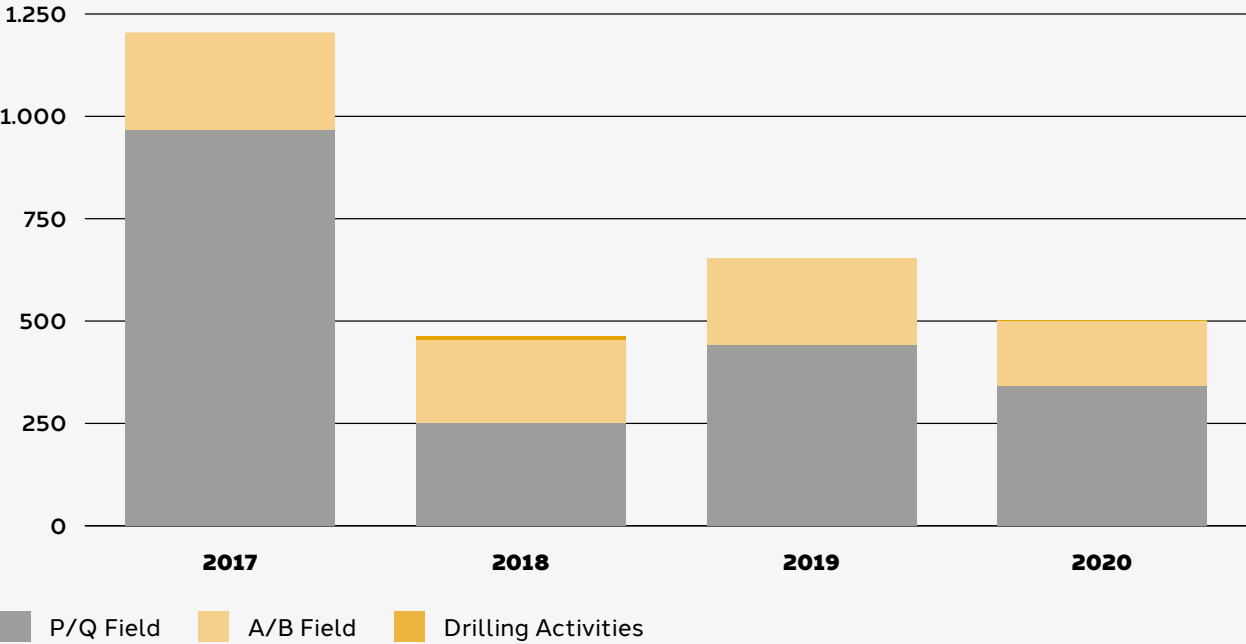


Figure 4 – Overview of PEPN Methane Emissions

By enacting this opportunity, PEPN will be able to upcycle some of the current infrastructure (i.e. both onshore and offshore pipelines) and to make use of renewable energy to power injection equipment (either self-produced or from an offshore wind farm switchgear). Besides the positive net effect on the Dutch Climate Change stride, this will also allow for long-term employment of 15-25 persons and the up-cycling of infrastructure would be of benefit to the Dutch society at large.

4.3 EMISSIONS

By the nature of oil and gas business, there are emissions; however, PEPN has put in place technologies and procedures to significantly reduce emissions of CH<sub>4</sub>, CO<sub>2</sub>, N<sub>2</sub>O and HFC Refrigerants greenhouse gases. These are monitored, reported to and reviewed by State Supervision of Mines (SSM) on an annual basis.

4.3.1 Methane Emissions

Within PEPN, Methane emissions are generated by combustion installations, safety venting and fugitive emissions in the equipment / plants. Occasionally, during concurrent drilling activities, safety required platform shutdowns result in controlled depressurisation leading to CH<sub>4</sub> venting.

In the period 2018-2020, a series of projects were executed to reduce the total amount of Methane emissions, as part of the Methane Reduction Covenant agreed between NOGEPA and the MEAC. An overview of these measures is given left (see Table 1).

The Covenant will end in Q1 2021 and PEPN is expected to show a total Methane reduction of 85% by the end of 2021, compared to the baseline year 2017 [5]. This is impressive and well above the industry target of 50%, to which the Dutch E&P Operators had committed.

The trends in Methane emissions can be seen in Figure 4; the initiatives indicated in Table 1 allowed us to start reducing the overall emissions and focus on the medium-term goal set by NOGEPA and MEAC.

4.3.2 Carbon Dioxide Emissions

Carbon Dioxide (CO<sub>2</sub>) emissions for 2020 were in line with previous years of operations (see Figure 5); CO<sub>2</sub> emissions are of particular importance for the A12-CPP, where the Emission Trading Scheme (ETS) and Dutch CO<sub>2</sub> Tax Regime is applied. The single A12-CPP emits around 65% of PEPN's CO<sub>2</sub> emissions.

CO<sub>2</sub> EMISSIONS [TONNES]

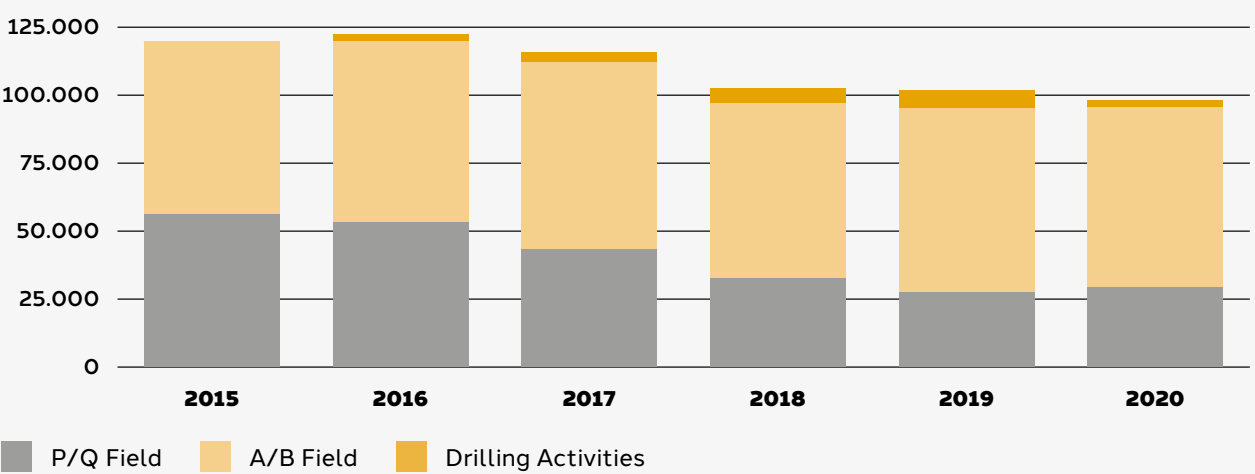


Figure 5 – CO<sub>2</sub> Emissions Trends



As part of ETS requirements, the CO<sub>2</sub> emission of the A12-CPP is verified by an external party (i.e. DNV) on an annual basis. The verification process includes a data flow audit, also including review of applicable maintenance actions and an offshore platform visit every 4 years. The annual verification for the 2020 report was performed remotely in February 2021; due to COVID-19 restrictions, the platform visit has been postponed to 2021. During the verification, no discrepancies were encountered and the CO<sub>2</sub> emission number has been approved and submitted to the Dutch Emission Authority (NEa).

CO<sub>2</sub> emission reduction options are under discussion both internally and externally (e.g. NOGEPa, NOGAT, etc.). Within NOGEPa, an extensive study was started in 2020, which include all Dutch E&P Operators to investigate CO<sub>2</sub> emission reduction options. Among the options, electrification, simplification of platform hubs and optimisation of the pressure of the offshore pipeline grid are being considered. One of the main incentives for this study is to align the CO<sub>2</sub> emission forecast of the E&P sector with the CO<sub>2</sub> emission reduction targets of the Climate Agreement of 49% reduction in 2030 and 95-100% (CO<sub>2</sub> neutrality) reduction in 2050.

4.3.3 Other GHG Emissions

Other GHG emissions relevant to PEPN operations are N<sub>2</sub>O and refrigerants.

N<sub>2</sub>O emissions are a result of the burning of fuel gas and diesel in combustion engines. The N<sub>2</sub>O emission factor of diesel is 6 times higher than that of fuel gas. It is policy of PEPN to reduce the amount of diesel used offshore, thereby reducing N<sub>2</sub>O emissions. The trend of N<sub>2</sub>O emissions is a steady slight decrease over the years, as a result of a lower diesel consumption.

Refrigerants are used in cooling units offshore. Every year a maintenance survey is performed. If a unit needs to be refilled, it is assumed that the missing amount is evaporated and the amount is reported to the Authorities (SSM) in the yearly environmental reports. As per European legislation, the more harmful refrigerants, so called R-substances, are being phased out. Therefore, the footprint of these emissions is going down. However, emissions are related fugitive emissions or equipment failures, therefore, can fluctuate over the years; in absolute terms, the amount of refrigerants lost are in the order of kilograms per year and have an incidental effect on the total CO<sub>2</sub> equivalent.

When combining these emissions with the substance's Global Warming Potential (GWP) *Figure 7*, it is possible to calculate the total emission of the company in tonnes CO<sub>2</sub>-equivalents (CO<sub>2</sub>-e).

As shown in *Figure 7*, the total GHG footprint of PEPN is decreasing in the last years. The efforts to reduce Methane emissions are the biggest contributor to this trend. With respect to 2015, a reduction of 31% of CO<sub>2</sub> equivalent has been achieved; with respect to 2017, when the different protocol in evaluating CH<sub>4</sub> emissions was started, the emission reductions is 25%.

4.3.4 GHG Intensity

Based on the production in the A/B and P/Q fields from PEPN, it is possible to monitor the Greenhouse Gas Intensity of the operations. *Figure 8* shows the overview of the GHG Intensity of both fields and the company in total. The intensity is defined by the ratio of the production, expressed in tonnes oil equivalent (TOEQ) and emissions, expressed in tonnes CO<sub>2</sub>-e. To show the complete picture, emissions from drilling projects have also been included in the total PEPN.

N<sub>2</sub>O AND REFRIGERANTS EMISSIONS [TONNES CO<sub>2</sub>-E]

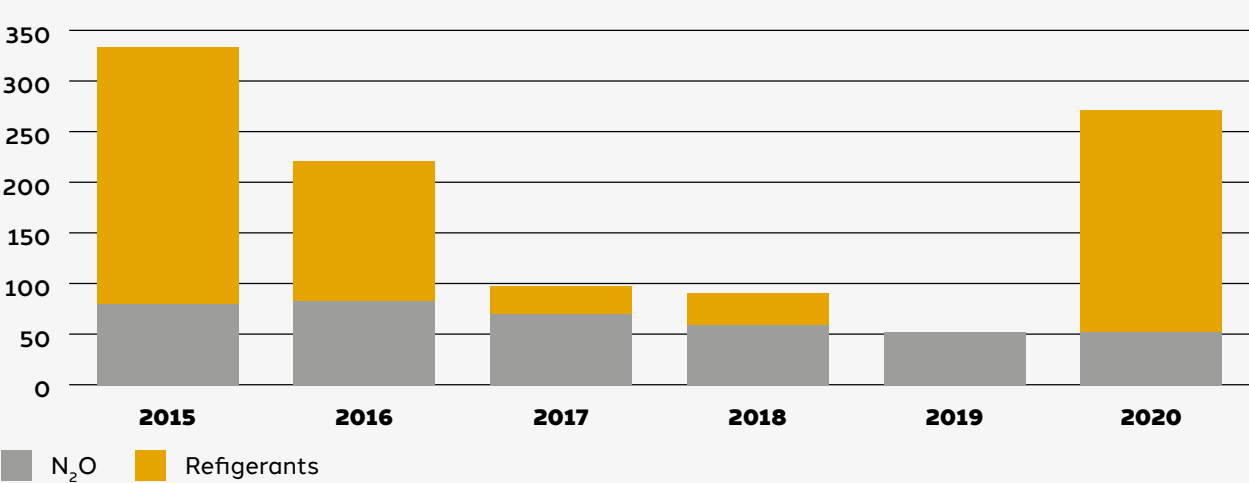


Figure 6 – Other GHG Emissions (N<sub>2</sub>O, refrigerants)

TOTAL GHG EMISSIONS [TONNES CO<sub>2</sub>-E]

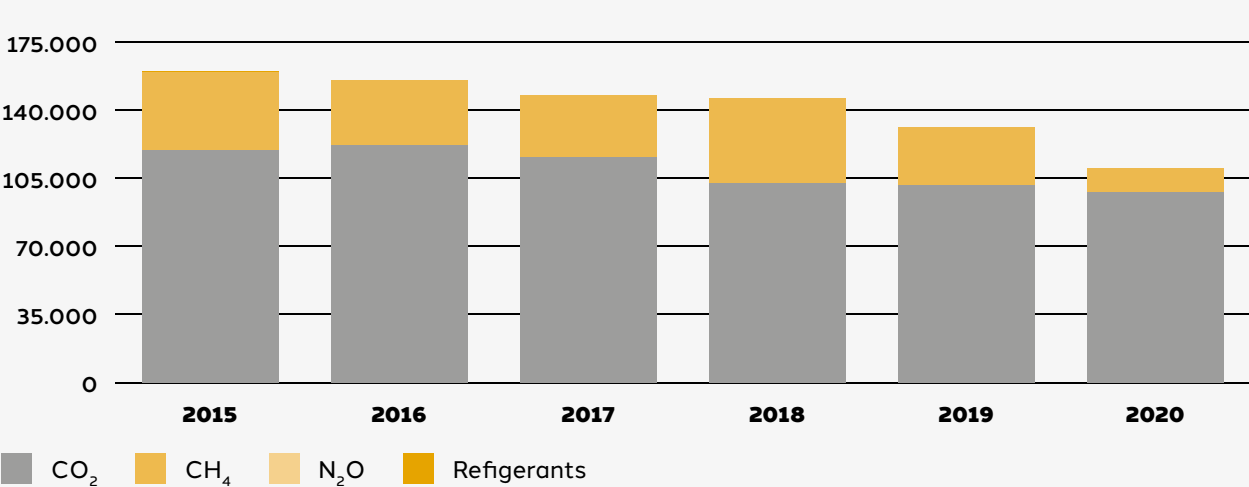


Figure 7 – GHG CO<sub>2</sub> equivalent Trends

GHG INTENSITY

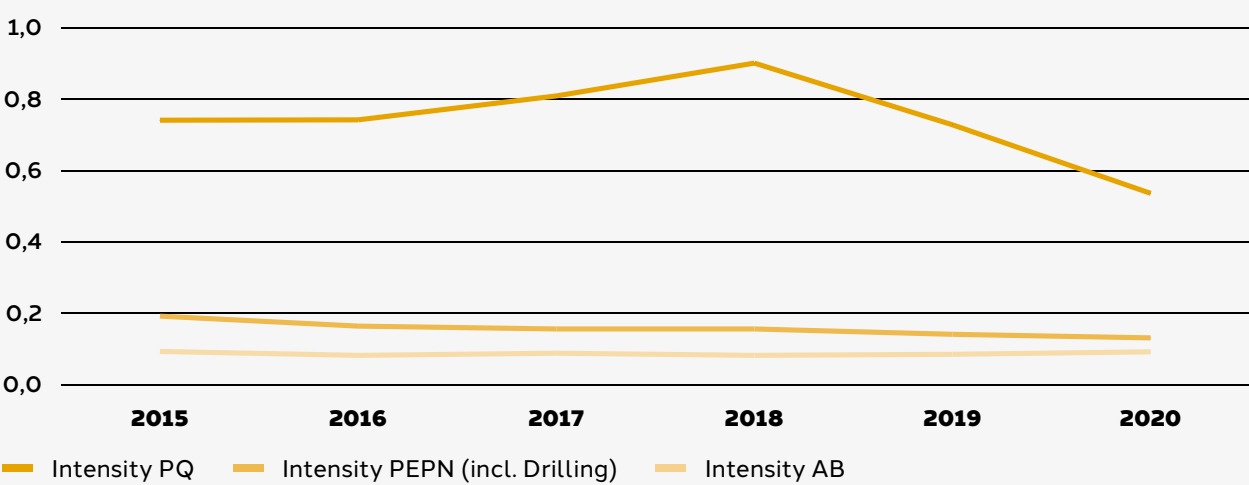


Figure 8 - GHG Intensity



|            | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  |
|------------|-------|-------|-------|-------|-------|-------|
| P/Q Fields | 0.741 | 0.742 | 0.809 | 0.901 | 0.728 | 0.536 |
| A/B Fields | 0.093 | 0.082 | 0.088 | 0.082 | 0.085 | 0.092 |
| Total PEPN | 0.192 | 0.164 | 0.156 | 0.156 | 0.141 | 0.131 |

Table 2 – GHG intensity Data

As shown in *Table 2*, the operations in the A/B have a relatively low GHG intensity, compared to the P/Q field operations. It shows a stable trend, based on GHG emissions, which are stable over the years combined with production levels based on the compressors capacity of the A12-CPP in relation to the pressure in the NOGAT pipeline to the shore, therefore creating a “plateau” on A/B field production. The trend is going slightly up in the years 2019 and 2020 due to lesser production of gas. New wells have been drilling in Q4 2020 and Q1 2021, which will restore A/B production to “plateau”, which should lead to a slight reduction in GHG Intensity. The P/Q field’s trend showed an increasing peak in the period 2016 to 2018, just after the Cessation Of Production (COP) of the Hoorn and Helm platforms. Since 2018, the trend has been in decline, mainly as a result of the efforts to reduce methane emissions in the P/Q field.

In general, the PEPN GHG Intensity is slowly declining over the years 2015-2020.

As per the current Business Plan, *Figure 9* shows the forecast GHG emissions in CO<sub>2</sub>-equivalents and corresponding GHG intensity up to 2033. Projects for further reduction of GHG emissions (e.g. electrification, use of renewables, etc.) are in the early stages of evaluation.

4.4 ENERGY USE

The main energy sources within PEPN are due to the use of diesel and fuel gas for power generation and compression. Venting of fuel gas is also considered in relation to energy efficiency, as it is potential fuel for a useful purpose. An overview of the energy consumption in the period 2015-2020 is shown in *Figure 10*.

It is policy of PEPN to reduce the amount of diesel used offshore. This does not only reduce logistics (and associated emissions and costs), but also has a positive effect on the NOx, SO2 and N2O emissions, as these are significantly lower from burning fuel gas compared to diesel. In the last years, the run hours of diesel engines have been significantly reduced and associated diesel consumption has decreased as well.

PEPN has committed itself to the Dutch energy-efficiency covenant, known as “Meerjaren afspraak Energie” (MJA). This covenant was introduced in 1992 as a collaborative effort of industrial companies and government authorities to improve energy efficiency of the industry. The latest phase of the covenant: MJA-3, was signed in 2008 and valid until the end 2020.

PEPN implemented the following energy efficiency measures in the period 2017-2020, *see Table 3*.

PEPN GHG EMISSIONS [TONNES CO<sub>2</sub>-E]

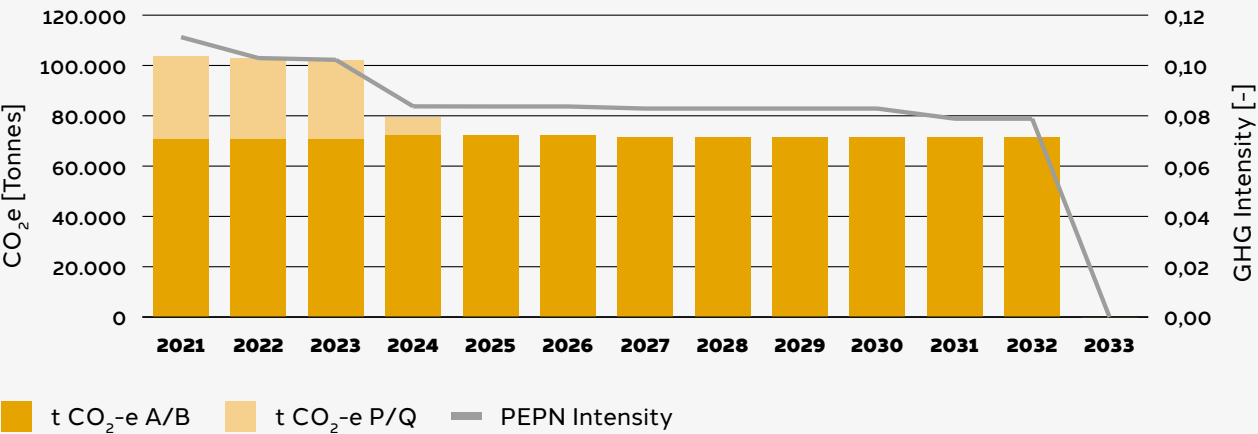


Figure 9 – Forecast GHG Emission and Intensity

ENERGY CONSUMPTION OFFSHORE

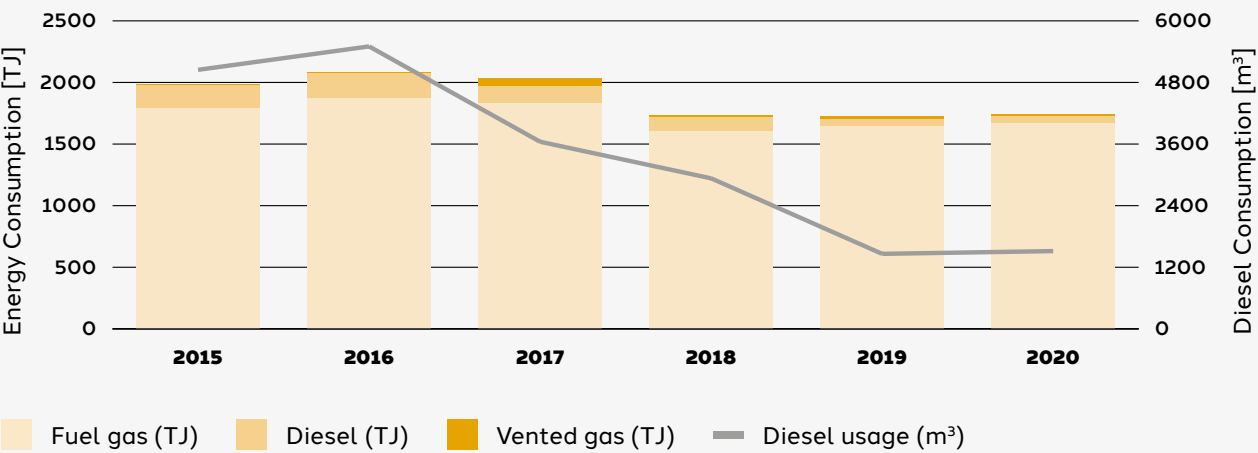


Figure 10 - Energy Consumption Offshore

| Activity / Reduction Measures                               | 2017 [TJ]  | 2018 [TJ]    | 2019 [TJ]    | 2020 [TJ]   |
|---|------------|--------------|--------------|-------------|
| Reduction of offshore helicopter flight hours               | 4.7        | 4.2          | 2.3          | 6,5         |
| Power Generation upgrade A12-CPP                            |            | 73.5         |              |             |
| Power Generation upgrade on Helder                          |            |              | 171.2        |             |
| Reduction of venting on Hoorn and Horizon                   |            | 45.4         |              |             |
| Transfer to a more efficient office (A label)               | 0.5        |              |              |             |
| Re-use of compressor seal gas to fuel gas system on A12-CPP |            |              |              | 4.2         |
| <b>Totals</b>   | <b>5.2</b> | <b>123.2</b> | <b>173.4</b> | <b>10.7</b> |

Table 3 - Energy Efficiency Measures



PEPN energy performance is reported on an annual basis to SSM. A third party review is performed by an independent consultancy company (e.g. KWA in 2020), before the report is officially released.

With the Covenant ended, as per 1 January 2021, PEPN has to directly comply with the Energy Efficiency Directive (EED), because companies adhering to MJA-3 covenant were exempted. One of the requirements of the directive is to develop an EED Study to determine the total energy saving potential of the company, both for offshore and onshore activities. This EED Study has been performed in 2020 and has been issued to Rijksdienst Voor Ondernemen (RVO), the competent authority in The Netherlands for the EED. Formal approval of the study is expected in Q2 of 2021.

4.5 FLARING

PEPN does not routinely flare, nor does it have an active flaring program; however, in special circumstances, short flaring campaigns are executed during well clean-up activities as part of new wells appraisal and / or drilling and completion. In order to protect the environment, flaring is minimised as such that all flaring activities conducted are in accordance with the relevant environmental permits and prevention strategies (e.g. bird migrations assessment, observers and shutdown protocols) are in place to avoid impact to flocks of birds migrating through the North Sea.

In 2017, PEPN developed a new well-cleaning methodology, which has significantly reduced flaring by over 60%. (see Table 4)

| Year | Well                       | Rig              | MMm <sup>3</sup> flared <sup>2</sup> |
|------|----------------------------|------------------|--------------------------------------|
| 2020 | B13-A2-S1                  | Maersk Resilient | 0.37                                 |
| 2019 | Horizon P09-A09 (HZW)      | Maersk Resolute  | 0.0013                               |
| 2019 | A15-A5                     | Maersk Resolute  | No flaring <sup>3</sup>              |
| 2019 | B10-O4                     | Maersk Resolute  | No flaring <sup>3</sup>              |
| 2018 | Well A18-A5                | Maersk Resolute  | 0.71                                 |
| 2018 | Well A12-A4-S1             | Maersk Resolute  | 0.32                                 |
| 2018 | A12-A7                     | Maersk Resolute  | No flaring <sup>3</sup>              |
| 2018 | Well A12-A9                | Maersk Resolute  | 0.32                                 |
| 2017 | Well A18-A4                | Maersk Resolute  | 0.17                                 |
| 2017 | Well A12-A8                | Maersk Resolute  | 0.28                                 |
| 2017 | Well A12-A9                | Maersk Resolute  | 0.19                                 |
| 2016 | A18-A1                     | Paragon C20052   | 1.01                                 |
| 2016 | A18-A2                     | Paragon C20052   | 1.71                                 |
| 2016 | A18-A3                     | Paragon C20052   | 1.17                                 |
| 2015 | No wells completed in 2015 | N/A              | N/A                                  |

Table 4 - Flaring Activities

<sup>2</sup> MMm<sup>3</sup> = 1,000,000 m<sup>3</sup>

<sup>3</sup> No well test executed





# ENVIRONMENT

PEPN has a mature ISO 14001:2015 certified management system; as integral part of BEMS and the HSEQ Process, the Environmental Stewardship (sub)process is well established to identify environmental and social health impacts related to our offshore and onshore activities, evaluate risks based on available preventive and mitigating measures and identify opportunities for improvements.

## 5.1 WATER

### 5.1.1 Fresh Water

PEPN does not make use of fresh water sources to conduct its operational business; potable water for personal use and cooking is either produced locally using seawater by means of Reverse Osmosis units or transported via Supply Vessel and bunkered in drink water tanks or from the city's water supply of Rijswijk or Den Helder. The amount of potable water kept offshore is based on standard quantities per person in order to maintain good hygiene practice.

The quality of Potable Water is managed by regular testing to verify compliance to the required biological, chemical and physical parameters (for more details refer to Section 6.2.3).

PEPN only operates offshore, therefore, there is no impact on the local community with respect to potable water or sanitation.

### 5.1.2 Discharged Water

Stormwater potentially in contact with any pollutant (e.g. the platform process and utility areas) is collected in the open drains systems and discharged overboard after water treatment. Water is sampled regularly and tested by an independent laboratory. The open drains water from the idle Helm and Hoorn platforms, which are not producing anymore since Q2/Q3 2016, is tested every quarter.



DISCHARGE OF PRODUCED WATER [MMm³]

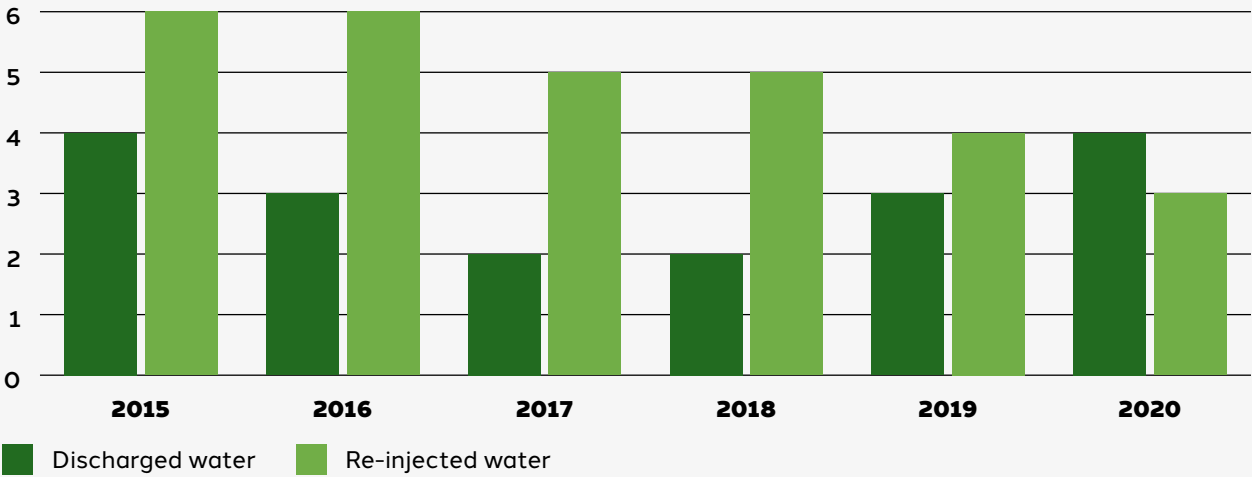


Figure 11 - Discharged and Re-Injected Produced Water

DISPERSED OIL AND BTEX [TONNES]

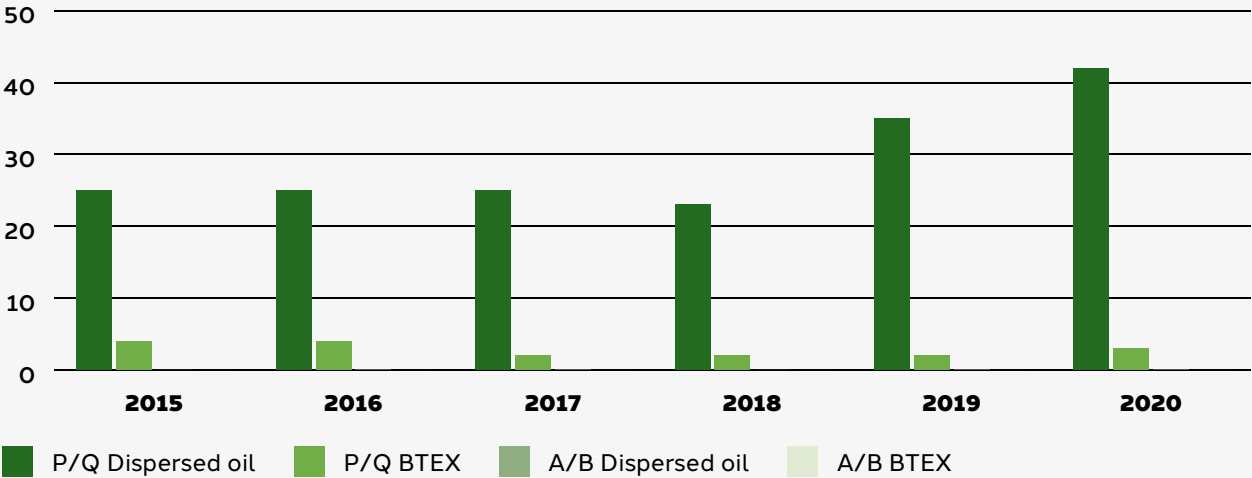


Figure 12 – Dispersed Oil and BTEX



Figure 13 – Wildlife around A12-CPP Jacket

Produced water is collected with the closed drains system, routed to drains tanks and treated before either re-injection into a dedicated reservoir (on the Helder platform) or discharge to the sea. The quantities of water discharged and injected are monitored. The produced water discharged is tested regularly by an independent laboratory.

The main contributors to total discharged dispersed and BTEX load are the Helder and Horizon platform (60% of total dispersed oil, 75% of total BTEX). In recent years, the Helder A-17 injection well performances has started to decline, thereby increasing the total amount of produced water discharged to sea. This is reflected in total amounts discharged dispersed oil and BTEX. In view of the upcoming P/Q Blocks Cessation of Production (COP) and following platforms decommissioning and removal, that the quantity of discharged water and associated dispersed oil and BTEX will be reduced dramatically by 2023.

5.2 BIODIVERSITY

Offshore installations in the North Sea have negative and positive impacts on biodiversity. During the installation of a platform or a pipeline, there is a short term negative impact to the local flora and fauna, due to the local disturbance created by vessel movement; fishes and mammals are driven away and flora is removed by excavating and trenching activities . In the medium and long term, however, and during the lifetime of the installation, an increase of biodiversity in the area is observed: the platform structure will create a substrate where molluscs can anchor and thrive, fishes will find more food and they will be preserved by the 500 m exclusion zone around the platform and mammals, such as porpoises dolphins will find plenty of food sources. In particular, the A18 platform lies within the Dogger Bank Special Area of Conservation which accommodates a diverse and highly productive marine ecosystem, including marine

mammals. PEPN worked together with Ocean Science Consulting (OSC) to gather data to assess the impact on the Harbour Porpoise population and activities in and around the A18 platform.

The study concluded that there was a positive long term impact on the porpoise population. PEPN is in the process of evaluating the best option to remove the Halfweg Gravity Based Structure (GBS), which supported the Halfweg Topside until January 2019, when it was removed. As part of the comparative assessment process PEPN sponsored Wageningen University to conduct an independent study on the ecological implications of removing the GBS to the flora and fauna of the area. According to the study, the GBS has a “[...] notable effect on both the local biodiversity and structuring of the macrofauna community [...]” and “[...] clearly indicates that the Halfweg structure increases the local species richness, suggesting positive impacts of this artificial reef on the macrofaunal biodiversity [...]” concluding that “[...] Removal of the gravity-based foundation of Halfweg will result in the loss of a significant number of species from the local area and possibly a lowering of functional diversity [...]” [8].



Figure 14 – Local Fauna Found at the Bottom of Halfweg GBS

It shall be noted that the Halfweg GBS has never contained any hydrocarbons during the platform operating lifetime.



5.3 AIR EMISSIONS

Other additional air emissions, which are relevant to PEPN, are the NOx and SO2, which are all generated by combustion engines.

5.3.1 Nitrogen Dioxides and Nitrogen Deposition

As part of the NOx Reduction Project, as initiated within NOGEPa, PEPN has been steadily decreasing its NOx emissions in recent years; taking as reference year 2017, the PEPN emissions have been cut ~80% and 41% with respect to 2019; NOx emissions were reduced by changing out diesel engine with gas generators, limiting the number of running hours on back-up diesel generators and installation of SCR (Selective Catalytic Reduction) units on the Helder and Horizon platforms to break down the pollutants.

PEPN successfully installed two SCR units on the Generator 3 and 6 on the Helder Platform in 2018 and two SCR units on Diesel Generator and Bi-Fuel Generator on the Horizon Platform.

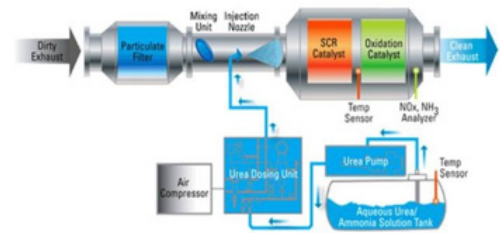


Figure 16 – SCR Unit Schematic

The net effect of this measure can be seen in Figure 15.

Based on the successful NOx reductions achieved in recent years, PEPN will continue to review opportunities for further reductions by utilizing low NOx drilling rigs vessel, etc. where applicable and feasible with particular attention to nitrogen deposition on close-by nature areas.

5.3.2 Sulphur Dioxides

SO2 emissions for PEPN show a steady decline over the years: around -60% with respect to 2017, as reference year, with a slight 1% increase between 2019 and 2020. This is mainly the result of the reduction of diesel used offshore.

5.4 SPILLS

In 2020, no spill of hydrocarbons into the sea occurred at any of the installations operated by PEPN or during operations executed on behalf of PEPN (e.g. Drilling activities).

5.5 MATERIALS MANAGEMENT

5.5.1 Waste Streams

PEPN waste streams are collected offshore in various categories and then shipped to the Den Helder base onshore. An overview of disposed waste is giving below in Figure 18.

Waste streams vary from year to year based on the number of offshore project activities and the amount of crew stationed on the platforms. 2020 was a year with lower waste quantities due to the effects of the COVID-19 pandemic.

NOX EMISSION (TONNES)

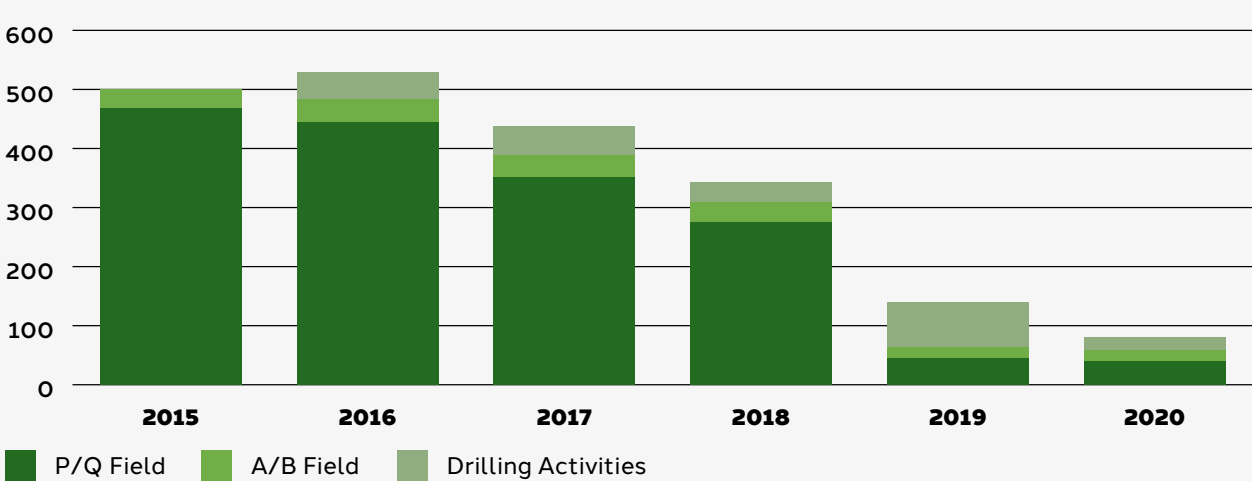


Figure 15 – NOx Emissions Trends

SO2 EMISSION (TONNES)

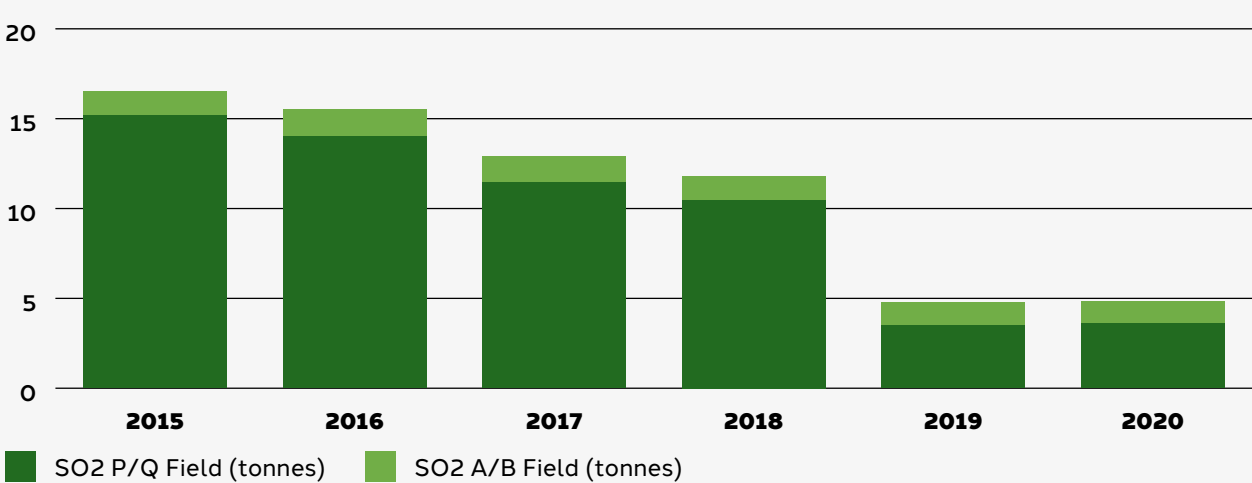


Figure 17 – SO2 Emission

WASTE STREAMS (KG)

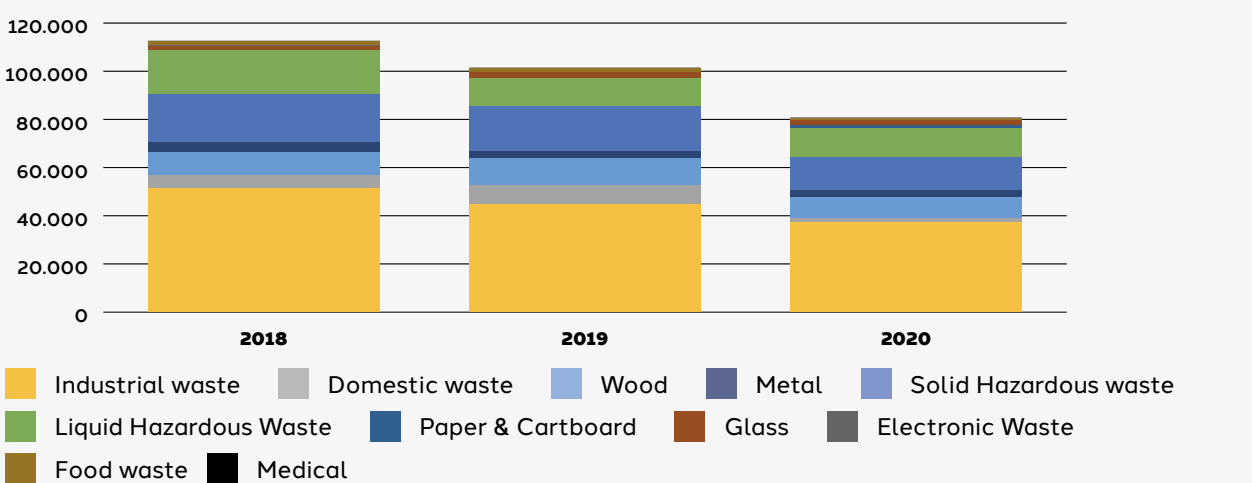


Figure 18 - PEPN Waste Streams to Shore



Joris Telgen

Environmental Coordinator

“The world is changing around us. Topics like sustainability and corporate responsibility are becoming more and more important. I see it as my job to bridge some of these expectations to the way we are working within the company and to keep finding ways to lower the environmental footprint of our activities. In my opinion, it is imperative that Petrogas does not only meet regulatory requirements but goes beyond that, is pro-active on environmental care, to ensure it can adapt in this new environment.”



### 5.5.2 NORM Waste

Naturally Occurring Radioactive Material (NORM) can be usually found as of result of Oil and Gas operations; NORM normally accumulates inside vessels and it can be removed together with some sludge during routine cleaning operations. As per standard operating procedure, in 2020, all the NORM contaminated sludge was collected offshore and transported onshore for disposal according to the legislative requirements, *see Table 5*.

In general, the amount of NORM waste is generated during maintenance (cleaning) or drilling activities and afterwards collected/transported/treated with the utmost care at its final destination an authorized company “NORM Waste company” according to the NOGEPa Industry Standards

### 5.5.3 Use of Chemicals

The use of offshore chemicals is regulated as per the Dutch Mining Regulations, which are in agreement with the OSPAR Convention. PEPN is registering the use of OSPAR regulated substances and reports this on an annual basis to SSM. Before issuing the data to SSM, an external review is performed by CEFAS and a report is generated to analyse trends in usage and discharge of chemicals [13].

OSPAR chemicals are categorized in seven groups. A, B, C and D group substances being the most harmful to the environment. R, P and E substances being the least harmful. The use and discharge of A and B substances has been phased out successfully in the past by Petrogas. In recent years, the use of C and D chemicals has been significantly reduced. Discharge of C and D substances is no longer allowed. Therefore, the use has been completely eliminated for production activities. As a contingency, C and D substances are still available for use during drilling projects, although the overall quantities has been minimised over the years. *Table 6* presents an overview of the reported used and discharged chemicals in the period 2015 to 2020.

Besides OSPAR regulated substances, PEPN also manages a Dangerous Goods List (DGL), which contains the chemicals and substances used on the platforms for regular activities, maintenance and small projects work. In 2020, an extensive review was started to assess this list, update it and remove substances, which are no longer in use or are redundant, thereby limiting the total amount of these items offshore. In January 2020, there were 430 items in this database, at the end of the year, this was reduced to 283 items (~35% reduction).

### 5.5.4 Recycling of Chemicals

Synthetic Oil Based Mud (SOBM) is selectively used during drilling activities and all SOBM is recovered for reuse; associated cuttings are recovered into containers transported onshore for final treatment.

### 5.6 DECOMMISSIONING

PEPN is pro-actively working on the decommissioning programme of the Q1 Field. The platforms in this cluster have been installed in the 80's and 90's, oil fields are depleted and production is ceased or close to cessation. The decommissioning activities completed in the last three years are summarised in *Table 7*.

The Halfweg platform was removed (both topside and jacket) in January 2019. An allision of a chemical tanker with the platform led to a fast-track removal project. The platform was installed with a Gravity Based Structure (GBS) on the seabed. This concrete structure is currently still on the seabed. Due to damage from the allision, it was not possible to remove it at the same time as the topsides. The Helm and Hoorn platforms have been in idle-mode since 2016. Helm is still in use as an up-and-over for the Helder pipeline to the shore. Hoorn is used a gas hub, transporting fuel gas from Wintershall's Q4a platform to Helder. Both Helm and Hoorn have still a function in the export of oil from the offshore locations of PEPN. In the current schedule, Helm is planned to be put in Lighthouse-mode by the end of 2021. This means that all

| Location                   | 2019     | 2020    |
|----------------------------|----------|---------|
| <b>A12-CPP<sup>4</sup></b> | 12690 kg | 0 kg    |
| <b>Helder</b>              | 0 kg     | 0 kg    |
| <b>Helm</b>                | 0 kg     | 0 kg    |
| <b>Hoorn</b>               | 0 kg     | 0 kg    |
| <b>Horizon</b>             | 6890 kg  | 4080 kg |

Table 5 - NORM Waste Collection

|                            | 2015                  | 2016                 | 2017                  | 2018                  | 2019                   | 2020                 |
|----------------------------|-----------------------|----------------------|-----------------------|-----------------------|------------------------|----------------------|
| <b>Used offshore</b>       |                       |                      |                       |                       |                        |                      |
| <b>A, B</b>                | 0 kg                  | 0 kg                 | 0 kg                  | 0 kg                  | 0 kg                   | 0 kg                 |
| <b>C, D</b>                | 25040 kg<br>(2.1%)    | 5191 kg<br>(1.0%)    | 5486 kg<br>(0.4%)     | 2325 kg<br>(0.3%)     | 17330 kg<br>(0.8%)     | 1757 kg<br>(0.3)     |
| <b>R, P, E</b>             | 1154919 kg<br>(97.9%) | 514485 kg<br>(99.0%) | 1309207 kg<br>(99.6%) | 807536 kg<br>(99.7%)  | 2074757 kg<br>(99.2%)  | 666687 kg<br>(99.7%) |
| <b>Discharged offshore</b> |                       |                      |                       |                       |                        |                      |
| <b>A, B</b>                | 0 kg                  | 0 kg                 | 0 kg                  | 0 kg                  | 0 kg                   | 0 kg                 |
| <b>C, D</b>                | 735 kg<br>(0.4%)      | 560 kg<br>(14.0%)    | 0 kg<br>(0.0%)        | 23 kg<br>(0.01%)      | 57 kg<br>(0.01%)       | 0 kg<br>(0.0%)       |
| <b>R, P, E</b>             | 185096 kg<br>(97.9%)  | 3447 kg<br>(86,02%)  | 245158 kg<br>(100%)   | 245270 kg<br>(99,99%) | 1134872 kg<br>(99,99%) | 135779 kg<br>(100%)  |

Table 6 - Use and discharge of OSPAR regulated substances

| Platform         | Activity                       | Year      |
|------------------|--------------------------------|-----------|
| <b>Halfweg</b>   | Wells Plugged and Abandoned    | 2017      |
| <b>Halfweg</b>   | Topside Removal and disposal   | 2018-2019 |
| <b>Helm</b>      | Wells Plugged and Abandoned    | 2017-2018 |
| <b>Pipelines</b> | Halfweg-Hoorn depressurisation | 2019      |

Table 7 – Last period Decommissioning Activities

<sup>4</sup> A12-CPP includes any waste collected on B13 or A18.



equipment will be decommissioned and only emergency and navigational lights will be active on the platform; the platform then will be only accessible via walk-to-work vessel for routine inspection and maintenance of the navigational aids. Hoorn Lighthouse-mode is scheduled later, after the wells have been plugged and abandoned.

Helder and Haven are currently still in production. After production has ceased, they will be transformed to Lighthouse-mode, as soon as reasonably practicable to reduce the environmental impact.

PEPN is currently setting up a contract with a marine contractor for the final removal scope of the Q1 platforms. This work is expected to be executed in the period 2023-2027.

PEPN is also participating in the NexStep campaign to plug and abandon stand-alone exploration wells across the Dutch Continental Shelf; a total of 3 PEPN wells will be decommissioned in 2022-2023 with a dedicated vessel equipped with a workover package.

| Location                    | Current Status   | Decommissioning Activities                         | Planning  |
|-----------------------------|--|--|---|
| Halfweg                     | Platform removed   | Removal of Gravity Based Structure (GBS) on Seabed | Pending decision on area of ecological interest |
| Helm                        | Idle – used for transportation of oil from Helder to shore | Convert to Lighthouse Mode                         | 2021  |
|                             |  | Removal of topside and jacket                      | 2023-2027                                       |
| Hoorn                       | Idle – used for transportation of gas to Helder            | Plug & abandon (P&A) wells                         | 2022  |
|                             |  | Convert to Lighthouse Mode                         | 2022  |
|                             |  | Removal of topside and jacket                      | 2023-2027                                       |
| Helder                      | In production  | Cessation Of Production (COP)                      | t.b.d.  |
|                             |  | Plug & abandon (P&A) wells                         | t.b.d.  |
|                             |  | Convert to Lighthouse Mode                         | t.b.d.  |
|                             |  | Removal of topside and jacket                      | 2023-2027                                       |
| Haven                       | In production  | Cessation Of Production (COP)                      | t.b.d.  |
|                             |  | Plug & abandon (P&A) wells                         | t.b.d.  |
|                             |  | Convert to Lighthouse Mode                         | t.b.d.  |
|                             |  | Removal of topside and jacket                      | 2023-2027                                       |
| Q1 and P9 Exploration Wells | Exploration wells suspended                                | Abandonment of exploration wells                   | 2022-2023                                       |

Table 8 – Decommissioning Plan





# SAFETY, HEALTH AND SECURITY

PEPN has a mature ISO 45001:2018 certified management system; a Health, Safety and Environment Policy and a Major Accident Prevention Policy are established and enacted to support the PEPN Vision, Mission and Core Values. Several BEMS processes and sub-processes are defined with the operational, tactical and strategic objectives to prevent and mitigate health and safety issues to the workforce; amongst them, some notable processes are: Occupational Hygiene, Health and Wellbeing, Emergency Management, Training and Competence, Managing Safe Work and Contractors Management. A Process Safety Management philosophy is also established to bring together the three defined pillars of Engineering Integrity, Facility Integrity and Operational Integrity and ensure that hazardous fluids are contained within their primary containment.

Due to the core business of PEPN, the health and safety impact of our activities to local communities is considered minimal if not negligible.

## 6.1 WORKFORCE ENGAGEMENT

Our colleagues, at all levels, are encouraged to report problems related to the BEMS and to offer suggestions on how to improve PEPN performance. The consultation and participation of workers/employees at all applicable levels in the organization related to PEPN BEMS is ensured by various mechanisms and systems. The participation and consultation mechanisms are characterised in detail in the Consultation, Participation and Communication Register.

To further improve the engagement of our staff, PEPN organises yearly “Crew Conferences”, which are the occasion for our whole offshore team to meet with the rest of the onshore colleagues, discuss safety topics, company performances, business developments and have bonding moments. Due to COVID-19, unfortunately, no Crew

Conference was organised in 2020; where possible, online engagement sessions were organised instead.

### 6.1.1 Work Council

A Work Council (WC) is established within PEPN; the WC is composed by 7 persons: 1 Chairman, 3 offshore personnel representatives and 3 onshore personnel representatives. The WC meets with the General Manager, HR Manager and General Counsel every quarter to address any concern of the workforce. Amongst the others, the WC is involved in the review and approval of Company Policies, the Risk Inventories and Evaluations and the Report on Major Hazards.

### 6.1.2 Townhalls

Townhall meetings are regularly organised by the PEPN Management Team to update the onshore and offshore workforce about the actual and current status of Company affairs: from the latest HSE incidents and lesson learnt to the newest business developments.

In 2020, due to the COVID-19 crisis, the Townhall meetings were almost all delivered via live stream with the possibility of interaction and questions for both the onshore and offshore workforce. This provides all the members of PEPN community with the opportunity to improve their awareness on the company affairs, ask questions to management and provide their views on the company business. The company enabled to have these questions to be sent also anonymously.

### 6.1.3 Participation

PEPN seeks to create and maintain a company culture in which all employees share positive commitment to HSE by:

- Encouraging HSE focused campaigns and themes, and welcomes employee constructive suggestions for improving HSE performance (e.g. Suggestion Box);
- Promoting a positive attitude towards HSE behaviours (e.g. SMART cards);



- Making everyone in PEPN responsible and accountable for their own actions (e.g. Stop Work Authority, Life Saving Rules).
- PEPN seeks to promote a positive culture throughout the execution of its core activities. A positive attitude of the BELT and other Managers and Supervisors on site can have a very influential effect in demonstrating the importance of health, safety, integrity and protection of the environment to the workforce. A Leadership Engagement KPI is established and tracked to encourage PEPN leaders to engage with PEPN Workforce and Contractors. PEPN positively recognises efforts of all personnel to maintain and strengthen our major accident defences, and relevant individuals are nominated for local award programmes. A reward system (e.g. “vouchers” given to the “best card of the week”) is put in place to recognise positive safe and environmentally sound behaviour during operational activities.

| Participation          | 2019 | 2020 |
|------------------------|------|------|
| Leadership Engagements | 66   | 65   |
| Hazard Hunt completed  | 40   | 43   |
| Life Saving Rules      | -    | 3    |

Leadership engagements continued in 2020 despite the limitations required to prevent COVID-19 outbreaks.

#### 6.1.4 Prevention Officers

Two dedicated Prevention Officers are available within PEPN to provide additional support in advising health and safety prevention measures.

#### 6.1.5 Contractors Management

Another key element of a robust health and safety management system is the engagement of our contractors, since a good percentage of the special construction, maintenance and inspection activities are conducted by third parties. As part of our Contractors Management process, we identify high risk contractors based on HSE and business criteria and routinely engage them either via informal/ formal meetings and / or via dedicated HSE audits. As members of NOGEPA and the SNS Pool, we also participate in industry driven initiatives to ensure we build and maintain a competent pool of contractors. In 2020, the number of initiatives was limited due to constraints in people movements, but we were able to engage our contractors in plenary online sessions before starting our maintenance campaign on the A/B Block (August 2020) and drilling operations on the B13 platform (September 2020) and A12-CPP (October 2020).

| Contractors Engagements      | 2019 | 2020 |
|------------------------------|------|------|
| Contractor Audits            | 5    | 8    |
| Contractors Plenary Sessions | 2    | 3    |

#### 6.1.6 NOGEPA

PEPN is an active member of NOGEPA, participating to various established committees and workgroups; by contributing and participating to these groups, we can address industry wide-issues and find common approaches on how to tackle potential threats to the health of personnel (e.g. substances of high concern) or the public (e.g. long term exposure to dangerous substances). Through NOGEPA, PEPN supports the “HSE Life” initiative to create a common HSE platform for all Contractors working on the Dutch Continental Shelf.

#### 6.1.7 Training

Keeping a trained and competent workforce is essential to protect personnel and the environment, while operating in a very hazardous environment like offshore upstream platforms in the North Sea. Based on the general and specific role assigned, personnel, either staff or long-term contractors, go through a routine of safety and technical training.

The COVID-19 pandemic in 2020, required us to

| Delivered Training        | 2019 | 2020 |
|---------------------------|------|------|
| NOGEPA                    | 297  | 27   |
| NORM                      | 2    | 0    |
| MAP                       | 25   | 12   |
| Offshore Emergency Drills | 127  | 141  |
| Office Emergency Drills   | 2    | 1    |

review the training schedule and postpone some of the planned training; where required, dispensations were granted by NOGEPA.

PEPN made available the time for employees to take part to the training program established by the Dutch Government as part of the economic package to support companies during the pandemic (i.e. Noodmaatregel Overbrugging voor Werkgelegenheid).

#### NON-HSE TRAINING HOURS

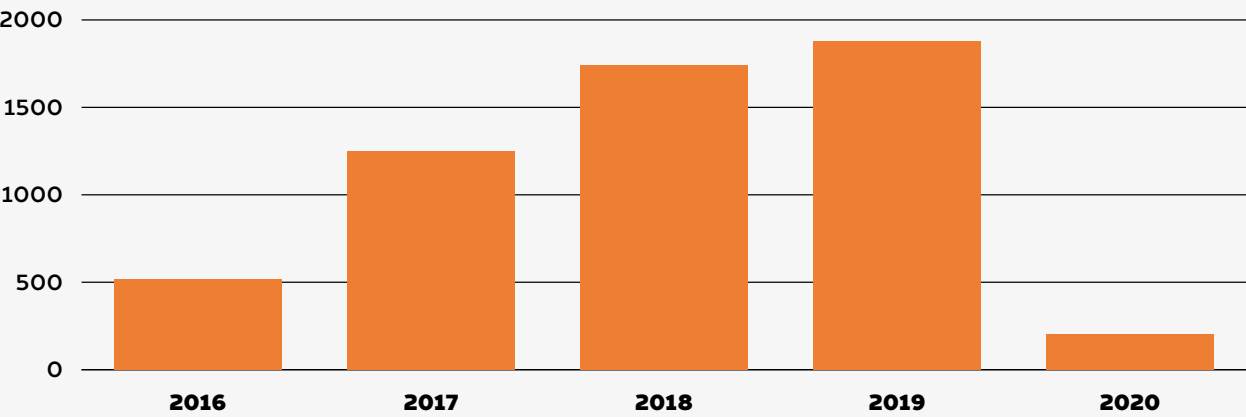


Figure 19 - Training Hours



Emanuele Gemelli  
HSEQ Manager

“Safety is something that an organisation does every day, it is not something we have because it is written in policies and procedures. My colleagues’ input, in form of observations, suggestions or comments is vital to understand what we are doing right and what we are doing wrong as an organisation: to learn and to share. This is not enough, thou; what is even more important, is that we keep the dialog open and provide feedback and answers to anybody raising questions or asking for improvements.”



6.2 WORKFORCE PROTECTION

PEPN has a comprehensive Occupational Hygiene and Health and Wellbeing program; while they focus on several aspects of health of personnel at work, they are complementary in their aim to protect and where possible improve the health of the workforce. Most of the programs planned 2020 were postponed due to the COVID-19 pandemic and most of the resources were redirected to prevent and mitigate any COVID outbreak within the working environment.

6.2.1 Pandemic Management

As soon as the word of a new health threat of international concern was shared by the World Health Organisation, we started to work out prevention and mitigation plans either within the Company and with NOGEPa to maximise the opportunity to keep our workforce, our colleagues and their family healthy. A COVID-19 Task Force was established in March to manage any aspect concerning health, safety and business continuity. Following the advice from the Dutch Government, we reduced the offshore crew to the bare minimum to maintain safe operations and established temporary Working From Home policies for office personnel, minimising the need for travelling and increasing social distancing. New protocols for normal operations and emergency management were put in place following a series of Risk Assessment executed along 2020. Changing the way of working created a new set of challenges to the Organisation, which required assessing how personnel was working from home, while still respecting their own privacy. A Working From Home (WFH) survey was launched and executed in October 2020. The aim of the survey was to verify, if our personnel working from home was able to do so in a safe and ergonomically sound environment; 94% of the personnel responded to the survey, indicating the road to take to further reduce potential physical and psychosocial harm. A new WFH policy will be enacted as of 2021.

In 2020, given all the preventing and mitigating measures put in place, we did not have any outbreak of COVID-19 either at the office (0 cases) or offshore (2 persons resulted positive after platform evacuation, with no further contamination onboard).

All personnel, either staff or contractor, working at any of PEPN premises were given the required PPE to minimise the chances of spreading flu-like diseases and, as of October 2020, a company provided PCR test was made compulsory for all personnel travelling to any of our offshore installations.

6.2.2 Health and Well Being Initiatives

A part of the Health and Well Being process, several initiatives are taken to prevent and mitigate health issues to the workforce. Apart from regulatory requirements to ensure and verify the adherence to legal requirements (e.g. Working Condition Act, Decree and Regulations) and company standards (e.g. Human Factor Engineering Philosophy), the Health and Well Being program includes:

| H&WB Initiatives                    | 2019 | 2020 <sup>4</sup> |
|-------------------------------------|------|-------------------|
| Medical examinations <sup>5</sup>   | 30   | 32                |
| Flu shot                            | 1    | 1                 |
| Health check-up days                | 3    | 3                 |
| Outdoor fitness breaks              | 24   | -                 |
| Remote stretching sessions          | -    | 3                 |
| Muscular strain prevention sessions | 24   | 4                 |
| H&WB Topics                         | 12   | 6                 |

Additional support is provided by the Company Doctor on as needed basis.

<sup>5</sup> H&WB activities have been restricted due to COVID-19  
<sup>6</sup> Medical examinations are carried out every two years for personnel travelling or working offshore

6.2.3 Legionella Prevention

As mentioned in Section 5.1.1, PEPN has a comprehensive Potable Water Management system; as per design, we currently operate 3 facilities with bunkered water (Helder, Helm and Hoorn) and 4 facilities with water produced via dedicated Reverse Osmosis (RO) units (A12, A18, B13 and Horizon). Chemical-physical means are applied to keep the quality of water within the legal limits. Although, on average, the quality of water is within parameters, sampling results show excursions from acceptable limits, but well within the reportability criteria to the authorities (e.g. <1000 cfu/l). On those occasions, as advised by our independent potable water advisor (i.e. Kalsbeek B.V.), a contingency plan is applied to bring the quality back to its required standards as mentioned in the Dutch legislation (Drinkwaterbesluit).

6.2.4 Naturally Occurring Radioactive Material

All fields operated by PEPN are under NORM license. The predominant nuclides measured are Radium-228 and Lead-210. Normally speaking, the measured background radiation at the platform decks is lower than the one measured inland.

In general and on average, the background radiation on our offshore platform is below 0.1 uSv/h against the onshore average of 0.18 uSv/h [12]. Personnel

directly involved with NORM handling are trained as per the relevant NOGEPa Industry standards.

6.2.5 Substances of High Concern

PEPN has control procedures in place to prevent and mitigate exposure to substances of high concern, which might have an impact to the health of personnel. These can include Mercury (as found in sludge), Chromium VI (as found in paints or result of welding and cutting), Asbestos (although rarely found, the material could be around in older facilities), BTEX and production chemicals in general. Potential long term exposure is monitored via biological sampling, as coordinated by our independent health services provider, based on a risk based approach.

6.2.6 Safety Campaigns

Safety Campaigns are a tool used in the industry to provide additional insight on a particular topic; usually, campaigns are either proactive, intended to inform about new safety aspects or reactive, launched after a series of negative events.

In 2020, we contributed to the NOGEPa campaign “Keep them All!”; the campaign was prepared by the Wat Group on behalf of NOGEPa with the active collaboration of PEPN; this campaign was focused on preventing hand injuries.

| Year | Haven    | Horizon      | Helder       | Hoorn    | Helm     | A12          | A18        | B13        |
|------|----------|--------------|--------------|----------|----------|--------------|------------|------------|
| 2019 | 8<br>CPS | 7 – 8<br>CPS | 7 – 8<br>CPS | 9<br>CPS | 7<br>CPS | 25<br>CPM    | 7.8<br>CPS | 7.8<br>CPS |
| 2020 | N/A      | 7 – 8<br>CPS | 7<br>CPS     | 9<br>CPS | N/A      | 7 – 8<br>CPS | 6<br>CPS   | 18<br>CPM  |

Table 9 - Average platform NORM background measurements (Counts per second/minute)



Further, in our quest for continuous improvement, we continue with the focus on the PEPN (IOGP) Life Saving Rules within the organisation; every month one of the 9 LSR is shared within the organisation and a token of appreciation is awarded for the best observation of the period. The observation is shared with the rest of the organisation via our Monthly Newsletter.

### 6.3 OCCUPATIONAL SAFETY

Analysis of occupational incident statistics as a tool to manage safety has been demonstrated to only provide limited improvements on safety; therefore, PEPN is actively pursuing a broader strategy in order to further improve both the occupational and process safety aspects of our daily activities. Safety cannot only be measured by the lack of incidents, but one has to consider the presence of safeguards; safety is something that an organisation, a complex socio-technical community, does on a daily basis, not something that it has. The focus therefore should move towards maximising doing the “right thing”, where we succeed under varying circumstances, while continuing to minimise the adverse outcomes.

*"We should not (just) try to stop things from going wrong. Instead, we need to understand why most things go right, and then ensure that as much as possible indeed goes right."*

## Dekker (2019) [9]

While in pursuit of enhancing our approach on occupational (and process) safety, we are and will continue to record, report, investigate and learn from incidents and near misses, as per current industry standards.

The Lost Time Injury Frequency Rate (LTIF) and Total Recordable Cases Frequency (TRCF) are calculated on one (1) millions manhours. The Road Traffic Accident Frequency is evaluated based on

| Occupational Safety Indicators | 2019 | 2020 |
|--------------------------------|------|------|
| LTIF                           | 0    | 2.46 |
| TCRF                           | 4.50 | 4.25 |
| Fatalities                     | 0    | 0    |
| Fatality rate                  | 0.00 | 0.00 |
| RTAF                           | 0.00 | 0.00 |

one (1) millions kilometres. Compared to 2019, in 2020, due to COVID-19 constraints, the number of manhours decreased of about 39%. Figures include both PEPN employees and contractors.

In 2020, we accumulated 639 helicopter flying hours to transport our personnel from/to Den Helder Airport to/from our installations or the rig employed to perform drilling operations. No incidents with HSE consequences were recorded.

In 2020, we accumulated around 120 full sailing days to transport goods from/to Den Helder Harbour from/to our installations or the rig employed to perform drilling operations. One first aid case (FAC) was recorded during marine operations, while moving the Maersk Drilling Resilient Rig from B13 to A12-CPP.

The most significant event occurred in 2020, was a Lost Time Injury (LTI) that occurred on the A12-CPP in October. The LTI was investigated as per PEPN Incident Investigation and Reporting Procedure <sup>[13]</sup> and lessons learnt captured and shared with all relevant stakeholders. In general, Lesson learnt are shared in ad-hoc sessions, during townhall meetings, TCM/OCM, daily operations meeting or other venues. It is a PEPN policy to start any meeting involving more than 5 persons with a safety moment; lessons learnt from our incidents are often used in those occasions.



Figure 20 – Safety Campaigns

## HISTORICAL SAFETY EVENTS (AND TRCF)

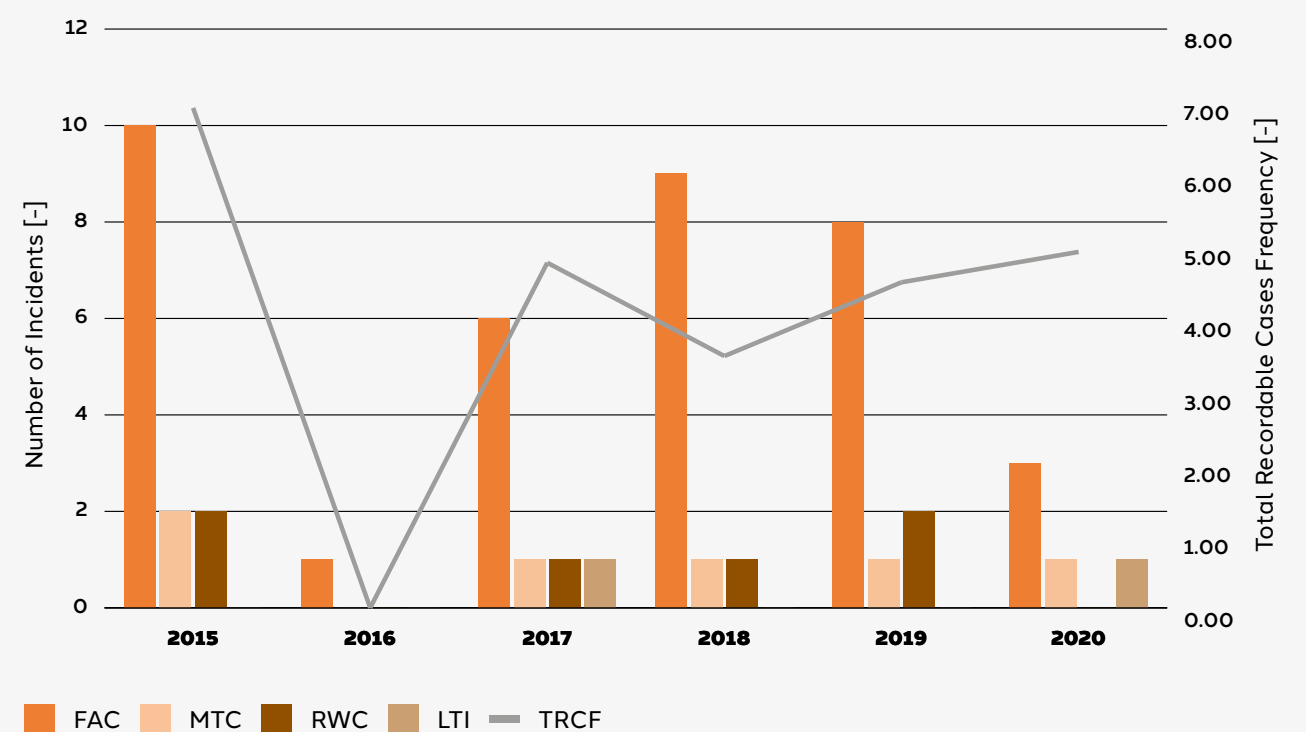


Figure 21 - Historical Safety Events Trends



In 2020, we refocused our attention to the learning process from incidents and observations. This is an ongoing process with the objective to ensure that all the lessons we can derive from a project, an observation or an incident are effectively embedded into the daily life of the organisation.

For completeness of information, the events classified as aviation and marine incidents did not result in injuries to personnel, but had a low potential for it. The number of near misses indicated where occasions where an unplanned event occurred with the potential for personnel to be injured.

| Other Occupational Safety Indicators    | 2019 | 2020 |
|---|------|------|
| First Aid Cases                         | 8    | 3    |
| Non-Work Related events                 | 8    | 14   |
| Aviation Incidents                      | 0    | 2    |
| Marine Incidents                        | 0    | 1    |
| Safety Zones Intrusions                 | 1    | 3    |
| Level 1 investigations executed in time | 100% | 97%  |
| Level 2 investigations executed in time | 100% | 90%  |
| Level 3 investigations executed in time | 100% | 100% |
| Improvement Action Raised               | 81   | 75   |

6.4 PROCESS SAFETY

The PEPN Process Safety Management is an integrated and disciplined framework for managing the integrity of the systems and processes to prevent and mitigate major accident events.

By managing its Engineering Integrity, Facility Integrity and Operations Integrity, PEPN ensure handling of hazardous fluids to prevent and mitigate major accident events.

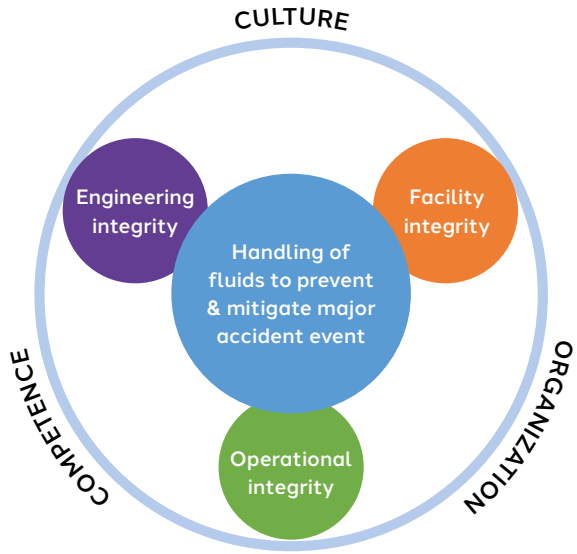


Figure 22 – Process Safety Management Framework

The identified “integrities” are a way to depict the existing PEPN BEMS processes and subprocesses around their main focus areas, but, in general, there is no rigid separation among them; further, there is no direct link between the “integrities” and the various PEPN technical departments. By managing Process Safety, PEPN ensures a consistent overlap with Occupational Safety and Environmental Protection is achieved.

PEPN ensures their “integrities” are managed by a competent workforce, fit for purpose organization, operating within a robust Safety Culture.

In 2020, neither Tier 1 nor Tier 2 events, as defined by API RP 754 occurred in PEPN; losses of containment and near misses are used as a lagging indicator for Process Safety.

PEPN classified the “size” of a loss of containment, as per the requirements of the NOGEPa Industry Standard 86 [14]. The gas released occurred in 2020 was negligible in nature and due to the technical failure of a connecting line to a gas engine manifold on the Helder Platform. A historical overview of all environmental events is depicted in Figure 23.

| Loss of Containments          | 2019 | 2020 |
|-------------------------------|------|------|
| Gas Releases - Negligible     | 0    | 1    |
| Gas Releases - Significant    | 0    | 0    |
| Gas Releases - Major          | 0    | 0    |
| LOC to sea - Minor            | 2    | 0    |
| LOC to sea - Major            | 0    | 0    |
| Potential for Fire/ Explosion | 4    | 3    |

Other leading indicators are available, monitored and shared within the Company; the goal of 2021 onwards is to centralise the outlook of data and make them more visible to the organisation.

At the beginning of 2020, a process safety leadership initiative was planned to be executed at the Spadeadam site in UK, however, the global pandemic put the exercise on hold.

In 2020, we also worked on a concept Process Safety Campaign; the material was completed in Q4, and it is expected to be launched in 2021.

HISTORICAL ENVIRONMENTAL

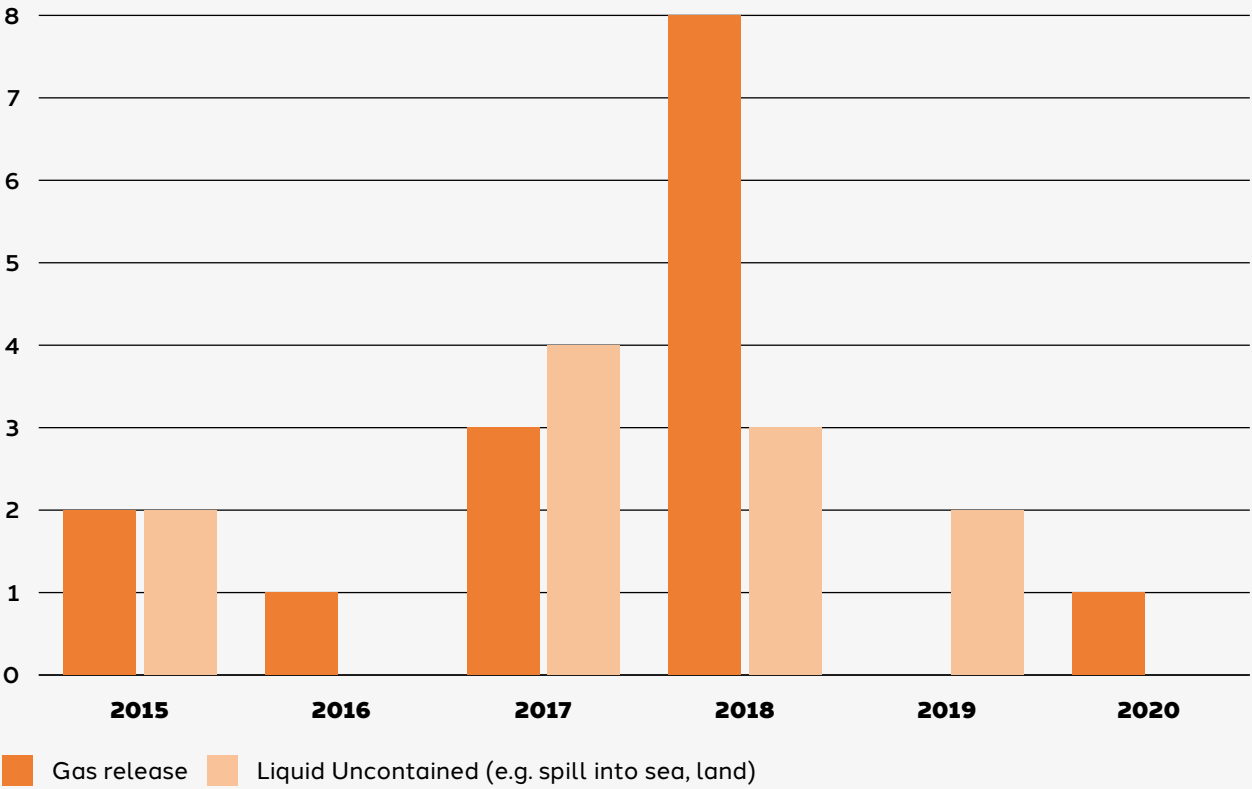


Figure 23 - Environmental Events Trends



## 6.5 SECURITY

Due to location of PEPN offshore facilities and pipelines, security has a low materiality for us; however, security threats are not ignored and processes are in place to prevent and mitigate security consequences. The onshore pipeline is routinely inspected by Pipeline Control B.V., while the Office is guarded by Securitas B.V.

### 6.5.1 Cybersecurity

Critical cloud systems within PEPN are hosted at ISO 27001 certified data centres and process safety equipment (e.g. Process Logic Controllers, etc.) are air-gapped to prevent external intrusions via internet; a protocol is in place to prevent uploading of unwanted or unchecked updates in the safety controls. The PEPN IT department is engaged to ensure everyone working within the PEPN network is well aware about the risks of opening suspected e-mails, phishing activities and other social engineering security threats.

PEPN internal IT policies and protocols are in line with ISO, ITIL and COBIT requirements.

Internal vulnerability scans are executed at least quarterly and a penetration test was executed in 2019, further test will be planned in the coming years on a regular basis.

### 6.5.2 GDPR

Within PEPN an interdepartmental workgroup led by a Data Protection Officer (Legal Counsel) is established to provide guidance on the requirements of privacy protection as per the GDPR requirements.

In 2020, no violation of GDPR rules were recorded and reported to authorities.





# SOCIAL

Due to the nature of our operations, the impact of PEPN to the local community is indirect. Although, with our workforce, contractors and provider of services, our impact is significant both in the area of our office and supply base locations, as well as through the rest of the Netherlands with the goods we are procuring.

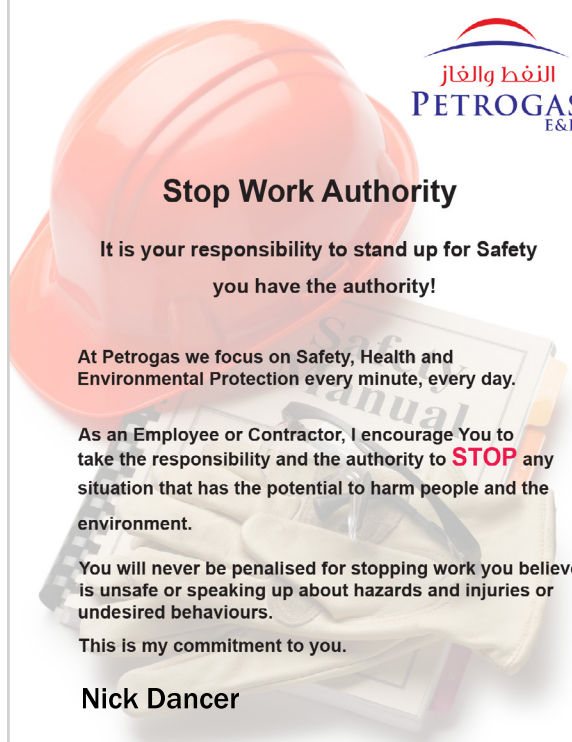
PEPN operates in the Netherlands and the Dutch Continental Shelf by predominantly using Dutch Vendors and Suppliers. By the nature of PEPN business, the risks of dealing with Companies infringing Human Rights is considered low, however, we are in the process to strengthen our commitment to respect Human Right, by amending our Contracts, Terms and Conditions.

There is a growing effort in “Giving Back” to the community as exemplified by our Ethics Principles.

## 7.1 HUMAN RIGHTS

PEPN has policies against Human Rights infringements, Modern day Slavery and Child Labour. Grievance and Whistle-blower policies and procedures are in place, as well although only open for staff and contractors.

Aside the PEPN Business Ethics, PEPN has a “Stop Work Authority” policy, which clearly stipulates that undesired behaviour, such as, but not limited to, harassment, discrimination or bullying, is not acceptable.



**النفط والفاز**  
**PETROGAS**  
E&P

### Stop Work Authority

**It is your responsibility to stand up for Safety  
you have the authority!**

At Petrogas we focus on Safety, Health and Environmental Protection every minute, every day.

As an Employee or Contractor, I encourage You to take the responsibility and the authority to **STOP** any situation that has the potential to harm people and the environment.

You will never be penalised for stopping work you believe is unsafe or speaking up about hazards and injuries or undesired behaviours.

This is my commitment to you.

**Nick Dancer**

General Manager  
Petrogas E&P Netherlands B.V.

PNS-GEN-PY-01155 Rev. 3, 24/06/2021

## SUPPLY CHAIN

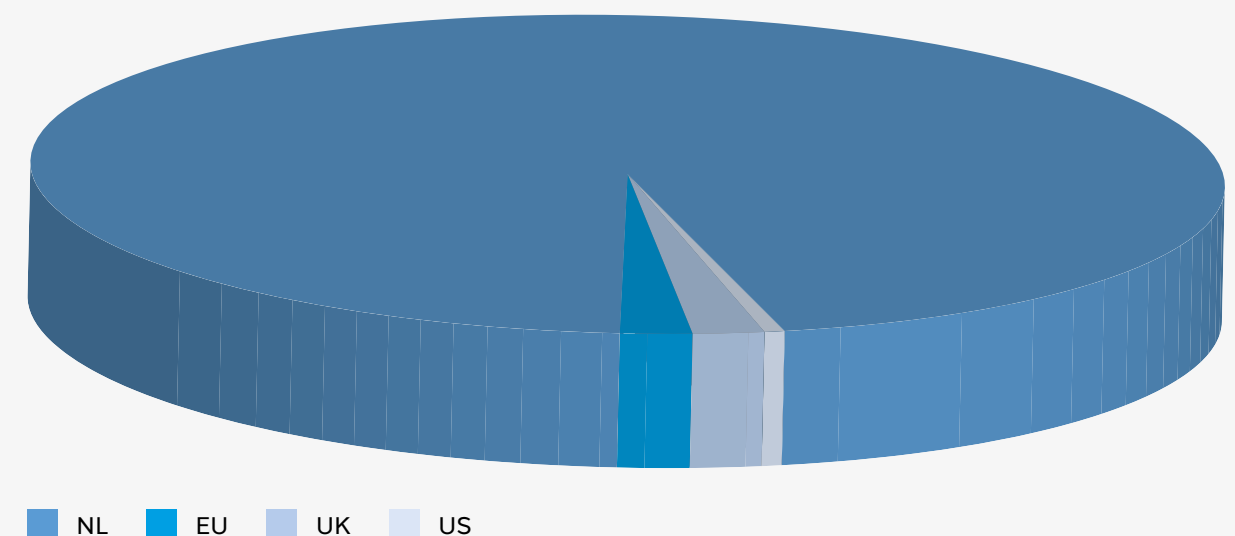


Figure 24 - Supply Chain Vendors Distribution



7.2 LABOUR PRACTICES

PEPN personnel, either staff or contractors, is predominantly sourced by the local market; 86% of the PEPN workforce is composed by Dutch nationals, while the rest of the workforce (14%) is coming from 11 different countries. The gender distribution of the workforce is in line with the oil and gas offshore industry [15]; there is no barrier preventing female personnel working in (or visiting) PEPN installations. Amongst the 162 persons working with PEPN at the end of 2020, 40 (25%) were Contractors. Other Contractors are hired to perform jobs as part of other short-term services (e.g. consultancy, inspections, operational activities), primarily from the Dutch labour market.

The PEPN workforce is on average highly skilled with average salaries benchmarked against similar sized companies in the Netherlands. The ratio between the highest and the average salary in 2020 was 3.5.

PEPN personnel are free to associate, to join and form trade unions.

PEPN does not tolerate discrimination by gender, age, ethnic or faith when recruiting and employing

personnel. Personnel has free access to prayers rooms at the office in Rijswijk.

Our offshore Personnel is provided with accommodation, which respects the Dutch laws and regulations and have access to quality food, water and sanitation. The onshore personnel working in cities and town connected to the “grid” and located in modern built buildings.

The PEPN Human Resource Department is tasked with the responsibilities to ensure compliance to employment rules and regulations.

7.2.1 Contractor Management

PEPN has a Contractor Management process to ensure contractors apply our policies, procedures and practices during the execution of the scope of work. For each Key and Important Contractor, Contract Owners are assigned to ensure the communication channel stays open and policies and procedure requirements are cascaded. Based on a risk assessment, Key Contractors are audited and findings and opportunities of improvement are shared. As part of NOGEPa, PEPN participates in Joint Contractors Audit Workgroup to pool the various Operators resources together and share

findings with a broader community; details about number of audits are given in Section 3.2.2.

| Contractors           | 2020 |
|-----------------------|------|
| Key Contractors       | 34   |
| Important Contractors | 25   |

Due to the consequences of COVID-19 to minimise the chances of spreading the disease as per Government guidance, external audits to Contractors were limited during 2020; around the end of the year, we managed to perform 3 online audits with some key contractor; on top of those “Contractors’ audits”, the various PEPN Contract Owners, the persons who are tasked by PEPN to stay in contact with the Contractors’ representative, ensure to keep a good level of engagement.

PEPN is part of SNS Pool Steering Committee, SNS Pool Safety Committee and Aviation Steering Committee, where marine and aviation best practices and incidents are shared amongst the participants for continuous learning and improvement.

7.3 COMMUNITY ENGAGEMENT

Besides business engagements with the various Ministries and associations, we strive to make a positive impact to the Society at large, not only trying to minimise our footprint and provide clean and affordable gas to the community, but contributing to local charities through Company sponsored activities (e.g. PEPN Charity Golf Tournament) or through Connect; Connect is our employees engagement group that enables

interactions among departments via social and cultural events. We paid out the pledged proceeding of the PEPN Charity Golf Tournament to the Dutch Red Cross, to KNRM and to Make-a-Wish Netherlands. Due to COVID-19, work on community engagement opportunities focuses on donations. In November, we purchased teddy bears from Stichting Kinderen Kankervrij (KiKa) and cuddly bears from Nederlandse Cystic Fibrosis Stichting and donated to the foundation Stichting Sintvoorieder1.

In December, we were pleased to have been able to support the Salvation Army by providing the funding to ensure 40 homeless people could enjoy a warm and memorable Christmas dinner at their location in The Hague.



WORKFORCE COMPOSITION

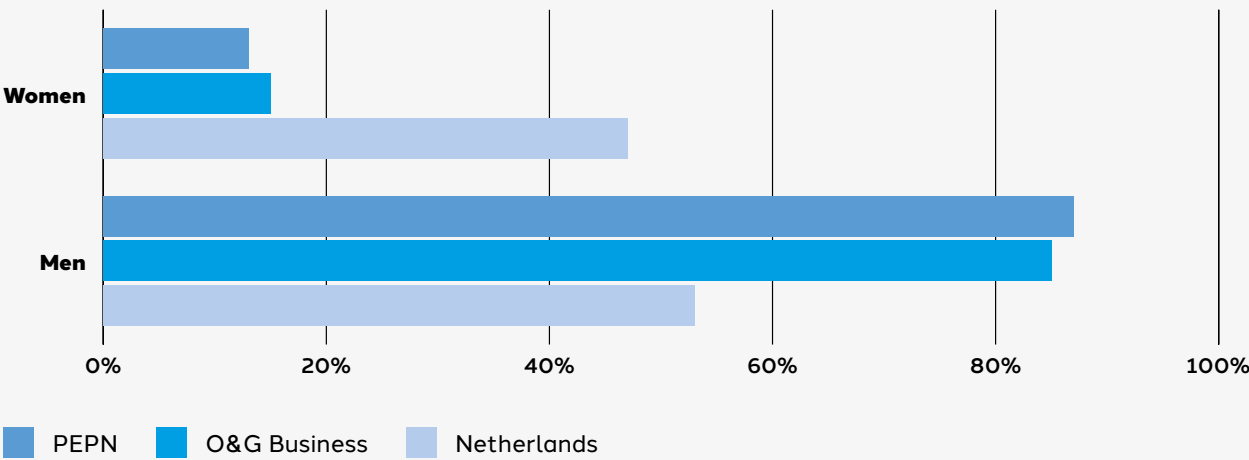


Figure 25 - Gender Distribution

“Thanks to your donation it was possible to serve a delicious meal and provide a gift under the tree. I would like to thank you an behalf of everyone at the Salvation Army. We depend on acts of goodwill to support our work. Thank you! As one person said: “It was a wonderful evening. The food was great. It gave me a warm feeling.” Thank you!”  
Kind regards, Adiel Vader (Mgr.), Salvation Army (The Hague)



# APPENDICES

## ABBREVIATIONS

|                 |   |
|-----------------|---|
| <b>A&amp;F</b>  | Account and Finance   |
| <b>ABEX</b>     | Abandonment Expenditure   |
| <b>AOC</b>      | Agreement of Cooperation  |
| <b>BELT</b>     | Business Excellence Leadership Team                                     |
| <b>BEMS</b>     | Business Excellence Management System                                   |
| <b>BEPS</b>     | Base Erosion and Profit Shifting  |
| <b>BROA</b>     | Business Risks and Opportunities Assessment                             |
| <b>BTEX</b>     | Benzene, Toluene, Ethylbenzene and Xylene                               |
| <b>BTW</b>      | Belasting over de Toegevoegde Waarde                                    |
| <b>CAPEX</b>    | Capital Expenditures  |
| <b>CCO</b>      | Chief Commercial Officer  |
| <b>CIPS</b>     | Chartered Institute of Procurement & Supply                             |
| <b>CIT</b>      | Corporate Income Tax  |
| <b>CCS</b>      | Carbon Capture and Storage  |
| <b>COBIT</b>    | Control Objectives for Information and Related Technology               |
| <b>COP</b>      | Cessation of Production   |
| <b>COVID-19</b> | Corona Virus Disease 2019   |
| <b>CPP</b>      | Central Processing Platform   |
| <b>DCS</b>      | Dutch Continental Shelf   |
| <b>DGL</b>      | Dangerous Goods List  |
| <b>DNV</b>      | Det Norske Veritas  |
| <b>DRC</b>      | Decision Review Committee   |
| <b>DSC</b>      | Delftsch Studenten Corps  |
| <b>E&amp;P</b>  | Exploration and Production  |
| <b>EBN</b>      | Energie Beheer Nederland B.V.   |
| <b>EBITDA</b>   | Earnings Before Interest, Taxes, Depreciation and Amortization          |
| <b>EED</b>      | Energy Efficiency Directive   |
| <b>EITI</b>     | Extractive Industries Transparency Initiative                           |
| <b>ESG</b>      | Environmental Social Governance   |
| <b>ETS</b>      | Emissions Trading Scheme  |
| <b>EU ATAD</b>  | European Union Anti-Tax Avoidance Directive                             |
| <b>GBS</b>      | Gravity Base Structure  |
| <b>GDPR</b>     | General Data Protection Regulation                                      |
| <b>GHG</b>      | Greenhouse Gasses   |
| <b>GWP</b>      | Global Warming Potential  |
| <b>HFG</b>      | Hydrofluorocarbons (refrigerant)  |
| <b>HR</b>       | Human Resources   |
| <b>HSEQ</b>     | Health, Safety, Environment and Quality                                 |
| <b>IPIECA</b>   | International Petroleum Industry Environmental Conservation Association |
| <b>IPPC</b>     | Integrated Pollution Prevention and Control                             |
| <b>ISO</b>      | International Organization for Standardization                          |
| <b>IT</b>       | Information Technology  |
| <b>KNRM</b>     | Koninklijke Nederlandse Redding Maatschappij                            |
| <b>KYC</b>      | Know Your Customer  |
| <b>LLC</b>      | Limited Liability Company   |
| <b>LNV</b>      | (Ministrie van) Landbouw, Natuur en Voedselkwaliteit                    |
| <b>LOC</b>      | Loss of Containment   |
| <b>LTIF</b>     | Lost Time Injury Frequency  |

|                   |  |
|-------------------|--|
| <b>MAP</b>        | Major Accidents Prevention                                     |
| <b>MBOE</b>       | Thousand Barrel of Oil Equivalent                              |
| <b>MDR (DAC6)</b> | Mandatory Disclosure Regime DAC6                               |
| <b>MEAC</b>       | Ministry of Economic Affairs and Climate                       |
| <b>MJA</b>        | Meerjarenafspraken   |
| <b>MNE</b>        | Multi National Enterprise                                      |
| <b>MSP</b>        | Management System Process                                      |
| <b>NGO</b>        | Non-governmental Organisation                                  |
| <b>NOGAT</b>      | Northern Offshore Gas Transport                                |
| <b>NOGEPA</b>     | Netherlands Oil and Gas Exploration and Production Association |
| <b>NORM</b>       | Normally Occurring Radioactive Material                        |
| <b>NUI</b>        | Normally Unattended Installation                               |
| <b>O&amp;G</b>    | Oil and Gas  |
| <b>OCM</b>        | Operational Committee Meeting                                  |
| <b>OECD</b>       | Organization for Economic Cooperation and Development          |
| <b>OPEX</b>       | Operating Expenditures   |
| <b>OSD</b>        | Offshore Safety Directive                                      |
| <b>OSPAR</b>      | Oslo Paris Agreement   |
| <b>P&amp;A</b>    | Plug and Abandonment   |
| <b>PCR</b>        | Polymerase Chain Reaction                                      |
| <b>PEPN</b>       | Petrogas E&P Netherlands B.V.                                  |
| <b>PGK</b>        | Petroleum Geologische Kring                                    |
| <b>PIEP</b>       | Petrogas International E&P Coöperatief U.A.                    |
| <b>PPE</b>        | Personal Protection Equipment                                  |
| <b>PSA</b>        | Psychosocial Aspects   |
| <b>PT</b>         | Petrogas Transportation B.V.                                   |
| <b>PWC</b>        | PricewaterhouseCoopers   |
| <b>PWD</b>        | Posted Workers Directive                                       |
| <b>RM</b>         | Risk Management  |
| <b>RTAF</b>       | Road Traffic Accident Frequency                                |
| <b>SEC</b>        | Societal Ethics Committee                                      |
| <b>SCM</b>        | Supply Chain Management  |
| <b>SCR</b>        | Selective Catalytic Reduction                                  |
| <b>SMART</b>      | Safety Makes the Right Team                                    |
| <b>SNS POOL</b>   | Consortium of offshore operators sharing logistical platform   |
| <b>SOBM</b>       | Synthetic Oil Based Mud  |
| <b>SPE</b>        | Society of Petroleum Engineers                                 |
| <b>SPS</b>        | State Profit Share   |
| <b>SSM</b>        | State Supervision of the Mines                                 |
| <b>TCM</b>        | Technical Committee Meeting                                    |
| <b>TOEQ</b>       | Total Oil Equivalent   |
| <b>TRCF</b>       | Total Recordable Cases Frequency                               |
| <b>UAV</b>        | Utrechtse Aardwetenschappen Vereniging                         |
| <b>UBO</b>        | Ultimate Beneficial Owners                                     |
| <b>UDS</b>        | Undrained Sands  |
| <b>UK</b>         | United Kingdom   |
| <b>US</b>         | United States  |
| <b>USC</b>        | Utrechtsch Studenten Corps                                     |
| <b>WC</b>         | Work Council   |



## REFERENCES

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- 2 Letter of the Minister of Economic Affairs and Climate informing Dutch Parliament on the government's policy towards gas production in The Netherlands, 30/05/2020:  
[www.rijksoverheid.nl/onderwerpen/gaswinning-uit-kleine-gasvelden/documenten/kamerstukken/2018/05/30/kamerbrief-over-gaswinning-uit-kleine-velden](http://www.rijksoverheid.nl/onderwerpen/gaswinning-uit-kleine-gasvelden/documenten/kamerstukken/2018/05/30/kamerbrief-over-gaswinning-uit-kleine-velden)
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- 5 Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas, July 2017
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- 12 [www.iea.org/commentaries/gender-diversity-in-energy-what-we-know-and-what-we-dont-know](http://www.iea.org/commentaries/gender-diversity-in-energy-what-we-know-and-what-we-dont-know)
- 13 Netherlands OSPAR report 2020 for Petrogas Netherlands B.V., 2 March 2021

The following indicators as per the IPIECA Sustainability Reporting Guidelines for the Oil and Gas Industry have been used throughout this document:

- Governance and Business Ethics: [GOV-1](#), [GOV-2](#), [GOV-3](#), [GOV-4](#), [GOV-5](#), [GOV-6](#);
- Climate Change and Energy: [CCE-1](#), [CCE-2](#), [CCE-3](#), [CCE-4](#), [CCE-5](#), [CCE-6](#), [CCE-7](#);
- Environment: [ENV-1](#), [ENV-2](#), [ENV-3](#), [ENV-4](#), [ENV-5](#), [ENV-6](#), [ENV-7](#), [ENV-8](#);
- Safety, Health and Security: [SHS-1](#), [SHS-2](#), [SHS-3](#), [SHS-6](#), [SHS-7](#);
- Social: [SOC-1](#), [SOC-2](#), [SOC-4](#), [SOC-5](#), [SOC-6](#), [SOC-7](#), [SOC-8](#), [SOC-9](#), [SOC-13](#), [SOC-14](#), [SOC-15](#).

The following indicators as per the GRI Sector Standard: Oil and Gas have been used throughout this document:

[GRI 201](#), [GRI 204](#), [GRI 205](#), [GRI 206](#), [GRI 207](#), [GRI 302](#), [GRI 303](#), [GRI 304](#), [GRI 305](#), [GRI 306](#), [GRI 401](#), [GRI 402](#), [GRI 403](#), [GRI 404](#), [GRI 405](#), [GRI 410](#), [GRI 413](#), [GRI 414](#), [GRI 415](#)

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