

MEMBANGUN OPERASI UNGGUL BERKELANJUTAN

Building a Sustainable Operational Excellence



2022
Laporan Keberlanjutan
Sustainability Report

An aerial photograph of an offshore oil and gas platform in the ocean. The platform is a complex of white and red metal structures, including tall towers and a central processing unit. The water is a deep blue, and the sky is clear. In the background, another smaller platform and a supply vessel are visible on the horizon.

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This Sustainability Report contains statements about the Company's economic, environmental, social, and governance performance and its strategy, which are classified as forward-looking statements under applicable laws and regulations, except for historical information. These are forward-looking statements that involve risks and uncertainties and may result in actual developments that differ materially from those stated in the statements.

The forward-looking statements in this Sustainability Report are based on a variety of assumptions regarding the Company's current and future operating conditions, as well as the business environment in which the Company operates. The Company makes no guarantee that any action taken to ensure the validity of this document will result in the expected results. All tables and graphs presenting numerical data use the Indonesian standard. English and Indonesian standards are used respectively where numerical values are presented in text format.



MEMBANGUN OPERASI UNGGUL BERKELANJUTAN

Building a Sustainable Operational Excellence

PHE ONWJ berkomitmen untuk terus mengimplementasikan keberlanjutan bersama seluruh pemangku kepentingan diseluruh kegiatan operasionalnya. Hal ini dilakukan agar PHE ONWJ dapat **Membangun** kegiatan **Operasi** yang **Unggul** serta **Berkelanjutan** di masa depan.

PHE ONWJ is committed to implement sustainability continuously with all stakeholders in all of its operational activities. It aims to enable PHE ONWJ to **Build a Sustainable Operational Excellence** in the future.

Daftar Isi

Table of Content

Ikhtisar Kinerja Keberlanjutan Sustainability Performance Highlights	2
Penjelasan Direktur Director's Message	6
Tentang PHE ONWJ About PHE ONWJ	12
Tentang Laporan Keberlanjutan About the Sustainability Report	19
Strategi Keberlanjutan Sustainability Strategy	25
<hr/>	
Lampiran Appendix	105
Pernyataan Assurance Independen Independent Assurance Statement	127
Referensi POJK 51, Indeks Isi Standar GRI (2021), GRI Spesifik Indikator: Oil and Gas Sector (2021), dan IPIECA Sustainable Guidance Reference POJK 51, GRI Standard Content Index (2021), GRI Spesifik Indikator: Oil and Gas Sector (2021), and IPIECA Sustainable Guidance	132
Lembar Umpan Balik Feedback Form	143

26

Kinerja Keberlanjutan Pengelolaan Lingkungan Operasi Unggul Berkelanjutan Untuk Kelestarian Lingkungan

Environmental Management Sustainability Performance
Sustainable Operational Excellence for Environmental Preservation

Pengendalian Emisi dan Pengelolaan Energi Emission Control and Energy Management	27
Keanekaragaman Hayati Biodiversity	39
Menjaga Lingkungan Preserving the Environment	45

60

Kinerja Keberlanjutan Pengelolaan Sosial Operasi Unggul Berkelanjutan Untuk Kesejahteraan Bersama

Social Management Sustainability Performance
Sustainable Operational Excellence for Shared Welfare

Keselamatan dan Kesehatan Kerja (K3) Occupational Health and Safety (OHS)	61
Bersama Memberdayakan Masyarakat Empowering Community Together	71
Menjaga Karyawan dan Konsumen Retaining Employees and Consumers	75

87

Tata Kelola Keberlanjutan Sustainability Governance

Struktur dan Tanggung Jawab Keberlanjutan Sustainability Structure and Responsibilities	88
Penilaian Risiko Terhadap Penerapan Keberlanjutan Risk Assessment of Sustainability Implementation	89
Pencegahan Benturan Kepentingan dan Antikorupsi Prevention of Conflict of Interest and Anti-Corruption	90
Kebijakan dan Penetapan Remunerasi Pejabat Tata Kelola Policy and Determination of Remuneration for Governance Officers	93
Pengembangan Kompetensi dan Penilaian Kinerja Keberlanjutan Competency Development and Sustainability Performance Assessment	93

95

Menjaga Ekonomi Berkelanjutan Maintaining Sustainable Economy

Target dan Realisasi Kinerja Performance Targets and Realization	96
Nilai Ekonomi yang Dihasilkan dan Didistribusikan Economic Value Generated and Distributed	99
Manfaat Ekonomi Fiskal Fiscal Economic Benefits	101
Pemasok PHE ONWJ PHE ONWJ Suppliers	101

Ikhtisar Kinerja Keberlanjutan

Sustainability Performance Highlights

KINERJA ASPEK EKONOMI (Ribu USD) [B.1]

ECONOMIC ASPECT PERFORMANCE (Thousand USD)

Kinerja Keuangan Financial Performance	2022	2021	2020
Total Penjualan Bersih Total Net Sales [B.1.b]	787.158	677.678	484.247
Laba Tahun Berjalan Profit for the Year [B.1.c]	224.983	122.216	41.255
Total Aset Total Assets	2.115.034	1.962.910	1.848.623

Kinerja Produksi [B.1.c] Production Performance	Satuan Unit	2022	2021	2020
Produksi Minyak Oil Production	MBOPD	27,59	27,14	28,82
Produksi Gas Bumi Natural Gas Production	MMSCFD	79,49	90,31	89,40
Produksi Migas Oil & Gas Production	MBOEPD	41,31	42,73	44,25

TKDN dan Pemasok Lokal (%) [B.1.d] TKDN and Local Suppliers	2022	2021	2020
Pengadaan Barang Procurement of Goods	39,52	23,42	29,48
Pengadaan Jasa Procurement of Services	80,07	71,88	61,11
Total	73,64	62,87	56,54

Produk Ramah Lingkungan [B.1.d]

Produk Perseroan di antaranya adalah gas bumi, yang termasuk produk ramah lingkungan. PHE ONWJ juga telah memanfaatkan solar panel untuk produksi listrik ramah lingkungan dengan total daya perhari 1,09 MWp, terdiri atas 20 panel surya (98,4 kWp/hari) untuk platform AVSA, 20 panel surya 98,4 kWp/hari di MB2, dan 824 unit solar panel (895,98 kWp/hari) di fasilitas offshore lainnya di area operasi PHE ONWJ.

Environmentally Friendly Products [B.1.d]

One of the Company's products is natural gas, which is an environmentally friendly product. PHE ONWJ has also utilized solar panels for environmentally friendly electricity with a total production of 1.09 MWp per day, consisting of 20 solar panels (98.4 kWp/day) for the AVSA platform, 20 solar panels 98.4 kWp/day at MB2, and 824 solar panels units (895.98 kWp/day) at other offshore facilities in the operational area PHE ONWJ.



KINERJA LINGKUNGAN

ENVIRONMENTAL PERFORMANCE

Konsumsi Energi (B.2.c) Energy Consumption	Satuan Unit	2022	2021	2020
Proses Produksi Production Process	GigaJoule (GJ)	7.839.685,25	7.106.750,24	9.196.991,31
Proses Pendukung Supporting Process		664.381,77	1.096.873,05	968.883,07
Intensitas Konsumsi Energi Energy Consumption Intensity	GJ/TOE	4,01	3,73	4,49

Emisi GRK (B.2.b) GHG Emissions	Satuan Unit	2022	2021	2020
Nilai Emisi Dihasilkan dan Reduksi Emisi GHG Emission Generated and Emission Reduction				
Operasi Operation	Ton CO ₂ eq	451.162,31	459.869,82	498.760,55
Fasilitas Pendukung Supporting Facilities		89.439,76	75.744,49	67.399,96
Jumlah Total		540.602,07	535.614,31	566.160,51
Intensitas Emisi GRK Operasi Operational GHG Emission Intensity	Ton CO ₂ eq/TOE	0,25	0,24	0,25

Pengelolaan Limbah (B.2.c) Waste Management	Satuan Unit	2022	2021	2020
Total Timbulan Limbah Non-B3 Padatan Total Non-hazardous Solid Waste Generation				
Proses Operasi Operating Process	Ton	0	0	0
Proses Pendukung Supporting Process		128,01	96,35	130,12
Jumlah Total		128,01	96,35	130,12
Limbah B3 dari Penanganan Darurat Dampak Insiden Sumur YYA-1 Hazardous Waste from Emergency Handling of YYA-1 Well Incident Impact				
Jumlah Total	Ton	0	0	98.546
Total Timbulan Limbah Hazardous Waste Generation				
Proses Operasi Operating Process	Ton	1,1	2,42	2,07
Proses Pendukung Supporting Process		191,92	160,8*	121,12
Jumlah Total		193,02	163,22*	123,19

Keterangan: *Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021 dikarenakan penambahan jenis limbah akibat dari perubahan izin penyimpanan limbah B3. [2-4]

Note: *Restatements from the 2021 Sustainability Report were due to the addition of waste types as a result of the change in hazardous waste management permit. [2-4]

Pelestarian Keanekaragaman Hayati (B.2.d) Biodiversity Conservation	Satuan Unit	2022	2021	2020
Luas Area Restorasi Mangrove Total Area of Mangrove Restoration	Ha	37,9	36,2*	19,4*
Luas Area Restorasi Terumbu Karang Total Area of Coral Reef Restoration	Ha	0,077	0,025	0,025

Keterangan: *Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021 dikarenakan data luas area restorasi mangrove tahun 2021 dan 2020 menyesuaikan pemutakhiran data tahun 2022, yaitu terdapat lokasi restorasi mangrove eksisting yang belum tercakup pada *monitoring* tahun sebelumnya, sehingga hasil kuantifikasi terbaru terjadi peningkatan luasan area restorasi. [2-4]

Note: *There is a restatement of the Sustainability Report data on the area of mangrove restoration in 2021 and 2020 to adjust the 2022 data update, which contains existing mangrove restoration locations that have not been included in the previous year's monitoring, thus the latest quantification results show an increase in the area of restoration. [2-4]



KINERJA SOSIAL [B.3]**SOCIAL PERFORMANCE**

Keselamatan dan Kesehatan Kerja Occupational Health and Safety	Satuan Unit	2022	2021	2020
Total Peserta Pelatihan K3 Total OHS Training Participants	Orang People	1.637	1.001*	727*
Jumlah Jam Kerja Aman Number of Safe Manhours	Jam Hours	38.309.832	28.684.107	20.012.478
Lost Time Injury (LTI)	Hari Days	0	0	0

Keterangan | Note:

*Terdapat pernyataan kembali (restatement) dari Laporan Keberlanjutan 2021 | Restatements from the 2021 Sustainability Report. [2-4]

Pelatihan K3 OHS Training	Satuan Unit	2022	2021	2020
Total Pelatihan K3 Per Pekerja Total OHS Training per Employee	Jam Hours	16.832	11.804	15.743

Pemberdayaan Masyarakat Community Development	Satuan Unit	2022	2021	2020
Realisasi Dana CSR CSR Fund Realization	Rp Miliar Rp Billion	4.213.421.500	3.807.981.725	5.304.461.541
Jumlah Penerima Manfaat Number of Beneficiaries	Kepala Keluarga Families	15.189	14.215	12.540

KINERJA TATA KELOLA KEBERLANJUTAN**SUSTAINABILITY GOVERNANCE PERFORMANCE**

Penerapan Tata Kelola Keberlanjutan Sustainability Governance Application	2022	2021	2020
Tingkat Kepatuhan LHKPN LHKPN Compliance Level	100%	100%	100%
Penilaian GCG GCG Assessment	96%	93%	89%





Penjelasan Direktur [D.1]

Director's Message



PHE ONWJ berkomitmen untuk menerapkan operasi unggul serta berkelanjutan yang ditujukan untuk mendukung kelestarian lingkungan di sekitar wilayah operasi serta mendukung kesejahteraan bersama para pemangku kepentingan.

PHE ONWJ's commitment to implementing sustainable operational excellence aims to support environmental sustainability around the operating area also supports the achievement of shared welfare of stakeholders.

Para pemangku kepentingan yang terhormat,

Melalui Laporan Keberlanjutan ini kami menyampaikan pelaksanaan kinerja keberlanjutan PT Pertamina Hulu Energi Offshore North West Java (PHE ONWJ) tahun 2022. Tema Laporan tahun ini adalah: Membangun Operasi Unggul Berkelanjutan. Tema tersebut berkesinambungan dengan tema pelaporan periode sebelumnya, dan menegaskan komitmen kami melanjutkan penerapan keberlanjutan dengan membangun operasi yang unggul serta berkelanjutan pada seluruh aspek lingkungan, sosial, dan tata kelola (LST).

Dear stakeholders,

Through this Sustainability Report we would like to disclose the sustainability implementation performance of PT Pertamina Hulu Energi Offshore North West Java (PHE ONWJ) in 2022. This year's report carries the theme: Building Sustainable Operational Excellence. This theme is a continuation of the previous report's theme and solidifies our commitment to continue implementing sustainability by building sustainable operational excellence in all environmental, social, and governance (ESG) aspects.



Kebijakan Keberlanjutan dan Respons Perusahaan

Laporan ini memuat informasi topik material yang diselaraskan dengan Kebijakan Keberlanjutan PERTAMINA dalam 10 Fokus Keberlanjutan PERTAMINA, dan Tujuan Pembangunan Berkelanjutan sesuai Peraturan Presiden (Perpres) Nomor 59 Tahun 2017 tentang Pelaksanaan Pencapaian Tujuan Pembangunan Berkelanjutan. Melalui Laporan ini kami ingin menjelaskan bagaimana operasi yang dijalankan PHE ONWJ selama tahun 2022, selain mampu menjaga tingkat produksi minyak mentah dan gas bumi (migas), saat bersamaan kami juga mengelola lingkungan, menjaga keselamatan-kesehatan kerja dan keselamatan proses, serta berkontribusi pada peningkatan kesejahteraan masyarakat di wilayah operasi.

Komitmen PHE ONWJ menerapkan operasi unggul serta berkelanjutan, ditujukan untuk mendukung kelestarian lingkungan di sekitar wilayah operasi dan mendukung kesejahteraan bersama para pemangku kepentingan, termasuk pekerja dan masyarakat di sekitar wilayah operasi melalui program-program pemberdayaan. Upaya PHE ONWJ membangun operasi unggul berkelanjutan disertai penerapan tata kelola keberlanjutan, dan disesuaikan dengan dinamika global yang terus berkembang.

Pencapaian dan Prestasi Kinerja Keberlanjutan

Pengelolaan lingkungan yang dijalankan selama tahun 2022 memastikan, kegiatan operasi yang dijalankan tetap dapat mendukung upaya menurunkan emisi GRK. Berdasarkan hasil penghitungan tahun 2022 diketahui volume emisi GRK mencapai 540.602,07 Ton CO₂eq, turun 4,5% dari baseline tahun 2020 sebesar 566.160,51 Ton CO₂eq dan naik 0,9% dari tahun 2021 sebesar 535.614,31 Ton CO₂eq.

Sustainability Policy and Corporate Response

This report contains information on material topics that are aligned with PERTAMINA's Sustainability Policy in PERTAMINA's 10 Sustainability Focuses, and Sustainable Development Goals according to Presidential Regulation Number 59 of 2017 on Implementation of Achieving Sustainable Development Goals. Through this report, we would like to explain how PHE ONWJ conducted its operations during 2022, apart from being able to maintain the level of production of crude oil and natural gas, while at the same time managing the environment, maintaining occupational health and safety processes, and contributing to the improvement of the welfare of the community in the operating area.

PHE ONWJ's commitment to implementing sustainable operational excellence aims to support environmental sustainability around the operating area and supports the achievement of shared welfare of stakeholders, including employees and the surrounding community through empowerment programs. PHE ONWJ carries out the efforts to build sustainable operational excellence along with sustainable governance, and adaptation to the dynamics of global development.

Sustainability Performance Achievements and Accomplishments

The environmental management that we carried out during 2022 showed that we remained able to run our operations while supporting GHG emission reduction efforts. The calculation results for 2022 showed the volume of GHG emissions reached 540,602.07 tons of CO₂eq, down 4.5% from the 2020 baseline of 566,160.51 tons of CO₂eq and up 0.9% from 535,614.31 tons of CO₂eq in 2021.



Dalam pengelolaan energi, meski memperlihatkan kenaikan pemakaian energi sebesar 3,67% dari tahun 2021, PHE ONWJ mencatatkan pencapaian positif dalam pemanfaatan energi baru terbarukan dan konservasi energi (EBTKE). Kami mengoperasikan 871 unit panel surya sebagai pembangkit listrik dengan total energi dihasilkan mencapai 1.464,30 GJ, sehingga mendukung 335,54% dari total penggunaan listrik pada tahun 2022.

Sampai dengan akhir tahun 2022, PHE ONWJ mengelola beberapa kawasan konservasi pesisir dan laut melalui program Restorasi Mangrove Pantai Utara Jawa (REMAJA) dan Orang Tua Asuh Karang di Laut Utara Jakarta dan Jawa Barat (OTAK JAWARA). Kami juga telah menyelesaikan kewajiban pemulihan ekosistem mangrove pasca-insiden YYA-1 Tahun 2019. Upaya konservasi yang dilakukan merupakan komitmen PHE ONWJ dalam melindungi keanekaragaman hayati di wilayah kerja.

Dalam kinerja keberlanjutan sosial, operasi unggul yang kami bangun telah mampu mencatatkan jumlah jam kerja aman mencapai 38,31 juta jam, dan nihil kecelakaan kerja maupun peristiwa keselamatan proses yang bersifat fatal. PHE ONWJ juga merealisasikan program pelatihan untuk meningkatkan kompetensi pekerja, dengan total kegiatan mencapai 130.210 jam pelatihan dan 397 peserta. Melalui penerapan operasi unggul, kami berikhtiar mencegah tumpahan/kebocoran migas dengan melaksanakan program-program penguatan, di antaranya percepatan proyek perbaikan dan penggantian jalur pipa (*pipeline repair & replacement project/PRRP*), serta survei dan perbaikan sistem perlindungan korosi (*cathodic protection*).

Kami juga terus membina hubungan yang baik dengan masyarakat di sekitar wilayah operasi, melalui pemenuhan tanggung jawab sosial sebagai upaya kami memastikan penerapan operasi unggul yang berkelanjutan. Selama tahun 2022 PHE ONWJ mengalokasikan biaya CSR sebesar Rp4,21 miliar, bertambah 10,65% dari tahun 2021. Jumlah tersebut diperuntukkan program-program pemberdayaan masyarakat, dengan penerima manfaat lebih dari 15.000 kepala keluarga. Secara berkala Perusahaan juga melakukan evaluasi untuk memastikan efektivitas pelaksanaan kegiatan pemberdayaan masyarakat.

In energy management, despite showing an increase in energy use of 3.67% from 2021, PHE ONWJ recorded positive achievements in the utilization of new, renewable energy and energy conservation (NREEC). We have operated 871 units of solar panels as power generators with a total energy output of 1,464.30 GJ, contributing 335.54% of the total electricity use in 2022.

Until the end of 2022, PHE ONWJ has managed several coastal and marine conservation areas through the North Java Coast Mangrove Restoration (REMAJA) and Coral Foster Parents Programs in the North Sea of Jakarta and West Java (OTAK JAWARA). We have also completed the obligation to restore the mangrove ecosystem after the 2019 YYA-1 incident. The conservation efforts are PHE ONWJ's commitment to protecting biodiversity in our working area.

In terms of social sustainability performance, the operational excellence we have built has been able to record a total of 38.31 million safe man hours, and zero work accidents or fatal process safety incidents. PHE ONWJ also held employee competence development training programs, with a total of 130,210 training hours and 397 participants. Through the implementation of operational excellence, we seek to prevent oil spills and gas leaks by carrying out strengthening programs, including accelerating pipeline repair and replacement projects (PRRP), as well as surveys and repairs to cathodic protection systems.

We also continue to build good relations with the communities in the areas where we operate, by fulfilling social responsibility as our effort to ensure the implementation of sustainable operational excellence. In 2022, PHE ONWJ allocated Rp4.21 billion for CSR funds, a 10.65% increase from 2021. The amount was used for community empowerment programs, with more than 15,000 households as beneficiaries. Periodically the Company also conducts evaluations to ensure the effectiveness of the implementation of community empowerment activities.



Dalam hal kepatuhan dan penerapan tata kelola perusahaan yang baik, secara umum tingkat kepatuhan Perusahaan maupun pejabat PHE ONWJ selama tahun 2022 terbilang tinggi. Sejalan dengan dinamika yang berkembang di PT PHE Subholding Upstream, struktur tata kelola keberlanjutan PHE ONWJ selama tahun 2022 mengalami penyesuaian selama periode pelaporan, yakni Penyempurnaan Organisasi Sub Holding Upstream PT Pertamina Hulu Energi yang tertuang pada SK. No. KPTS-052/PHE00000/2022-SO.

Operasi unggul berkelanjutan yang dibangun, mampu menjaga kinerja produksi migas PHE ONWJ selama tahun 2022. Realisasi produksi migas PHE ONWJ di tahun 2022 mencapai 41,31 MBOEPD, atau 4,05% dari total produksi migas PHE Subholding Upstream sebesar 1.018,68 MBOPED. Hingga akhir periode pelaporan, Perusahaan juga mampu meningkatkan cadangan hidrokarbon menjadi 163,8 MMB dan 426,9 BCF. Perusahaan akan terus melakukan kegiatan survei untuk mendapatkan cadangan hidrokarbon baru berupa cadangan 2P/2C, guna menjaga kesinambungan produksi migas sehingga dapat terus memastikan proses transisi energi di Indonesia dapat berjalan dengan baik.

Pengelolaan Risiko, Peluang, dan Strategi Mencapai Keberlanjutan [E.5]

Perusahaan menerapkan sistem pengelolaan risiko untuk menekan risiko seminimal mungkin, sehingga operasi unggul yang dibangun PHE ONWJ dapat menjalankan kegiatan operasi dan produksi secara berkelanjutan. Perusahaan menerapkan sistem pengelolaan risiko yang dijalankan Fungsi Safety, dan dilaksanakan dengan memastikan ketersediaan prosedur beserta personel kompeten untuk melakukan identifikasi, evaluasi, pengendalian, pemantauan dan pengelolaan risiko secara sistematis. Dalam pengelolaan bahaya dan risiko aktivitas operasional, PHE ONWJ menggunakan pedoman dari PHE Subholding Upstream, yaitu *Health, Safety, Security, and Environment Risk Register* (HSSE RR) yang merupakan KPI dari PHE ONWJ. Pada tahun 2022 target KPI ditetapkan 75% dengan pencapaian 80%.

In terms of compliance and good corporate governance implementation, the level of compliance of the Company and PHE ONWJ officers during 2022 was relatively high. In line with the dynamics that were developing at PT PHE Subholding Upstream, the PHE ONWJ sustainability governance structure underwent adjustments during the reporting period in 2022, based on Decree SK. No. KPTS-052/PHE00000/2022-SO on the Improvement of the Upstream Subholding Organization of PT Pertamina Hulu Energi.

The sustainable operational excellence that was built was able to maintain the performance of PHE ONWJ's oil & gas production in 2022. Realization of PHE ONWJ's oil & gas production in 2022 reached 41.31 MBOEPD, or 4.05% of the total oil & gas production of PHE Subholding Upstream of 1,018.68 MBOPED. Until the end of the reporting period, the Company also managed to increase its hydrocarbon reserves to 163.8 MMB and 426.9 BCF. The Company will continue to conduct surveys to acquire new hydrocarbon reserves in the form of 2P/2C reserves, to maintain the continuity of oil & gas production to ensure that the energy transition process in Indonesia can run well.

Management of Risks, Opportunities and Strategies to Achieve Sustainability [E.5]

The Company implements a risk management system to reduce risk to a minimum, so that PHE ONWJ can carry out operations and production activities in a sustainable manner with the operational excellence that has been built. The Company's risk management system is implemented by the Safety Function, by ensuring the availability of procedures along with competent personnel to run systematic identification, evaluation, control, monitoring and management of risks. In managing the hazards and risks of operations, PHE ONWJ refers to the *Health, Safety, Security, and Environment Risk Register* (HSSE RR) from PHE Subholding Upstream, which is a KPI of PHE ONWJ. In 2022, the KPI target was set at 75% with an achievement of 80%.



Melalui penerapan operasi unggul berkelanjutan, PHE ONWJ bersiap melanjutkan proyek Optimasi Pengembangan Lapangan (OPL) migas lepas pantai YY di perairan utara Karawang, Jawa Barat. Sampai dengan akhir tahun 2022, Perusahaan telah melaksanakan berbagai tahapan pada Sumur YYA-1RWST yang merupakan *re-entry* dan *side-track* dari sumur Relief Well YYA-1RW. Seluruh proses dijalankan dengan tetap mengedepankan aspek keamanan dan keselamatan kerja, serta keandalan fasilitas operasi. Bila sudah beroperasi dan memproduksi maka akan dapat meningkatkan produksi migas PHE ONWJ sekaligus memperbesar kontribusi pada ketahanan energi nasional.

Penutup

Atas nama Perusahaan dan manajemen, kami mengucapkan terima kasih atas dukungan yang diberikan selama tahun 2022. Kami berharap, kebersamaan yang terbangun menjadi modal untuk menghadapi tahun-tahun mendatang guna meningkatkan penerapan keberlanjutan.

Through the implementation of sustainable operational excellence, PHE ONWJ is prepared to continue the YY offshore oil & gas Field Development Optimization (OPL) project in the northern waters of Karawang, West Java. Until the end of 2022, the Company has carried out various stages in the YYA-1RWST Well which is a *re-entry* and *side-track* from the YYA-1RW Relief Well. The entire process has been carried out while prioritizing occupational safety and security aspects, as well as the reliability of operating facilities. By the time it is operating and producing, it will be able to increase PHE ONWJ's oil & gas production, while increasing its contribution to national energy security.

Closing

On behalf of the Company and management, we would like to thank you for your support throughout 2022. We hope that the togetherness that we have built will become the strength to face the coming years to improve the implementation of sustainability.

Jakarta, Juli 2023 | Jakarta, July 2023

signed

Wisnu Hindadari
Direktur | The Director's





Tentang PHE ONWJ

About PHE ONWJ

VISI, MISI, DAN NILAI-NILAI INTI
VISION, MISSION, AND CORE VALUES

H

HARMONIS

L

LOYAL

K

KOMPETEN

A

ADAPTIF

A

AMANAH

K

KOLABORATIF



Nilai-Nilai Inti | Core Values [C.1] [2-23]

VISI Vision [C.1]

Menjadi Perusahaan eksplorasi & produksi minyak dan gas kelas dunia.

To become a world class oil and gas exploration & production company.

MISI Mission [C.1]

Menjalankan kegiatan eksplorasi & produksi minyak dan gas dengan prinsip komersial yang kuat, berkelanjutan, memenuhi harapan pemangku kepentingan dengan menjalankan operasi yang handal, aman dan ramah lingkungan.

Running the exploration & production of oil and gas with strong commercial principles, sustainable, meet the expectations of stakeholders by conducting reliable, safe and environmentally friendly operations.

VISI dan MISI Perusahaan ditetapkan pada 1 April 2021, yang ditandatangani pimpinan tertinggi Perusahaan. Sosialisasi dilakukan melalui *broadcast email* dan pertemuan rutin antara manajemen dan pekerja (*town hall meeting*).

The Company's VISION and MISSION were established on April 1, 2021, and signed by top management of the Company. The vision and mission were disseminated through email broadcasts and regular town hall meetings between the management and employees.

NAMA PERUSAHAAN DAN ALAMAT KANTOR PUSAT [C.2][2-1] COMPANY NAME AND HEAD OFFICE ADDRESS

Nama Perusahaan dan Tahun Berdiri [2-1a] Company Name and Year of Establishment

PT Pertamina Hulu Energi Offshore North West Java (PHE ONWJ).

Perusahaan berdiri tahun 2009, dan disahkan Menteri Hukum dan Hak Asasi Manusia Republik Indonesia pada 8 Januari 2010.

The company was founded in 2009 and was approved by the Minister of Law and Human Rights of the Republic of Indonesia on January 8, 2010.

Kantor Pusat [2-1a] Head Office

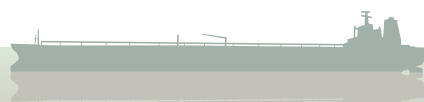
Menara Standard Chartered | Standard Chartered Tower
Jl. Prof. DR. Satrio No.164, RT.4/RW.4, Karet Semanggi, Kecamatan Setiabudi, Kota Jakarta Selatan, Daerah Khusus Ibukota Jakarta, Indonesia 12930
Telp: 021-78543002

Jl. Prof. Dr. Satrio No.164, RT 4/RW 4, Karet Semanggi, Setiabudi District, South Jakarta City, Special Capital Region of Jakarta, Indonesia 12930
Phone: 021-78543002

SKALA USAHA [C.3] BUSINESS SCALE

Uraian Description	Satuan Unit	2022	2021	2020
Jumlah Pekerja Total Employees [C3.b]	Orang People	396	402	478
Produksi Production				
Minyak Oil	MBOPD	27,59	27,14	28,82
Gas Bumi Natural Gas	MMSCFD	79,49	90,31	89,40
Pendapatan Usaha Operating Revenues				
Total Penjualan Bersih Total Net Sales	Ribu USD Thousand USD	787.158	677.678	484.274
Total Kapitalisasi Total Capitalization [C3.a]				
Utang Debt		711.009	783.859	791.832
Ekuitas Equity	Ribu USD Thousand USD	1.404.025	1.179.051	1.056.791
Total Aset Total Assets		2.115.034	1.962.910	1.848.623

Keterangan: Selama tahun 2022 tidak ada perubahan signifikan di PHE ONWJ. | Notes: During 2022 there were no significant changes at PHE ONWJ. [C.6]



Para Pekerja PHE ONWJ [2-7][2-8]

Pengungkapan informasi terkait jumlah karyawan PHE ONWJ beserta uraian karyawan PHE ONWJ berdasarkan jenis kelamin, jabatan, usia, pendidikan dan status ketenagakerjaan disampaikan pada bahasan tentang Keberagaman dan Kesetaraan.

Lebih lanjut, terdapat pekerja yang bukan karyawan di PHE ONWJ. Mereka adalah pekerja TPC dan *internship*.

Pemegang Saham dan Bentuk Legal [C.3.c][2-1b]

PHE ONWJ berbentuk Perseroan Terbatas, berdasarkan Undang- Undang No.40 Tahun 2007 tentang Perseroan Terbatas. Pemegang Saham per 31 Desember 2022:

- 1. PT Pertamina Hulu Energi 99%
- 2. PHE Arun 1%

Wilayah Operasi [C.3.d][2-1d]

Area operasional PHE ONWJ berada di Indonesia, dalam wilayah Kontrak Kerja Sama (KKS) Blok ONWJ di Jawa Barat, membentang dari Kepulauan Seribu (DKI Jakarta) sampai ke Cirebon Utara (Jawa Barat). Luas wilayah kerja PHE ONWJ mencapai luas 8.279,29 km².

PHE ONWJ Employees [2-7][2-8]

Disclosure of information on the number of PHE ONWJ employees and a description of PHE ONWJ employees by gender, position, age, education and employment status is presented in the discussion on Diversity and Equality.

In addition , there are non-employee workers at PHE ONWJ. They consist of TPC workers and interns.

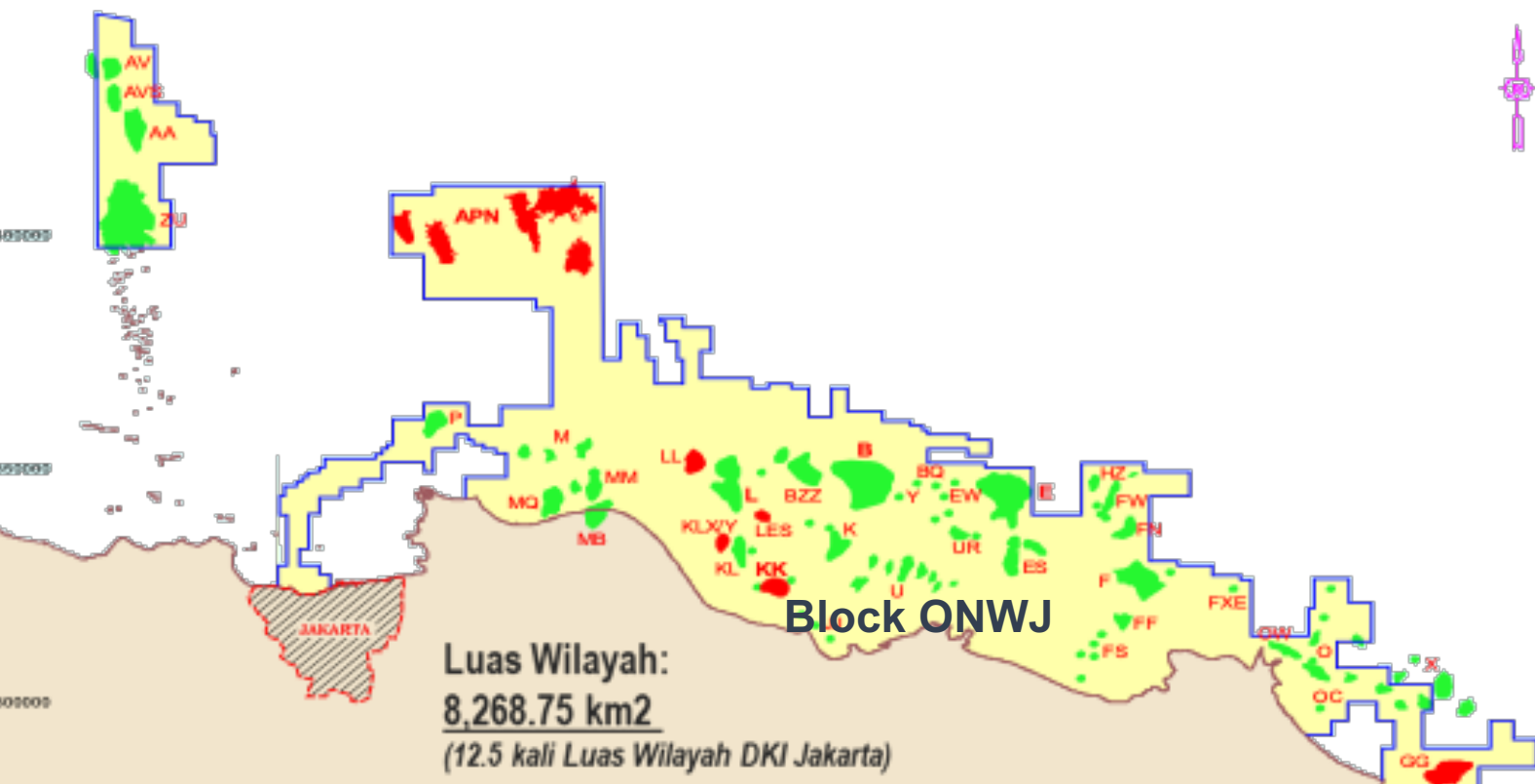
Shareholders and Legal Form [C.3.c][2-1b]

PHE ONWJ’s legal form is a Limited Liability Company, based on Law No. 40 of 2007 concerning Limited Liability Companies. Shareholders as of December 31, 2022:

- 1. PT Pertamina Hulu Energi 99%
- 2. PHE Arun 1%

Operating Area [C.3.d][2-1d]

The operating area of PHE ONWJ is located in Indonesia, in the ONWJ Block Cooperation Contract (KKS) area in West Java, stretching from the Thousand Islands (Jakarta) to North Cirebon (West Java). The working area of PHE ONWJ is 8,279.29 km².



Fasilitas Operasi dan Produksi PHE ONWJ Per 31 Desember 2022

Facilities of PHE ONWJ Working Area as of December 31, 2022

No	Fasilitas	Jumlah Total	Facilities
1	Stasiun		Flow Station
	Aktif	10	Active
	Tidak Aktif	2	Inactive
2	Anjungan	221	Platform
3	Normally Unmanned Installation (NUI)		Normally Unmanned Installation (NUI)
	NUI Aktif	81	Active NUI
	NUI Tidak Aktif	81	Inactive NUI
4	Sumur Aktif	256	Active wells
5	Pipa Bawah Laut (Aktif)	179	Subsea Pipelines (Active)
6	Fasilitas Penerimaan Darat		Onshore Receiving Facility (ORF)
	Muara Karang dan Tanjung Priok (Jakarta)	2	Muara Karang and Tanjung Priok (Jakarta)
	Cilamaya (Karawang, Jawa Barat)	1	Cilamaya (Karawang, West Java)
7	Fasilitas Pengolahan Darat		Onshore Processing Facility (OPF)
	Balongan (Indramayu, Jawa Barat)	1	Balongan (Indramayu, West Java)
8	Unit Produksi dan Penyimpanan Terapung Arjuna	1	Floating Production Storage and Offloading (FPSO) Arjuna

Keterangan: Pada periode pelaporan, PHE ONWJ tidak melakukan penonaktifan permanen (*decommissioning*) anjungan minyak dan gas lepas pantai (AMPL) yang sudah tidak beroperasi.

Note: In the reporting period, PHE ONWJ did not decommission any offshore oil and gas platforms (AMPL) that were no longer operating.



Kegiatan Usaha, Produk dan Jasa Dihilkan [C.4] [2-6a][2-6b][2-6c][2-6d]

PHE ONWJ bergerak di sektor industri minyak dan gas bumi (migas). Kegiatan usaha berdasarkan Anggaran Dasar terakhir PT PHE ONWJ berdasarkan Akta Notaris Marianne Vincentia Hamdani, SH No. 44 tanggal 11 Mei 2023 dan telah mendapat persetujuan dari Menteri Hukum dan HAM RI pada tanggal 8 Juni 2023 dengan No. AHU-0031530.AH.01.02 dan dijalankan selama periode pelaporan adalah eksplorasi dan produksi migas di lepas pantai, yang menjadi bagian dari rantai pasok migas PT Pertamina Hulu Energi Subholding Upstream. Dengan demikian tidak ada perubahan dari periode sebelumnya.

Business Activities, Products and Services [C.4][2-6a][2-6b][2-6c][2-6d]

PHE ONWJ is engaged in the oil and gas industry sector. Business activities based on the latest Articles of Association of PT PHE ONWJ under Deed of Notary Marianne Vincentia Hamdani, SH No. 44 dated May 11, 2023 which was approved by the Decree of the Minister of Law and Human Rights of the Republic of Indonesia No. AHU-0031530.AH.01.02 dated June 8, 2023 and carried out during the reporting period is offshore oil and gas exploration and production, as part of the oil and gas supply chain of PT Pertamina Hulu Energi Subholding Upstream. There has been no change from the previous period.

KEANGGOTAAN PRAKARSA INTERNASIONAL DAN ASOSIASI [C.5][2-28A]

MEMBERSHIP OF INTERNATIONAL INITIATIVES AND ASSOCIATIONS [C.5][2-28A]

Inisiatif Eksternal | External Initiative

SUSTAINABLE DEVELOPMENT GOALS

Keanggotaan Asosiasi | Association Membership



IATMI

Ikatan Ahli Teknik Perminyakan Indonesia
Indonesian Association of Geologists



IPA

Indonesian Petroleum Association



IAGI

Ikatan Ahli Geologi Indonesia
Association of Indonesian Petroleum Engineers

Keterangan: Di seluruh asosiasi tingkat nasional, PHE ONWJ bergabung sebagai anggota.
Note: PHE ONWJ joins the national associations as a member.

SERTIFIKASI DAN PENGHARGAAN EKSTERNAL

Sertifikasi

Sertifikasi Certification	Fasilitas Facilities
ISO 50001:2011 Sistem Manajemen Energi Energy Management System	1. Arco Arjuna 2. Mike Mike 3. 3 ORF (Muara Karang, Tanjung Priok, and Cilamaya)
Sistem Manajemen Keselamatan dan Kesehatan Kerja Occupational Health and Safety Management System	
ISO 14001:2015 Sistem Manajemen Lingkungan Environmental Management System	Seluruh fasilitas, baik di <i>offshore</i> dan <i>onshore</i> All facilities, both offshore and onshore
ISO 45001:2018 Sistem Manajemen Kesehatan dan Keselamatan Kerja Occupational Health and Safety Management System	

CERTIFICATION AND EXTERNAL AWARDS





Certification

Penghargaan Eksternal







Di Tahun 2022, PHE ONWJ berhasil mendapatkan penghargaan yang berasal dari pihak eksternal, di antaranya yaitu:

External Awards

In 2022, PHE ONWJ managed to earn awards from external parties, including:

Nama Penghargaan Award Name	Pemberi Penghargaan Awarded by	Foto Award Award Photo
Asia Sustainability Reporting Rating (ASRRAT) 2022 Platinum Asia Sustainability Reporting Rating (ASRRAT) 2022 Platinum	National Center for Corporate Reporting (NCCR) National Center for Corporate Reporting (NCCR)	
PROPER Hijau Green PROPER	Kementerian Lingkungan Hidup dan Kehutanan Ministry of Environment and Forestry	
'Inovasi Green Platform Di Anjungan Lepas Pantai Avsa Dengan Penerapan EBT Sistem Paster Menuju Transisi Energi Di PHE ONWJ' 'Green Platform Innovation at Avsa Offshore Platform with the Implementation of NRE Paster System Towards Energy Transition at PHE ONWJ'	Penghargaan Subroto Award Dari Kementerian Energi dan Sumber Daya Mineral Subroto Award From the Ministry of Energy and Mineral Resources	
'Anjungan Lepas Pantai Pertama Full Energy Surya' 'Pemasangan Solar Panel Terbanyak di Migas Lepas Pantai' 'First Full Solar Energy Offshore Platform' 'The Most Installation of Solar Panels in Offshore Oil & Gas'	Museum Rekor Dunia Indonesia Indonesian World Record Museum	



Nama Penghargaan Award Name	Pemberi Penghargaan Awarded by	Foto Award Award Photo
Zero Accident Awards Zero Accident Awards	Kementerian Tenaga Kerja dan Transmigrasi Ministry of Manpower and Transmigration	
Subroto Awards Subroto Awards	Kementerian Energi dan Sumber Daya Mineral (ESDM). Ministry of Energy and Mineral Resources (EMR).	
Perusahaan yang mengaplikasikan solar panel terbanyak di industri migas lepas pantai di Indonesia The company that applies the most solar panels in the offshore oil & gas industry in Indonesia	Dinas Lingkungan Hidup Provinsi Jawa Barat West Java Provincial Environmental Agency	
Penghargaan Gubernur Jawa Barat bidang Lingkungan Hidup Raksa Prasada Raksa Prasada Environmental Award	Gubernur Provinsi Jawa Barat Governor of West Java Province	
Kecelakaan Nihil (Zero Accident) Zero Accident Award	Kementerian Ketenagakerjaan Republik Indonesia Ministry of Manpower of the Republic of Indonesia	
CSR & Pembangunan Desa Berkelanjutan Award 2022 CSR & Sustainable Village Development Award 2022	Kementerian Desa, Pembangunan Desa Tertinggal, dan Transmigrasi Republik Indonesia Ministry of Village, Development of Disadvantaged Regions, and Transmigration of the Republic of Indonesia	



Tentang Laporan Keberlanjutan

About the Sustainability Report

PHE ONWJ menyampaikan Laporan Keberlanjutan setiap tahun. Laporan sebelumnya diterbitkan pada September 2022. Informasi Laporan Keuangan disusun terpisah untuk tahun buku yang berakhir pada 31 Desember 2022, dan menjadi bagian dari Laporan Keuangan Konsolidasian PHE Subholding Upstream. Data dan informasi berasal dari PHE ONWJ saja dikarenakan hingga tahun 2022 Perseroan tidak memiliki entitas anak. Pada Laporan Keberlanjutan tahun 2022 ini terdapat informasi penyajian kembali mengenai data pengelolaan limbah, pelestarian keanekaragaman hayati, pencatatan kecelakaan kerja, dan pelatihan K3. Informasi penyajian kembali bersifat memperbaiki informasi pada tahun sebelumnya. Setiap penyajian kembali, diberikan keterangan pada bawah tabel. [2-2] [2-3] [2-4]

PHE ONWJ telah menyusun laporan sesuai dengan standar Global Reporting Initiative (GRI) 2021, dengan kesesuaian: *in accordance with the GRI Standards*. Laporan ini juga disiapkan sesuai GRI 11 Sektor Minyak dan Gas. Kami juga merujuk pada Peraturan Otoritas Jasa Keuangan (POJK) No.51/POJK.03/2017, Surat Edaran Otoritas Jasa Keuangan (SEOJK) No. 16/SEOJK.04/2021, International Petroleum Industry Environmental Conservation Association (IPIECA), serta kesesuaian dengan Tujuan Pembangunan Berkelanjutan (TPB).

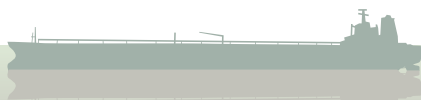
PHE ONWJ publishes a Sustainability Report every year. The previous report was published in September 2022. Information on Financial Statements has been prepared separately for the fiscal year ending December 31, 2022, and is part of the Consolidated Financial Statements of PHE Subholding Upstream. Data and information were collected from PHE ONWJ only because until 2022 the Company did not have a subsidiary. The 2022 Sustainability Report contains restatement information regarding waste management data, biodiversity preservation, occupational accident records, and OHS training. The restatement is to revise information from the previous year. Each restatement has a description below the table. [2-2] [2-3] [2-4]

PHE ONWJ has prepared the report in accordance with the 2021 Global Reporting Initiative (GRI) Standards. This report has also been prepared in accordance with GRI 11 for the Oil and Gas Sector 2021. We also refer to the Financial Services Authority Regulation (POJK) No.51/POJK.03/2017, the Financial Services Authority Circular Letter (SEOJK) No. 16/SEOJK.04/2021, International Petroleum Industry Environmental Conservation Association (IPIECA), as well as compliance with the Sustainable Development Goals (SDGs).

Laporan ini dilengkapi publikasi daring, dan dapat diakses di situs web

This report is complemented with an online publication and can be accessed on the website

<https://phe.pertamina.com/id/hubungan-investor/laporan-keberlanjutan>



VERIFIKASI LAPORAN [G.1]

Laporan ini telah diverifikasi lembaga independen, yaitu SR Asia Indonesia. Penjaminan meliputi keabsahan seluruh data dan informasi yang disampaikan, dengan tingkat verifikasi menengan (*moderate*) Tipe 2, seperti pelaporan sebelumnya. Proses verifikasi oleh Lembaga independen melibatkan pejabat perusahaan yang berwenang dalam pengelolaan data dan informasi dimaksud. Seluruh pengungkapan informasi telah mendapatkan persetujuan Direktur sebagai pejabat tertinggi tata kelola keberlanjutan PHE ONWJ. [2-5a,5b][2-14a, 15b]

LEMBAR UMPAN BALIK DAN TANGGAPAN ATAS UMPAN BALIK [G.2, G.3]

Pada bagian akhir Laporan tersedia Lembar Umpan Balik yang bisa digunakan pemangku kepentingan, untuk menyampaikan pendapat, saran maupun kritik atas Laporan ini. Kami belum menerima umpan balik dari beberapa pemangku kepentingan atas Laporan Keberlanjutan Tahun 2021.

KONTAK TERKAIT LAPORAN [2-3D]

Senior Manager Relation Region 2
Menara Standard Chartered
Jl. Prof. DR. Satrio No.164, RT.4/RW.4, Karet Semanggi,
Kecamatan Setiabudi, Kota Jakarta Selatan,
Daerah Khusus Ibukota Jakarta, Indonesia 12930
Telp: 021-78543002

REPORT VERIFICATION [G.1]

This report has been verified by SR Asia Indonesia, an independent agency. The assurance includes the validity of all published data and information, with a Type 2 moderate level of verification, like the previous report. The verification process by an independent agency involves company officers who are authorized in managing data and information. All disclosures of information have been approved by the Director as the highest sustainability governance officer at PHE ONWJ. [2-5a,5b][2-14a, 15b]

FEEDBACK FORM AND RESPONSES TO FEEDBACK

[G.2, G.3]

At the end of the Report there is a Feedback Sheet that can be used by stakeholders to express opinions, suggestions and criticisms about this Report. We have not received any feedback from our stakeholders regarding the 2021 Sustainability Report.

CONTACT REGARDING THE REPORT [2-3D]

Senior Manager Relation Region 2
Standard Chartered Tower
Jl. Prof. DR. Satrio No.164, RT.4/RW.4, Karet Semanggi,
Setiabudi District, South Jakarta City
Special Capital Region of Jakarta, Indonesia 12930
Phone: 021-78543002



TOPIK MATERIAL


PHE ONWJ melakukan penyesuaian topik material dari pelaporan terdahulu, di mana terdapat penambahan topik material Anti-Korupsi pada laporan 2022. Hal ini dikarenakan Perusahaan berkomitmen menerapkan praktik bisnis berintegritas. Topik material pelaporan ditentukan melalui diskusi internal secara daring pada tanggal 12 Mei 2023. Proses penetapan topik material melalui tahapan pemahaman konteks kegiatan dan bisnis PHE ONWJ; identifikasi dampak aktual dan potensial dari kegiatan eksplorasi dan produksi migas selama periode pelaporan, serta analisis pengaruhnya terhadap PHE ONWJ. Perusahaan telah menetapkan prioritas dampak aktual dan potensial yang berpengaruh pada Perusahaan selama tahun 2022, untuk ditetapkan sebagai topik material. Proses yang berlangsung melibatkan pihak independen sebagai tim ahli. Kami menetapkan delapan topik material yang telah disetujui Direktur sebagai pejabat tertinggi tata kelola keberlanjutan PHE ONWJ. [3-1][3-2]

MATERIAL TOPICS

PHE ONWJ made adjustments to material topics from the previous report, by adding a material topic on Anti-Corruption in the 2022 report. This is because the Company is committed to implementing business practices that have integrity. Material topics for the report were determined through online internal discussions on May 12, 2023. The process of determining material topics through the stages of understanding the context of PHE ONWJ's activities and business, identification of the actual and potential impacts of oil and gas exploration and production activities during the reporting period, as well as an analysis of their impact on PHE ONWJ. The company had prioritized actual and potential impacts that affected the company during 2022, to be determined as material topics. The ongoing process involved independent parties as a team of experts. We set eight material topics that have been approved by the Director as the highest governance officer for PHE ONWJ. [3-1][3-2]

Topik Material, Dampak terhadap Pemangku Kepentingan, dan Pengelolaannya [3-3]

Material Topics, Impact on Stakeholders, and Their Management


Topik Material Material Topics	Dampak dan Pengelolaan Topik Material Impact and Management of Material Topics
 <p>Lingkungan Environment</p>	
<p>Kepatuhan Lingkungan Pengendalian Emisi Efisiensi Energi Keanekaragaman Hayati</p> <p>Environmental Compliance Emission Control Energy Efficiency Biodiversity</p>	<p>Kegiatan yang dijalankan PHE ONWJ dijalankan dengan mengedepankan kepatuhan pengelolaan lingkungan guna meminimalkan risiko terhadap kerusakan lingkungan, termasuk pengendalian emisi gas rumah kaca (GRK) untuk pencegahan perubahan iklim. PHE ONWJ melakukan inisiatif standardisasi sistem pengelolaan lingkungan, efisiensi energi, pemanfaatan panel surya sebagai energi terbarukan dan pengendalian gas suar untuk mereduksi emisi GRK; serta mempromosikan keanekaragaman hayati di darat maupun lepas pantai, di antaranya penanaman mangrove dan restorasi terumbu karang. Seluruh kegiatan melibatkan para pemangku kepentingan, dan dievaluasi dengan pelaporan berkala kepada Pemerintah, regulator, dan pihak berwenang lainnya.</p> <p>PHE ONWJ carries out its activities by prioritizing compliance with environmental management to minimize risks to environmental damage, including controlling greenhouse gas (GHG) emissions to prevent climate change. PHE ONWJ carries out initiatives to standardize environmental management systems, energy efficiency, use of solar panels as renewable energy and gas flare control to reduce GHG emissions; as well as promoting biodiversity both onshore and offshore, including mangrove planting and coral reef restoration. All activities involve stakeholders, and are evaluated by periodic reporting to the Government, regulators and other authorities.</p>




Topik Material Material Topics	Dampak dan Pengelolaan Topik Material Impact and Management of Material Topics
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     	Sosial Social
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<p>Keselamatan dan Kesehatan Kerja Pelibatan masyarakat lokal</p> <p>Occupational Health and Safety Involvement of local communities</p>	<p>Dalam menjalankan kegiatan eksplorasi dan produksi migas, PHE ONWJ menerapkan standar tertinggi keselamatan dan kesehatan kerja (K3), keselamatan proses, manajemen krisis, serta tanggap darurat, untuk meminimalkan risiko keselamatan dan kesehatan terhadap pekerja maupun masyarakat. PHE ONWJ juga berkomitmen meningkatkan kesejahteraan masyarakat di wilayah operasi Perusahaan. Inisiatif yang dilaksanakan meliputi standardisasi sistem manajemen terkait K3 dan keselamatan proses, dengan melibatkan pekerja, kontraktor, regulator dan pemerintah. Inisiatif lain adalah program pemberdayaan masyarakat berkelanjutan, yang melibatkan masyarakat, regulator dan pemerintah. Evaluasi dilakukan melalui pelatihan dan pelaporan berkala kepada Direksi maupun pihak-pihak berwenang.</p> <p>In conducting oil & gas exploration and production activities, PHE ONWJ applies the highest standards of occupational health and safety (OHS), process safety, crisis management, and emergency response, to minimize safety and health risks to employees and the community. PHE ONWJ is also committed to improving the welfare of the people in the Company's operating areas. Initiatives implemented include standardization of management systems on OHS and process safety, involving employees, contractors, regulators and the government. Another initiative is a sustainable community empowerment program, which involves the community, regulators and government. Evaluation is carried out through training and periodic reporting to the Board of Directors and the authorities.</p>
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	Tata Kelola Governance
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<p>Antikorupsi</p> <p>Anti-corruption</p>	<p>PHE ONWJ berkomitmen menerapkan praktik bisnis berintegritas, dengan mematuhi peraturan perundang-undangan yang berlaku. Perusahaan melakukan inisiatif meningkatkan kepatuhan melalui uji nilai (<i>assessment</i>) penerapan <i>good corporate governance</i> (GCG), dengan melibatkan semua pemangku kepentingan. Evaluasi dilakukan melalui pelaporan kepada pihak-pihak berwenang, termasuk penyampaian LHKPN kepada Komisi Pemberantasan Korupsi (KPK).</p> <p>PHE ONWJ is committed to implementing business practices with integrity, by complying with the applicable laws and regulations. The company carries out initiatives to improve compliance through an assessment of the implementation of good corporate governance (GCG), involving all stakeholders. Evaluation is carried out through reporting to the authorities, including submitting the State Official Wealth Report (LHKPN) to the Corruption Eradication Commission (KPK).</p>
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	Ekonomi Economy
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<p>Kinerja Ekonomi</p> <p>Economic Performance</p>	<p>Kinerja ekonomi berpengaruh pada penerapan keberlanjutan, melalui pendistribusian sebagian nilai ekonomi yang diperoleh, kepada para pemangku kepentingan. PHE ONWJ berkomitmen menjaga kinerja ekonomi melalui inisiatif penerapan operasi unggul, efisiensi, inovasi dan investasi sosial yang berkelanjutan, dengan melibatkan seluruh pemangku kepentingan. Evaluasi dilakukan berkala melalui pelaporan kepada Direksi dan pihak-pihak berwenang.</p> <p>Economic performance affects the sustainability implementation, through the distribution of some of the generated economic value, to stakeholders. PHE ONWJ is committed to maintaining economic performance through initiatives to implement operational excellence, efficiency, innovation and sustainable social investment, involving all stakeholders. Evaluation is carried out periodically through reporting to the Board of Directors and the authorities.</p>
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PEMANGKU KEPENTINGAN TERDAMPAK




Pemangku kepentingan diidentifikasi berdasarkan pemetaan sosial dan lingkungan yang dilakukan secara dinamis, dan diperbarui berkala, terakhir tahun 2017. Pemetaan yang dilakukan juga menjadi bagian dari manajemen dalam mengidentifikasi dan mengelola dampak ekonomi, lingkungan dan sosial keberadaan PHE ONWJ. Kami melibatkan para pemangku kepentingan dalam pelaksanaan kinerja keberlanjutan, berdasarkan identifikasi topik-topik utama yang menjadi kebutuhan mereka. [2-29a]

AFFECTED STAKEHOLDERS





Stakeholders are identified based on social and environmental mapping, which is carried out dynamically, and updated regularly, most recently in 2017. Mapping is also part of management in identifying and managing the economic, environmental and social impacts of the existence of PHE ONWJ. We involve stakeholders in implementing sustainability performance, based on identifying the main topics that are their needs. [2-29a]

Daftar Pemangku Kepentingan Terdampak, Bentuk dan Frekuensi Pelibatan [E.4]

List of Affected Stakeholders, Form and Frequency of Engagement

Jenis Pelibatan Type of Engagement	Topik Utama dan Frekuensi Pelibatan Key Topics and Frequency of Engagement	Kekuatan dan Pengaruh Power and Influence
 Pemegang Saham Shareholders		
Konsultasi	<ul style="list-style-type: none"> RUPS, dilaksanakan sesuai kebutuhan. Penyusunan Rencana Kerja dan Anggaran Perusahaan (RKAP), dilakukan setiap awal tahun. 	Kebijakan perencanaan operasi dan investasi.
Consultation	<ul style="list-style-type: none"> Laporan kinerja berkala: bulanan, triwulan, semester dan tahunan. GMS, held as needed. The preparation of the Company's Work Plan and Budget (WP&B) is carried out at the beginning of each year. Periodic performance reports: monthly, quarterly, half-yearly and yearly . 	Operation and investment planning policy.
 Pelanggan Customer		
Informasi	Pertemuan berkala dan paparan program kerja terkait jaminan pasokan dan produk migas. Dilaksanakan satu kali dalam setiap bulan atau 12 kali dalam setiap tahun.	Perolehan pendapatan usaha.
Information	Periodic meetings and presentation of work programs on secure supply of oil & gas products. Held once a month or 12 times a year.	Operating revenues
 Pekerja Employee		
Partisipasi	<ul style="list-style-type: none"> Keselamatan dan Kesehatan Kerja (K3). Dilaksanakan berkala sesuai Pedoman HSSE. Paparan program kerja. Dilaksanakan sesuai melalui <i>management walk through</i> (WMT), serta town hall meeting. 	Pencapaian target produksi migas.
Participation	<ul style="list-style-type: none"> Penilaian kinerja (KPI), dilaksanakan setiap waktu sepanjang tahun. Occupational health and safety (OHS). Conducted periodically according to HSSE Guidelines. Presentation of work programs. Conducted according to management walk through (WMT), and town hall meetings. Key performance indicator (KPI), carried out at any time throughout the year. 	Achievement of oil and gas production targets.



Jenis Pelibatan Type of Engagement	Topik Utama dan Frekuensi Pelibatan Key Topics and Frequency of Engagement	Kekuatan dan Pengaruh Power and Influence
	<p>Pemasok Supplier</p>	
<p>Partisipasi Participation</p>	<ul style="list-style-type: none"> • Penerapan <i>e-procurement</i> dilaksanakan sepanjang tahun. • <i>Leadership Contractor Meeting (LCM)</i>, dan <i>Vendor Day</i>. Dilaksanakan dua kali setiap tahun mengenai sosialisasi serta evaluasi komitmen pemasok terkait HSSE kepatuhan kontrak kerja dan penggunaan kandungan lokal. • Implementation of <i>e-procurement</i> is carried out throughout the year. • <i>Leadership Contractor Meeting (LCM)</i>, and <i>Vendor Day</i>. Held twice a year on dissemination and evaluation of supplier commitments to HSSE compliance with work contracts and the use of local content. 	<ul style="list-style-type: none"> • Pekerjaan sesuai <i>on time, on budget, on schedule, on return (OTOSOBOR)</i>. • Realisasi Tingkat Komponen Dalam Negeri (TKDN). • Work on time, on budget, on schedule, on return (OTOSOBOR). • Realization of Domestic Component Level (TKDN).
	<p>SKK Migas</p>	
<p>Konsultasi Consultation</p>	<p>Pertemuan dan pelayanan kinerja. Dilaksanakan berkala dua kali, setiap tahun. Meetings and performance services. Held periodically, twice every year.</p>	<ul style="list-style-type: none"> • Persetujuan Rencana Kerja dan Anggaran. • Realisasi target produksi migas. • Approval of work plan and budget. • Realization of oil and gas production targets.
	<p>Pemerintah dan Asosiasi Industri Government and Industry Associations</p>	
<p>Konsultasi Partisipasi Consultation Participation</p>	<ul style="list-style-type: none"> • Pertemuan dan pelaporan kinerja. Dilaksanakan berkala dua kali setiap tahun. • Berkontribusi pada rencana kebijakan dan regulasi sektor migas. Dilaksanakan sesuai kebutuhan. • Meetings and performance reporting. Held twice every year. • Contribute to oil and gas sector policy plans and regulations. Held as needed. 	<ul style="list-style-type: none"> • Realisasi target produksi migas. • Pembayaran penerimaan negara. • Realization of oil and gas production targets. • Payment of state revenue.
	<p>Masyarakat, termasuk LSM dan media. Communities, including NGOs and the media.</p>	
<p>Partisipasi Informasi Participation, Information</p>	<ul style="list-style-type: none"> • Pertemuan informal dan penyampaian informasi. Dilaksanakan sesuai kebutuhan. • Workshop program kerja sosial kemasyarakatan. Dilaksanakan sesuai kebutuhan. • Informal meetings and delivery of information. Held as needed. • Social work program workshop. Held as needed. 	<ul style="list-style-type: none"> • Lisensi sosial dan dukungan operasional. • Citra positif Perusahaan. • Social license and operational support. • Positive corporate image.



Strategi Keberlanjutan [A.1][2-22]

Sustainability Strategy

Untuk mendukung penerapan operasi unggul berkelanjutan, PHE ONWJ berkomitmen menjalankan bisnis yang berkesinambungan, dengan membangun budaya keberlanjutan melalui pengelolaan lingkungan, sosial, dan tata kelola (LST). Penerapan keberlanjutan mengacu pada Kebijakan Keberlanjutan PERTAMINA yang dirumuskan dalam 10 Fokus Keberlanjutan PERTAMINA, dan diselaraskan dengan Tujuan Pembangunan Berkelanjutan (TPB) sesuai Peraturan Presiden (Perpres) Nomor 59 Tahun 2017 tentang Pelaksanaan Pencapaian Tujuan Pembangunan Berkelanjutan (TPB). Terbangunnya budaya keberlanjutan akan mendukung upaya strategis PHE ONWJ untuk meningkatkan produktivitas, mengurangi biaya, meningkatkan keuntungan dan peluang investasi, serta terus memberikan kontribusi positif terhadap masyarakat, lingkungan, dan seluruh pemangku kepentingan. [2-23][2-24]

Selama tahun 2022 PHE ONWJ melakukan berbagai kegiatan yang mendukung terbangunnya budaya keberlanjutan, di antaranya: [F.1]

1. Perusahaan memiliki *Continuous Improvement Program* sebagai sarana perbaikan proses atau sistem kerja. Selama tahun 2022 sejumlah 21 *paper Improvement Program* di Zona 5.
2. Sosialisasi Core value "AKHLAK" ke para perwakilan Fungsi dalam wadah Agent of Change (AOC)

To support the implementation of sustainable operational excellence, PHE ONWJ is committed to running a sustainable business, by building a sustainability culture through environmental, social and governance (ESG) management. The sustainability implementation refers to PERTAMINA's Sustainability Policy which is formulated in PERTAMINA's 10 Sustainability Focuses and is aligned with the Sustainable Development Goals (SDGs) based on Presidential Regulation (Perpres) Number 59 of 2017 concerning Implementation of Achieving Sustainable Development Goals (SDGs). The establishment of a sustainability culture will support PHE ONWJ's strategic efforts to increase productivity, reduce costs, increase profits and investment opportunities, and continue to make a positive contribution to society, the environment and all stakeholders. [2-23][2-24]

During 2022 PHE ONWJ carried out various supporting activities to build a sustainability culture, including: [F.1]

1. The company has a *Continuous Improvement Programme* as the medium for improving work procedures or systems. In 2022, there were 21 *paper Improvement Programmes* in Zone 5 .
2. Dissemination of the Core values of "AKHLAK" to Function representatives in the Agent of Change (AOC) forum.



Kinerja Keberlanjutan Pengelolaan Lingkungan
Environmental Management Sustainability Performance

**Operasi Unggul Berkelanjutan
Untuk Kelestarian Lingkungan**
Sustainable Operational Excellence for
Environmental Preservation



Komitmen PHE ONWJ menerapkan operasi unggul berkelanjutan, ditujukan untuk mendukung kelestarian lingkungan di sekitar wilayah operasi, dan dilaksanakan dengan pengelolaan lingkungan yang sejalan aspek Health, Safety, Security, & Environment (HSSE). Perusahaan mendukung upaya pencegahan perubahan iklim dengan mengelola pemakaian energi dan pengendalian emisi termasuk mengurangi emisi gas rumah kaca (GRK) serta mengembangkan energi baru terbarukan (EBT). Upaya lain adalah menjaga, keanekaragaman hayati, disertai mengelola penggunaan air, limbah disertai dukungan biaya lingkungan.

PHE ONWJ's commitment to implementing sustainable operational excellence, aimed at supporting environmental sustainability around the operating area, and carried out with environmental management that is in line with Health, Safety, Security & Environment (HSSE) aspects. The company supports efforts to prevent climate change by managing energy consumption and controlling emissions, including reducing greenhouse gas (GHG) emissions and developing new and renewable energy (NRE). Other efforts in protecting biodiversity are along with managing the use of water, waste and supporting environmental costs.

Pengendalian Emisi dan Pengelolaan Energi

Emission Control and Energy Management

UPAYA KAMI MENGENDALIKAN EMISI [3-3][11.1.1]

PHE ONWJ menyadari kegiatan operasi yang dijalankan menimbulkan dampak negatif di antaranya lepasan emisi gas rumah kaca (GRK), yang turut mempengaruhi terjadinya perubahan iklim sehingga harus dikendalikan. Pengendalian emisi dilakukan dengan melibatkan seluruh Divisi dan diawasi Divisi Health, Safety, Security and Environment (HSSE) yang bertanggung jawab kepada Direktur sebagai pejabat tata kelola keberlanjutan tertinggi. Upaya PHE ONWJ mengendalikan emisi GRK menjadi bagian dari komitmen PT Pertamina Hulu Energi Subholding Upstream sebagai induk perusahaan dan PT Pertamina (Persero) sebagai Badan Usaha Milik Negara (BUMN). [2-25][CCE-1.C1][CCE-1.C2][CCE-1.C3]

Pengendalian emisi mengacu pada regulasi yang berlaku, di antaranya:

1. Permen LH No.13 tahun 2009 tentang Baku Mutu Emisi Sumber Tidak Bergerak Bagi Usaha dan/atau Kegiatan Minyak dan Gas Bumi.
2. Permen LH No.11 tahun 2021 tentang Baku Mutu Emisi Mesin dengan Pembakaran Dalam.

OUR EFFORTS TO CONTROL EMISSIONS [3-3][11.1.1]

PHE ONWJ is aware that its operating activities cause negative impacts, therefore they must be controlled, including the greenhouse gas (GHG) emissions, which also affect climate change. Emission control is carried out by all divisions under the supervision of the Health, Safety, Security and Environment (HSSE) Division, which reports to the Director as the highest sustainability governance officer. PHE ONWJ's efforts to control GHG emissions are part of the commitment of PT Pertamina Hulu Energi Subholding Upstream as the holding company and PT Pertamina (Persero) as Stated Owned Company. [2-25][CCE-1.C1][CCE-1.C2][CCE-1.C3]

Emission control refers to applicable regulations, including:

1. Regulation of the Minister of Environment No.13 of 2009 on Quality Standards for Emissions from Stationary Sources for Oil and Gas Businesses and/or Activities.
2. Regulation of the Minister of Environment No.11 of 2021 on Quality Standards for Internal Combustion Engine Emissions.



3. Peraturan Direktur Jenderal Pengendalian Pencemaran dan Kerusakan Lingkungan Nomor P.14/PPKL/SET/KUM.1/9/2020 tentang Perubahan atas Peraturan Direktur Jenderal Pengendalian Pencemaran dan Kerusakan Lingkungan Nomor P.12/PPKL/KUM.1/9/2018 Tentang Benchmarking Sektor Industri Minyak dan Gas Eksplorasi dan Produksi.

Lebih lanjut, PHE ONWJ juga telah melakukan beberapa inisiatif untuk mengurangi emisi antara lain mengurangi emisi gas suar (*flare*) melalui penerapan peta jalan zero routine flaring dan pengembangan EBT untuk menciptakan keseimbangan pemakaian energi di internal Perusahaan serta masyarakat di sekitar wilayah kerja PHE ONWJ. Setiap upaya yang dijalankan disertai pelaporan kepada pemangku kepentingan. [CCE-1.C4][CCE-1.A1]

Pengelolaan Risiko Terkait Emisi GRK

- Zona 5 telah menetapkan KPI penurunan emisi sebesar 1,25% yang tujuannya untuk mengukur keberhasilan perusahaan dalam mereduksi emisi dari sumber-sumber bergerak dan tidak bergerak dari kegiatan operasional. KPI ini sebagai strategi pengelolaan risiko dan mitigasi pengelolaan emisi GRK. [CCE-2.C1]
- PHE ONWJ memiliki rencana strategis pengelolaan emisi GRK dari tahun 2020 sampai 2025, yang didalamnya terdapat rencana aktivitas pengelolaan emisi dan jumlah investasi yang dibutuhkan. [CCE-2.C2]
- PHE ONWJ tidak memiliki program pengendalian gas metana secara spesifik tetapi gas metana atau CH₄ termasuk dalam emisi GRK dan PHE ONWJ memiliki 14 program Reduksi Emisi GRK yang berhasil mereduksi sebesar 77.972,85 ton CO₂eq. [CCE-2.C3]

Penghitungan Volume Emisi GRK [F.11][CCE-2.C4][CCE-4.C1,C2,C3,C4]

Penghitungan emisi GRK terdiri atas Cakupan 1 dan Cakupan 2, namun tidak termasuk Cakupan 3 serta CO₂ biogenik. Emisi GRK meliputi CO₂, CH₄, dan N₂O, yang dinyatakan sebagai CO₂eq. Sumber Emisi meliputi pembakaran dalam, pembakaran suar bakar, emisi *fugitive*, tangki timbun, proses bongkar muat dan unit dehidrasi. Metode penghitungan emisi GRK merujuk Permen LH No.12 Tahun 2012 tentang Pedoman Penghitungan Beban Emisi Kegiatan Industri Minyak dan Gas Bumi,

3. Regulation of the Director General of Pollution and Environmental Damage Control Number P.14/PPKL/SET/KUM.1/9/2020 on Amendments to the Regulation of the Director General of Pollution and Environmental Damage Control Number P.12/PPKL/KUM.1/9/ 2018 on Benchmarking of the Oil and Gas Exploration and Production Industry Sector.

In addition, PHE ONWJ has also carried out several initiatives to reduce emissions, including reducing flare emissions by implementing a zero routine flaring roadmap and developing NRE to create a balance of energy use within the Company and the communities around the PHE ONWJ working area. The Company reports every effort carried out to stakeholders. [CCE-1.C4][CCE-1.A1]

Risk Management Related to GHG Emissions

- Zone 5 has set a KPI of 1.25% emission reduction which aims to measure the company's achievement in reducing emissions from mobile and stationary sources from operating activities. This KPI is a risk management and mitigation strategy for GHG emission management. [CCE-2.C1]
- PHE ONWJ has a strategic plan for managing GHG emissions from 2020 to 2025, which includes plans for emission management activities and the amount of investment required. [CCE-2.C2]
- PHE ONWJ does not have a specific methane gas control program, however methane gas or CH₄ is categorized as GHG emissions and PHE ONWJ has 14 GHG Emission Reduction programs which have managed in reducing 77,972.85 tons of CO₂eq. [CCE-2.C3]

Calculation of GHG Emission Volume [F.11][CCE-2.C4][CCE-4.C1,C2,C3,C4]

The calculation of GHG emission covers Scope 1 and Scope 2, which excludes Scope 3 and biogenic CO₂. GHG emissions consist of CO₂, CH₄, and N₂O, which are expressed as CO₂eq. Emission sources include internal combustion, flare combustion, fugitive emissions, storage tanks, loading and unloading processes and dehydration units. The method for calculating GHG emissions refers to Regulation of the Minister of Environment No. 12 of 2012 on Guidelines for Calculating Emission Loads for Oil and



PERTAMINA Emission Calc; dengan penghitungan Global Warming Potential (GWP) dari panduan API Compendium 2009, USEPA Standard dan OGP-Oil and Gas Procedures. Berdasarkan hasil penghitungan tahun 2022 diketahui volume emisi GRK mencapai 540.602,07 Ton CO₂eq, turun 4,5% dari baseline tahun 2020 sebesar 566.160,51 Ton CO₂eq dan naik 0,9% dari tahun 2021 sebesar 535.614,31 Ton CO₂eq. [305-1][305-2][305-3]

Gas Industry Activities, PERTAMINA Emission Calc; with the calculation of the Global Warming Potential (GWP) from the 2009 API Compendium, USEPA Standard and OGP-Oil and Gas Procedures guidelines. The 2022 calculation results showed the volume of GHG emissions reached 540,602.07 tons of CO₂eq, down 4.5% from the 2020 baseline of 566,160.51 tons of CO₂eq and up 0.9% from 2021 of 535,614.31 tons of CO₂eq. [305-1][305-2][305-3]

Hasil Penghitungan Emisi GRK (Ton CO₂eq) [305-1][305-2]
GHG Emission Calculation Results (Ton CO₂eq)

Sumber Emisi Emission Source	2022	2021	2020
Kegiatan Operasi Operating Activities	451.162,31	459.869,82	498.760,55
Fasilitas Pendukung Support facilities	89.439,76	75.744,49	67.399,96
Jumlah Total	540.602,07	535.614,31	566.160,51

Keterangan | Notes
Penghitungan Cakupan I dan Cakupan II sudah termasuk kegiatan operasi (penggunaan listrik dari pihak ketiga)
The Calculation of Scope I dan Scope II was included in the operating activities (use of electricity from third party)

Rasio Intensitas Emisi GRK [F.11]

Rasio Intensitas Emisi GRK dinyatakan sebagai volume lepasan emisi GRK untuk setiap Ton Oil Equivalent (TOE). Penghitungan emisi GRK meliputi CO₂, CH₄, dan N₂O. Nilai Rasio Intensitas Emisi GRK tahun 2022 mencapai 0,25 Ton CO₂eq/TOE, naik dari tahun 2021 sebesar 0,01 Ton. [305-4]

GHG Emission Intensity Ratio [F.11]

The GHG Emission Intensity Ratio is expressed as the volume of GHG emissions released for each Ton Oil Equivalent (TOE). The calculation of GHG emissions covers CO₂, CH₄, and N₂O. The GHG Emission Intensity Ratio in 2022 reached 0.25 Ton CO₂eq/TOE, up from 2021 of 0.01 tons. [305-4]

Rasio Intensitas Emisi GRK [305-4]
GHG Emission Intensity Ratio

Uraian Description	Satuan Unit	Volume		
		2022	2021	2020
Total Produksi Migas Total Oil and Gas Production	TOE	2.121.620,36	2.198.851,58	2.263.808,83
Total Volume Emisi GRK Total GHG Emission Volume	Ton CO ₂ eq	540.602,07	535.614,31	566.160,51
Rasio Intensitas Emisi GRK GHG Emission Intensity Ratio	Ton CO ₂ eq/TOE	0,25	0,24	0,25

Keterangan: Perhitungan rasio intensitas sudah mencakup emisi cakupan 1 dan cakupan 2.
Note: The intensity ratio calculation includes scope 1 and scope 2 emissions.



Reduksi Emisi GRK dan Pencapaian [F.12]

Selama periode pelaporan PHE ONWJ telah melakukan beberapa upaya untuk mengurangi emisi GRK, dengan total volume pengurangan emisi GRK mencapai 77.972,85 ton CO₂eq. Penghitungan reduksi emisi GRK meliputi CO₂, CH₄, dan N₂O. Upaya yang dilakukan dan pencapaian yang dilakukan tahun 2022, di antaranya: [305-5]

1. Pemanfaatan Suar Bakar di Zulu sebagai Bahan Bakar Turbin Generator (*Zulu Mini Compressor/ Magic Com*).
2. Implementasi Si Kethip OW pada Sistem Kelistrikan di Anjungan Papa.
3. Project Renewable Energy Pemasangan Solar Panel di MB2.
4. Implementasi PASTER (*Online Monitoring System*) di AVSA Green Platform.
5. *Solar Cell* untuk masyarakat di Desa Muara Baru, Sungai Buntu, Cemara Jaya.

PHE ONWJ melanjutkan pelaksanaan tahapan inventarisasi proses *Life Cycle Assessment (LCA)*, sesuai Peraturan Direktur Jenderal Pengendalian Pencemaran dan Kerusakan Lingkungan No: P.14/PPKL/SET/DIK.0/9/2018. Berdasar hasil kajian yang telah dijalankan, pada periode pelaporan PHE ONWJ telah mengidentifikasi dampak lingkungan utama, proses yang berkontribusi terhadap dampak lingkungan terutama emisi GRK, serta rekomendasi untuk menurunkan dampak lingkungan.

GHG Emission Reduction and Achievement [F.12]

During the reporting period, PHE ONWJ has made several GHG emission reduction efforts, with a total volume of GHG emission reductions reaching 77,972.85 tons of CO₂eq. The calculation of GHG emission reduction includes CO₂, CH₄, and N₂O. The efforts and achievements in 2022, including: [305-5]

1. Utilization of flare gas in Zulu as fuel for turbine generators (*Zulu Mini Compressor/Magic Com*).
2. Implementation of Si Kethip OW in the electrical system at Papa Platform.
3. Solar Panel Installation Renewable Energy Project in MB2.
4. Implementation of PASTER (*Online Monitoring System*) at the AVSA Green Platform.
5. Solar Cells for the community in Muara Baru, Sungai Buntu, and Cemara Jaya villages.

PHE ONWJ continues to carry out the inventory stage of the *Life Cycle Assessment (LCA)* process, according to the Regulation of the Director General of Pollution and Environmental Damage Control No. P.14/PPKL/SET/DIK.0/9/2018. Based on the results of studies that have been conducted in the reporting period, PHE ONWJ has identified the main environmental impacts, processes that contribute to environmental impacts, particularly GHG emissions, as well as recommendations for reducing environmental impacts.

Hasil Inventarisasi Proses Life Cycle Assessment PHE ONWJ Tahun 2022

PHE ONWJ's Life Cycle Assessment Process Inventory Results 2022

Proses Process	Dampak Lingkungan Ditimbulkan Environmental Impact Caused	Rekomendasi dan Tindak Lanjut Recommendations and Follow Up
Gate	Global Warming Potential Potensi Penipisan Ozon Ozone Depletion Potential Potensi Hujan Asam Acid Rain Potential Potensi Eutrofikasi Eutrophication Potential Photochemical Oxidation Toxicity Non-renewable	<ul style="list-style-type: none"> • Monitoring Program Pemanfaatan Suar Bakar melalui Pemasangan Zulu Mini Compressor. • Pemanfaatan Gas Suar dengan Pemasangan Ejector di Lapangan Bravo. • Pemasangan Solar Panel di Lapangan Zulu dan MB2. • Monitoring the Flare Utilization Program by installing a Zulu Mini Compressor. • Utilization of Gas Flares by installing ejectors at Bravo Field. • Installing solar panels at Zulu Field and MB2.





Pengendalian Emisi Gas Metana [CCE-5]

PHE ONWJ tidak memiliki program pengendalian gas metana secara spesifik, tetapi gas metana atau CH4 termasuk dalam emisi GRK dan PHE ONWJ memiliki 14 program Reduksi Emisi GRK yang berhasil mereduksi sebesar 77.972,85 tonCO₂eq.

Methane Emission Control [CCE-5]

PHE ONWJ does not have a specific methane gas control program, however, methane gas or CH4 is categorized as GHG emissions, and PHE ONWJ has 14 GHG Emission Reduction programs which have managed to reduce 77,972.85 tonCO₂eq.

Pengendalian Emisi Mengandung ODS dan Emisi Lain

PHE ONWJ menggunakan freon R417A dengan *Ozone Depleting Potential* (ODP) = 0, sehingga tidak menimbulkan penipisan lapisan ozon. PHE ONWJ juga memantau dan menghitung kadar emisi NOx dan SOx. Dari hasil pemantauan dan pengukuran pada tahun 2022 menggunakan metode US EPA Method 6C 1996 untuk NOx dan metode US EPA Method &E 1990 untuk SOx, diketahui kadar emisi NOx dan SOx masih di bawah baku mutu berdasarkan Permen LH No.13 Tahun 2009 tentang Baku Mutu Emisi Sumber Tidak Bergerak Bagi Usaha dan/atau Kegiatan Minyak dan Gas Bumi. [305-6][305-7]

Emission Control Containing ODS and Other Emissions

PHE ONWJ uses freon R417A with *Ozone Depleting Potential* (ODP) = 0, which does not cause ozone depletion. PHE ONWJ also monitors and calculates NOx and SOx emission levels. The results of monitoring and measurement in 2022 using the US EPA Method 6C 1996 for NOx and the US EPA Method &E 1990 method for SOx, showed the emission levels of NOx and SOx were below the quality standard based on Regulation of the Minister of Environment No. 13 of 2009 on Emission Quality Standards from Stationary Sources for Oil and Gas Businesses and/or Activities. [305-6][305-7]

Intensitas Emisi Tahun 2022 [305-7]

Emission Intensity in 2022

Produksi Setara Minyak Oil Equivalent Production Emission	Emisi Emission				
	Jenis Emisi Emission Type Intensity	Volume		Intensitas Intensity	
		Satuan Unit	Jumlah Total	Satuan Unit	Jumlah Total
2.198.851,58	GRK	Ton CO ₂ eq	540.602,07	Ton CO ₂ eq/TOE	0,25
	NOx	Ton	4.266,52	Ton NOx/TOE	0,00188
	SOx	Ton	191,93	Ton SOx/TOE	0,00008



Nilai Intensitas Emisi [305-7]

Emission Intensity Value

Uraian Description	Satuan Unit	2022	2021	2020
Intensitas Emisi GRK GHG Emission Intensity	Ton CO ₂ eq/TOE	0,25	0,24	0,25
Intensitas Emisi NOx NOx Emission Intensity	Ton/TOE	0,00201	0,00007	0,00166
Intensitas Emisi SOx SOx Emission Intensity	Ton/TOE	0,00009	0,0017	0,00007

Hasil Pengukuran Emisi NOx Berdasarkan Sumber Emisi [305-7]

Results of NOx Emission Measurement Based on Emission Sources

Sumber Emisi Emission Source	Baku Mutu Quality standards (mg/Nm ²)	2022		2021		2020	
		Terendah Lowest	Tertinggi Highest	Terendah Lowest	Tertinggi Highest	Terendah Lowest	Tertinggi Highest
Mesin pembakaran dalam berbahan bakar gas. Gas-fired internal combustion engine	400	6,00	253,50	6,60	387,60	6,60	7,20
Mesin pembakaran dalam berbahan bakar minyak. Oil-fired internal combustion engine	1.000	71,40	1.465,90	98,90	517,91	347,90	347,90
Turbin berbahan bakar gas. Gas-fired turbine	176,20	1,90	318,20	5,40	237,90	176,20	5,40
Pengolah panas berbahan bakar gas. Gas-fired heat treatment	400	1,90	288,70	21,740	144,30	63,20	63,20

Hasil Penghitungan Emisi Konvensional (Ton) [305-7]

Conventional Emission Calculation Results (Tons)

Kegiatan Activity	2022	2021	2020
Proses Produksi Production Process			
NO _x	1.626,11	1.591,06	18,61
SO _x	18,30	17,90	1.799,75
Particulate Matter	33,44	33,11	36,38
Fasilitas Pendukung Support Facilities			
NO _x	2.640,41	2.225,85	128,85
SO _x	173,63	146,37	1.959,39
Particulate Matter	185,61	156,47	137,73



UPAYA KAMI MENGELOLA ENERGI [3-3][11.1.1]

Energi dibutuhkan untuk kegiatan operasi dan fasilitas pendukung. Pengelolaan energi melibatkan seluruh Divisi di PHE ONWJ dengan pengawasan Divisi QHSSE, dan bertanggung jawab kepada Direktur. Kebijakan dan pelaksanaan pengelolaan energi mengacu pada standar dan regulasi yang berlaku, di antaranya ISO 50001:2011 Sistem Manajemen Energi, Peraturan Pemerintah No. 70 tahun 2009 tentang Konservasi Energi, dan Permen ESDM No.14 Tahun 2012 tentang Manajemen Energi. Pengelolaan energi dilakukan dengan inovasi berkelanjutan, serta pemanfaatan EBTKE. PHE ONWJ secara berkala melaksanakan evaluasi pengelolaan energi melalui penilaian pencapaian indikator kinerja kunci (KPI), audit energi, dan pelaporan kepada pihak-pihak berwenang termasuk pemangku kepentingan.

Volume Pemakaian Energi [F.6][CCE-6.C1][11.1.2][11.1.3]

Total penggunaan energi di dalam dan di luar Perusahaan tahun 2022 mencapai 8.510.496,73 GJ, bertambah 3,67% dari tahun 2021 sebesar 8.209.121,25 GJ. Kenaikan ini terjadi adanya tambahan proyek yang mulai berjalan di tahun 2022. Energi yang digunakan bersumber dari pemakaian sumber energi tidak terbarukan meliputi bahan bakar minyak (BBM); sumber energi baru dan terbarukan yakni gas bumi, gas suar dan panel surya; serta listrik yang dipasok PT PLN (Persero). Penghitungan merujuk pada Peraturan Menteri ESDM No.14 Tahun 2012 tentang Manajemen Energi termasuk konversi ke satuan energi. Sesuai bidang usaha yang dijalankan, PHE ONWJ juga menjual migas yang dihasilkan. Uraian volume migas yang dijual selama tahun 2022 disampaikan dalam bahasan kinerja ekonomi. [302-1][302-2]

OUR EFFORTS TO MANAGE ENERGY [3-3][11.1.1]

Energy is required for operating activities and support facilities. Energy management involves all divisions at PHE ONWJ under the supervision of the QHSSE Division, which reports to the Director. Energy management Policy and implementation refer to applicable standards and regulations, including ISO 50001:2011 Energy Management System, Government Regulation No. 70 of 2009 on Energy Conservation, and Minister of Energy and Mineral Resources No. 14 of 2012 on Energy Management. We manage energy through sustainable innovation and the use of NREEC. PHE ONWJ regularly evaluates energy management by assessing the achievement of key performance indicators (KPIs), energy audits, and reports to authorities, including stakeholders.

Energy Use Volume [F.6][CCE-6.C1][11.1.2][11.1.3]

The total energy use inside and outside the Company in 2022 reached 8,510,496.73 GJ, an increase of 3.67% from 8,209,121.25 GJ in 2021. This increase was due to additional projects starting in 2022. The Company used non-renewable energy, including fuel oil; new and renewable energy sources, such as natural gas, flare gas, and solar panels; as well as electricity supplied by PT PLN (Persero). The energy use calculation referred to the Minister of Energy and Mineral Resources Regulation No. 14 of 2012 on Energy Management, including conversion to energy units. According to its line of business, PHE ONWJ also sells its oil and gas products. The details of oil and gas sales volume in 2022 are available in the discussion of economic performance. [302-1][302-2]

Penggunaan Energi Di Dalam dan Luar Perusahaan (GJ) [302-1e][302-2a]

Energy Use Inside and Outside the Company (GJ)

Uraian Description		2022	2021	2020
Di Dalam Perusahaan Inside the Company	Proses produksi dan fasilitas pendukung. Production process and support facilities.	8.504.067,02	8.203.623,29	10.165.874,38
Di Luar Perusahaan Outside the Company	Penggunaan helikopter untuk transportasi dari/ke anjungan. Use of a helicopter for transportation from/to the platform.	6.429,71	5.497,96	2.231,23
Total		8.510.496,73	8.209.121,25	10.168.105,61



Penggunaan Energi Di Dalam Perusahaan Berdasarkan Sumber Energi (GJ) [302-1a,1b,1c]

Energy Use Within the Company Based on Energy Sources (GJ)

Uraian Description		2022	2021	2020
Energi Tak Terbarukan Non-Renewable Energy	BBM Fuel Oil	1.345.326,69	1.141.058,64	1.004.613,31
	Gas Bumi Natural Gas	7.154.620,71	7.056.744,37	9.151.586,53
Energi Baru dan Terbarukan New and Renewable Energy	Panel Surya Solar Panels	1.464,30	1.435,91	1.435,91
Listrik (PLN) Electricity (PLN)		4.119,63	5.820,28	9.674,54
Total		8.504.067,02	8.209.121,25	10.168.105,61

Intensitas Pemakaian Energi [F.6]

Rasio Intensitas Konsumsi Energi (IKE) dihitung sebagai besaran energi per GigaJoule untuk produksi per Ton Oil Equivalent (TOE) dan dinyatakan dalam GJ/TOE. Nilai IKE tahun 2022 mencapai 4,01 GJ/TOE, lebih tinggi dari tahun 2021 sebesar 3,73 GJ/TOE. Cakupan seluruh penghitungan energi hanya berasal dari dalam Perusahaan, yang digunakan untuk kegiatan produksi dan fasilitas produksi. Naiknya nilai IKE pada periode pelaporan dipengaruhi oleh meningkatnya konsumsi energi pada penggunaan diesel, gas, dan listrik. [302-3a,3b,3c,3d]

Energy Use Intensity [F.6]

The Energy Consumption Intensity (IKE) ratio is the amount of energy per GigaJoule for production per Ton Oil Equivalent (TOE) and is expressed in GJ/TOE. The IKE ratio in 2022 reached 4.01 GJ/TOE, an increase from 3.73 GJ/TOE in 2021. The total energy calculations only covered the Company's internal use for production activities and facilities. The increase in the IKE ratio in the reporting period was caused by the increase in energy consumption of diesel, gas, and electricity. [302-3a,3b,3c,3d]

Rasio Intensitas Konsumsi Energi [302-3a]

Energy Consumption Intensity Ratio

Status Energi Energy Status		Satuan Unit	2022	2021	2020
Total Produksi Migas Total Oil & Gas Production		TOE	2.121.620,36	2.198.851,58	2.263.808,83
Total Energi Terpakai Total Energy Used	Proses Produksi Production process	GJ	7.839.685,25	7.106.750,24	9.196.991,31
	Kegiatan Pendukung Support Activities		664.381,77	1.096.873,05	968.883,07
Intensitas Energi Energy Intensity	Proses Produksi Production Process	GJ/TOE	3,70	3,23	4,06
	Proses Produksi + Kegiatan Pendukung Production Process + Support Activities		4,01	3,73	4,49



Upaya dan Pencapaian Efisiensi Energi [F.7][CCE-6.C2]

Pelaksanaan Audit Energi

Audit Energi dilakukan berkala setiap dua tahun. Audit Energi terakhir dilakukan pada tahun 2021. Pada tahun 2022, Perusahaan melanjutkan pelaksanaan rekomendasi berdasar hasil audit yang dilakukan untuk meningkatkan efisiensi energi, guna mendukung pencapaian KPI Perusahaan dalam penurunan emisi berkelanjutan (*sustainability emission reduction*) yakni 18.86% dari *baseline* tahun 2020.

Nilai Rasio dan Realisasi Efisiensi Energi

Nilai Rasio Efisiensi Energi tahun 2022 mencapai 12,21% untuk proses produksi, sedangkan untuk proses produksi dan pendukung sebesar 11,25%. Nilai tersebut lebih rendah dari tahun 2021 yang mencapai 16,74% untuk proses produksi, serta 14,50% untuk proses produksi dan pendukung. Hal ini menunjukkan Nilai Absolut Efisiensi Energi pada tahun 2022 adalah 956.860,39 GJ, setara dengan USD5.596.667,73.

Nilai Rasio Efisiensi Energi (%) [302-4]

Energy Efficiency Ratio (%)

Uraian Description	2022	2021	2020
Proses Produksi Production process	12,21	16,74	2,37
Proses Produksi + Pendukung Production Process + Support	11,25	14,50	2,15

Penghitungan didasarkan pada penghitungan total pemakaian energi dari seluruh sumber energi baik pada proses produksi, fasilitas pendukung, kegiatan yang berhubungan dengan comdev dan kegiatan lain pada periode pelaporan, dibandingkan dengan periode sebelumnya. Pencapaian tersebut lebih baik dari tahun 2021 yang mencapai 1.189.342,53 GJ, atau setara USD3.383.161,35. [302-4a,4b,4c,4d]

Realisasi Efisiensi Energi (GJ) [302-4]

Energy Efficiency Realization (GJ)

Uraian Description	2022	2021	2020
Proses Produksi Production Process	956.832,00	1.189.340,16	218.089,60
Kegiatan yang Berhubungan dengan Comdev Comdev-related Activities	28,39	2,37	0,00
Jumlah Total	956.860,38	1.189.342,53	218.089,60

Efforts and Achievement of Energy Efficiency [F.7]

[CCE-6.C2]

Implementation of Energy Audit

An energy audit is conducted periodically every two years. The last energy audit was conducted in 2021. In 2022, the Company continued implementing recommendations based on the results of audits conducted to improve energy efficiency, in order to support the achievement of the Company's KPI for sustainable emission reduction by 18.86% from the 2020 baseline.

Energy Efficiency Ratio and Realization

The Energy Efficiency Ratio in 2022 reached 12.21% for production processes, while for production and support processes was at 11.25%. The ratios decreased from 2021 which were 16.74% for the production process, and 14.50% for the production and support processes. It showed that the Absolute Value of Energy Efficiency in 2022 was 956,860.39 GJ, equivalent to USD5,596,667.73.

The calculation was based on total energy use from all energy sources both in the production process, support facilities, community development activities, and other activities in the reporting period, compared to the previous period. The achievement was better than in 2021 which reached 1,189,342.53 GJ, or the equivalent of USD3,383,161.35. [302-4a,4b,4c,4d]



Bentuk Penghematan Energi Tahun 2022 dan Pencapaian [302-5a,5b,5c]

Forms of Energy Saving in 2022 and Achievements

Uraian Singkat Brief Description	Nilai Penghematan Saving Value
Proses Produksi Kegiatan Berkaitan dengan Comdev Production process Comdev-related activities	
Solar Cell untuk Masyarakat Solar Cells for Community	Rp11,39 juta Penghitungan berdasarkan Absolute efisiensi energi Rp11.39 million Calculation based on Absolute energy efficiency
Proses Produksi Production process	
Pemanfaatan Suar Bakar di Zulu sebagai Bahan Bakar Turbin Generator (Zulu Mini Compressor/ Magic Com) Utilization of flares in Zulu as fuel for turbine generators (Zulu Mini Compressor/Magic Com)	Rp25.681,76 juta Penghitungan berdasarkan Absolute efisiensi energi Rp25,681.76 million The calculation was based on absolute energy efficiency
Implementasi Si Kethip OW pada Sistem Kelistrikan di Anjungan Papa Implementation of Si Kethip OW in the electrical system at Papa Platform	Rp37,07 juta Perhitungan berdasarkan Absolute efisiensi energi Rp37.07 million The calculation was based on absolute energy efficiency
Implementasi PASTER (Online Monitoring System) di AVSA Green Platform Implementation of PASTER (Online Monitoring System) on the AVSA Green Platform	Rp788 juta Perhitungan berdasarkan Absolute efisiensi energi Rp788 million The calculation was based on absolute energy efficiency
Project Overhaul Generator di Arco Ardjuna Project Overhaul Generator at Arco Ardjuna	Rp1.888,82 juta Perhitungan berdasarkan Absolute efisiensi energi Rp1,888.82 million The calculation was based on absolute energy efficiency
Perubahan tipe BTU pada Turbin Generator di Zulu BTU type changes for Turbine Generators in Zulu	Rp1.769,19 juta Perhitungan berdasarkan Absolute efisiensi energi Rp1,769.19 million The calculation was based on absolute energy efficiency
Perubahan Mode Operasi Sistem Kompresi Gas di B1C dari 2 menjadi 1,5 train (LEBAH) Change of Gas Compression System Operation Mode in B1C from 2 to 1.5 train (LEBAH)	Rp56.645,69 juta Perhitungan berdasarkan Absolute efisiensi energi Rp56,645.69 million The calculation was based on absolute energy efficiency
Perubahan Mode operasi lapangan GGA (Meningkatkan Keandalan Fasilitas Produksi dengan Metode "SINGA" di OPF Balongan PHE ONWJ) Change of GGA field operation mode (Increasing the Reliability of Production Facilities with the "SINGA" Method at OPF Balongan PHE ONWJ)	Rp424,30 juta Perhitungan berdasarkan Absolute efisiensi energi Rp424.30 million The calculation was based on absolute energy efficiency
Fasilitas Pendukung Berkaitan dengan Proses Support Facilities Related to Process	
Project Renewable Energy Pemasangan Solar Panel di MB2 Installation of Solar Panels for Renewable Energy Project in MB2	Rp16,67 juta Perhitungan berdasarkan Absolute efisiensi energi Rp16.67 million The calculation was based on absolute energy efficiency

Keterangan: Pada tahun 2022, PHE ONWJ melakukan perhitungan penghematan energi yang telah dituangkan pada PROPER Hijau dengan program-program penghematan energi di *station* pada aspek efisiensi energi .

Note: In 2022, PHE ONWJ calculated the energy savings that have been outlined in the Green PROPER with energy saving programmes at the station on the energy efficiency aspect .





PENGEMBANGAN TEKNOLOGI RENDAH KARBON DAN EBTKE [F.7]

Kontribusi PHE ONWJ dalam mengurangi potensi perubahan iklim juga dilaksanakan melalui pengembangan teknologi rendah karbon, di antaranya pemanfaatan EBTKE dengan mengoperasikan unit panel surya sebagai pembangkit listrik (PLTS). Sampai dengan tahun 2022 tercatat ada 871 unit panel surya dengan jumlah daya 1.464,30 GJ per tahun. Jumlah tersebut bertambah dari tahun 2021 sebanyak 864 unit dan total daya 1.435,91 GJ. Panel surya-panel surya ditempatkan di anjungan tak berpenghuni untuk keperluan *navigation aids* dan *control system*, di anjungan berpenghuni lepas pantai dan di *living quarter* darat untuk memenuhi kebutuhan akomodasi sehari-hari menggantikan konsumsi listrik konvensional. [CCE-3.C1][CCE-3.C2]

Komitmen PHE ONWJ dalam menerapkan EBT mendapatkan apresiasi dari Museum Rekor Indonesia (MURI), berupa 2 piagam penghargaan yakni:

1. Rekor Anjungan Lepas Pantai Pertama yang Seluruhnya Beroperasi Menggunakan Energi Surya.
2. Rekor Fasilitas Produksi Migas dan Pemasangan Panel Energi Surya Terbanyak.

DEVELOPMENT OF LOW CARBON TECHNOLOGY AND NREEC [F.7]

PHE ONWJ contributes to the climate change potential reduction by developing low-carbon technologies, including the use of NREEC by operating solar panel units as power generators. As of 2022, there have been 871 units of solar panels with a total power of 1,464.30 GJ per year. The number has increased from 2021, with 864 units and total power of 1,435.91 GJ. Solar panels are placed on uninhabited platforms for the navigation aids and control system, on offshore inhabited platforms, and onshore living quarters to meet daily accommodation needs replacing conventional electricity consumption. [CCE-3.C1][CCE-3.C2]

PHE ONWJ's commitment to implementing NRE received two award certificates from the Indonesian Record Museum (MURI), namely:

1. Record for the first offshore platform to operate entirely using solar energy.
2. Record for the most oil and gas production facilities and installation of solar energy panels.



Selain untuk keperluan sendiri, PHE ONWJ juga menginisiasi penggunaan panel surya kepada masyarakat di sekitar wilayah operasional. [CCE-3.C2]

PHE ONWJ juga mengembangkan penggunaan teknologi rendah karbon lain dalam kegiatan eksplorasi dan produksi migas, di antaranya:

- Pemakaian panel surya dengan total 1.464,29 GJ, mendukung 17,77% dari total penggunaan listrik yang digunakan dan dimanfaatkan untuk pendukung operasional.
- Pemakaian biodiesel B30 dengan total volume mencapai 30.219.294,00 Liter pada tahun 2022.

PENGELOLAAN GAS SUAR

Berdasarkan Peraturan Menteri ESDM No.17 tahun 2021, tidak terdapat pembakaran gas suar bakar rutin yang melebihi 2 MMSCFD di setiap lapangan minyak. Selama periode pelaporan, PHE ONWJ telah melakukan beberapa upaya untuk melakukan pengelolaan gas suar, antara lain yaitu:

- Volume hidrokarbon yang dibakar sebagai gas suar dari kegiatan operasi sebesar 0,913 MMSCF dengan pembakaran per harinya sebesar 0,25 MMSCFD. [CCE-7.C1]
- Peta geografis titik gas suar dalam wilayah kerja PHE ONWJ. [CCE-7.C2]
- Komitmen dalam mengendalikan gas suar tertuang pada 'Kebijakan Pengelolaan Sumber Daya Alam PT. Pertamina Hulu Energi ONWJ tahun 2022 dengan pemanfaatan gas suar bakar/flaring dengan Zero Routine Flaring pada tahun 2030. [CCE-7.C3]
- Pada tahun 2022 kontribusi gas suar terhadap total emisi GRK sebesar 75.259,82 ton CO₂eq atau sebesar 13,9 % dari emisi total GRK PHE ONWJ. [CCE-7.C4]

Lebih lanjut, PHE ONWJ mempunyai dua program pengelolaan gas suar bakar, yaitu: [CCE-7.C5]

- Ejector Mounting on Bravo F/S – ONWJ, alat sudah terpasang dan diuji coba pada Q3 2022. Program ini berhasil mereduksi emisi sebesar 53,24 TonCO₂eq pada tahun 2022.
- Zero Routine Flaring Program at Echo F/S – ONWJ. Target onstream Q4 2023 dengan target reduksi emisi sebesar 763,9 TonCO₂eq per tahun.

In addition to meet their own needs, PHE ONWJ also has initiated the use of solar panels for communities around the operating area. [CCE-3.C2]

PHE ONWJ is also developing other low-carbon technologies in oil and gas exploration and production activities, including:

- Use of solar panels with a total of 1,464.29 GJ, supporting 17.77% of the total use of electricity and utilized for operational support.
- Use of biodiesel B30 with a total volume of 30,219,294.00 liters in 2022.

FLARE GAS MANAGEMENT

Based on Minister of Energy and Mineral Resources Regulation No. 17 of 2021 on zero routine flaring of more than 2 MMSCFD in every oil field. During the reporting period, PHE ONWJ has made several efforts to manage flare gas, including:

- The volume of hydrocarbons burned as flare gas from operating activities was 0.913 MMSCF with 0.25 MMSCFD burning per day. [CCE-7.C1]
- Geographic map of flare gas spots within PHE ONWJ working area. [CCE-7.C2]
- The commitment to controlling flare gas is stated in the 'Natural Resource Management Policy of PT. Pertamina Hulu Energi ONWJ of 2022 by utilizing flare gas with Zero Routine Flaring in 2030. [CCE-7.C3]
- In 2022 the contribution of flare gas to total GHG emissions was 75,259.82 tons of CO₂eq or 13.9% of the total GHG emissions of PHE ONWJ. [CCE-7.C4]

Furthermore, PHE ONWJ has two flare gas management programs, namely: [CCE-7.C5]

- Ejector Mounting on Bravo F/S – ONWJ, the equipment has been installed and tested in Q3 2022. This program has succeeded in reducing emissions by 53.24 TonCO₂eq in 2022.
- Zero Routine Flaring Program at Echo F/S – ONWJ, with onstream target in Q4 2023 and emission reduction target of 763.9 TonCO₂eq per year.



Keanekaragaman Hayati

Biodiversity

Dalam menerapkan operasi unggul yang berkelanjutan, PHE ONWJ berupaya mengelola dampak kegiatan operasi terhadap keanekaragaman hayati di wilayah kerja terutama biota laut dan pesisir. Pengelolaan keanekaragaman hayati di wilayah kerja PHE ONWJ menjadi tanggung jawab Divisi HSSE dan melibatkan pemangku kepentingan eksternal lain, dengan mengacu pada Persetujuan Lingkungan (Perling) dan Kebijakan Pengelolaan Sumber Daya Alam PHE ONWJ. Secara berkala Perusahaan menyampaikan laporan kinerja pengelolaan keanekaragaman hayati termasuk hasil pemantauan dan pengukuran indeks keanekaragaman hayati kepada pihak-pihak berwenang. Berdasarkan hasil pemantauan dan pengukuran biota perairan secara umum parameter dalam kondisi normal, atau tidak dijumpai kekritisan dan *blooming*. Di samping itu pada wilayah pesisir yang dikonservasi, parameter populasi, luasan area restorasi dan indeks keanekaragaman hayati tahun 2022 menunjukkan tren meningkat. [3-3a,3b,3c,3d,3e,3f]

PENGELOLAAN DAMPAK TERHADAP WILAYAH DILINDUNGI [F.9][EN-3.C1]

Wilayah kerja PHE ONWJ mencakup Blok Offshore North West Java (ONWJ) sesuai *Production Sharing Contract (PSC)/ Kontrak Kerja Khusus Pelaksana Kegiatan Minyak dan Gas dengan Pemerintah Indonesia melalui SKK Migas*. Total luas wilayah kerja Perusahaan adalah 8.279,29 km² yang berlokasi di lepas pantai utara Pulau Jawa, terbentang dari wilayah Cirebon di Provinsi Jawa Barat hingga Kepulauan Seribu di DKI Jakarta. Dari luas wilayah kerja keseluruhan, seluas 76 km² berada di perairan Kabupaten Administrasi Kepulauan Seribu yang termasuk dalam kawasan konservasi Taman Nasional Laut Kepulauan Seribu. Selain itu wilayah kerja terluar PHE ONWJ yang berada di perairan Kabupaten Indramayu Provinsi Jawa Barat berjarak sekitar 9 km dari Kepulauan Biawak yang berstatus Kawasan Konservasi Laut Daerah (KKLD) Kabupaten Indramayu. [304-1a]

In implementing sustainable operational excellence, PHE ONWJ manages the impact of operations on biodiversity in the working area, especially marine and coastal biota. HSSE Division is responsible for Biodiversity management in the PHE ONWJ working area, involving other external stakeholders, with reference to the Environmental Agreement (Perling) and the PHE ONWJ Natural Resource Management Policy. The Company periodically submits reports on the performance of biodiversity management including the results of monitoring and measuring the biodiversity index to the authorities. The results of monitoring and measurement of aquatic biota revealed that the parameters were generally in normal conditions, or no criticality and *blooming* were found. In 2022, population parameters, area of restoration, and biodiversity index in protected coastal areas showed an upward trend.

[3-3a,3b,3c,3d,3e,3f]

MANAGEMENT OF IMPACTS ON PROTECTED AREAS

[F.9][EN-3.C1]

The working area of PHE ONWJ includes the Offshore North West Java (ONWJ) Block according to the Production Sharing Contract (PSC)/Special Work Contract for Oil and Gas Activities with the Government of Indonesia through SKK Migas. The total working area of the Company is 8,279.29 km², which is located off the north coast of Java Island, stretching from Cirebon in West Java Province to Thousand Islands in Jakarta. Of the total working area, 76 km² is located in the waters of the Thousand Islands Administrative Regency which is part of the conservation area of the Thousand Islands Marine National Park. In addition, the outermost working area of PHE ONWJ, located in the waters of Indramayu Regency, West Java Province, is about 9 km from the Biawak Islands whose status is a Regional Marine Conservation Area (KKLD) of Indramayu Regency. [304-1a]



Kegiatan operasi PHE ONWJ sebagian besar berlangsung di lepas pantai, sehingga keanekaragaman hayati yang potensial terdampak adalah biota laut dan habitatnya. Biota laut wajib pantau secara berkala yaitu *Fitoplankton*, *Zooplankton*, dan *Benthos* yang sebagian besar berada di sekitar anjungan dan beberapa lokasi di perairan pesisir. Pengelolaan dampak dilakukan melalui pemantauan berkala kualitas air laut di wilayah kerja Perusahaan, dengan parameter pengukuran sesuai ketentuan dalam Lampiran III KepMen LHK No. SK.1159/MENLHK/SETJEN/PLA.4/11/2021 tentang Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah PHE ONWJ, dan Lampiran II KepMenLHK No. SK.3874/Menlhk-PKTL/PDLUK/PLA.4/4/2022 tentang Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah OPF Balongan. Berdasarkan hasil pemantauan tahun 2022, diketahui seluruh parameter pengukuran berada di bawah baku mutu yang ditetapkan Pemerintah dan tidak dijumpai kekritisan terhadap biota laut. Detail mengenai hasil pemantauan terdapat pada Lampiran 1. [304-2a,2b][ENV-3.C3]

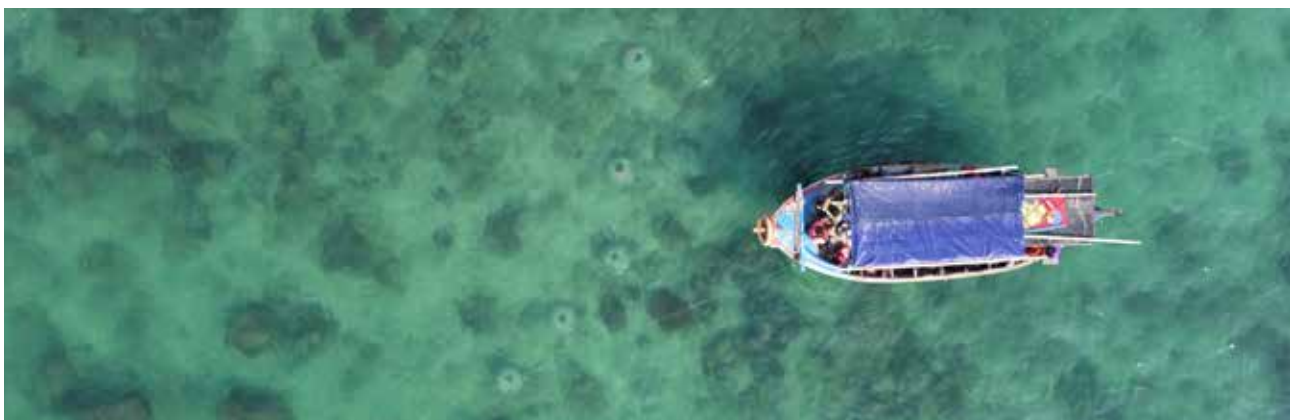
USAHA KONSERVASI DAN PERLINDUNGAN HABITAT [F.10][ENV-3.C2]

Sampai dengan akhir tahun 2022, PHE ONWJ mengelola beberapa kawasan konservasi pesisir dan laut melalui program Restorasi Mangrove Pantai Utara Jawa (REMAJA) dan Orang Tua Asuh Karang di Laut Utara Jakarta dan Jawa Barat (OTAK JAWARA), serta menyelesaikan kewajiban pemulihan ekosistem mangrove pasca insiden YYA-1 Tahun 2019. Upaya konservasi yang dilakukan merupakan komitmen PHE ONWJ dalam melindungi keanekaragaman hayati di wilayah kerja. Masing-masing kawasan restorasi dikelola dengan menyertakan pihak eksternal dalam kerja sama kemitraan dari elemen Pemerintah, Lembaga Pegiat Konservasi, Masyarakat, dan Perguruan Tinggi, sesuai prioritas program: [304-3a,3b,3c,3d]

PHE ONWJ's operations mostly take place offshore, which can potentially affect biodiversity, particularly marine biota and its habitat. The Company must periodically monitor marine biota, such as Phytoplankton, Zooplankton, and Benthos, most of which live around the platforms and several locations in coastal waters. The Company also manages impact through regular monitoring of seawater quality in its working area, with measurement parameters in accordance with the provisions in Appendix III to Minister of Environment and Forestry Decree No. SK.1159/MENLHK/SETJEN/PLA.4/11/2021 on Technical Approval for Fulfillment of PHE ONWJ Wastewater Quality Standards, and Appendix II to Minister of Environment and Forestry Decree No. SK.3874/Menlhk-PKTL/PDLUK/PLA.4/4/2022 on Technical Approval of Fulfillment of Balongan OPF Wastewater Quality Standards. The monitoring results for 2022 found all measurement parameters were below the Government's quality standard threshold and there was no criticality for marine biota. Details regarding monitoring results are available in Appendix 1. [304-2a,2b][ENV-3.C3]

HABITAT CONSERVATION AND PROTECTION EFFORTS [F.10][ENV-3.C2]

Until the end of 2022, PHE ONWJ has managed several coastal and marine conservation areas through the North Java Coastal Mangrove Restoration (REMAJA) and Coral Foster Parents in the North Sea of Jakarta and West Java (OTAK JAWARA), as well as completing the obligation to restore mangrove ecosystems post YYA-1 incidents in 2019. The conservation efforts are PHE ONWJ's commitment to protecting biodiversity in the working area. Each restoration area is managed through partnerships with external parties from the Government, conservation activists, communities, and universities, according to program priorities: [304-3a,3b,3c,3d]



Program REMAJA

Restorasi Mangrove Pantai Utara Jawa (REMAJA) merupakan program perbaikan ekosistem mangrove pesisir terdegradasi melalui penanaman mangrove dan asosiasinya di Pantai Utara Jawa. Sampai dengan akhir tahun 2022, program REMAJA telah merealisasikan penanaman mangrove dan asosiasinya sebanyak 368.980 batang dengan luas area restorasi 39,26 Ha yang tersebar di:

- 2 Provinsi (Jawa Barat & DKI Jakarta)
- 4 Kabupaten/Kota (Subang, Karawang, Bekasi, Kepulauan Seribu)
- 12 Area/Desa di Subang (Greenthink Cilamaya Girang), Karawang (Sukajaya, Mekarpohaci, PJU, Sedari, Tambaksari, Segarjaya), Bekasi (Pantai bakti, Pantai bahagia), dan Kepulauan Seribu (Pulau Untung Jawa, Pulau Rambut, Pulau Bokor, Pulau Lancang).

Implementasi program melibatkan pemerintah daerah, Pusat Penelitian Lingkungan Hidup Institut Pertanian Bogor (PPLH IPB), kelompok orang tua asuh pohon, kelompok tani GreenThink, Pokdarwis, kelompok PRPM, Pokmaswas dan masyarakat sekitar program.



REMAJA Program

Mangrove Restoration on North Coast of Java (REMAJA) is a program to restore degraded coastal mangrove ecosystems through mangrove planting and their associations on the North Coast of Java. Until the end of 2022, the REMAJA program has realized the planting of 368,980 mangroves and their associations with a restoration area of 39.26 Ha spread across:

- 2 Provinces (West Java & Jakarta)
- 4 Regencies/Cities (Subang, Karawang, Bekasi, Thousand Islands)
- 12 Areas/Villages in Subang (Greenthink Cilamaya Girang), Karawang (Sukajaya, Mekarpohaci, PJU, Sedari, Tambaksari, Segarjaya), Bekasi (Bakti Beach, Happy Beach), and Thousand Islands (Untung Jawa, Rambut, Bokor, and Lancang islands).

Program implementation involved the local government, the Bogor Agricultural University Environmental Research Center (PPLH IPB), tree foster parent groups, GreenThink farmer groups, Tourism Awareness Group (Pokdarwis), Research Center and Community Service (PRPM) groups, Community Surveillance Group (Pokmaswas), and communities around the program.



Program OTAK JAWARA

Orang Tua Asuh Karang di Laut Utara Jakarta dan Jawa Barat (OTAK JAWARA) PHE ONWJ adalah program restorasi ekosistem terumbu karang dengan cara melakukan transplantasi karang dan inovasi media transplantasi buatan guna meningkatkan tutupan karang, menyediakan habitat biota perairan dan mendukung peningkatan kelimpahan ikan. Sampai dengan akhir tahun 2022 PHE ONWJ melalui program OTAK JAWARA telah merealisasikan transplantasi 2.200 fragmen karang yang ditumbuhkan pada 500 modul transplantasi buatan dan meningkatkan luas area restorasi karang 0,077 Ha yang berada di 2 lokasi yaitu gugus karang Pulau Biawak, Kabupaten Indramayu dan gugus karang Sendulang, Kabupaten Karawang, Provinsi Jawa Barat.

OTAK JAWARA Program

PHE ONWJ Coral Foster Parents in the North Sea of Jakarta and West Java (OTAK JAWARA) is a coral reef ecosystem restoration program through coral transplants and artificial transplant media innovations to increase coral cover, provide habitat for aquatic biota and support an increase in fish abundance. Until the end of 2022, PHE ONWJ through the OTAK JAWARA program has realized the transplantation of 2,200 coral fragments grown on 500 artificial transplant modules and increased the coral restoration area by 0.077 Ha in 2 locations, namely the coral cluster of Biawak Island, Indramayu Regency, and Sendulang coral reef, Karawang Regency, West Java Province.



Implementasi program melibatkan pemerintah daerah, Pusat Penelitian Lingkungan Hidup Institut Pertanian Bogor (PPLH IPB), koperasi usaha bersama Minabahari, pegiat konservasi karang Pandu Alam Sendulang (PAS) dan masyarakat sekitar program.

The implementation of the program involves the local government, the Bogor Agricultural Institute's Environmental Research Center (PPLH IPB), the Minabahari joint venture cooperative, Pandu Alam Sendulang (PAS) coral conservation activists, and the community around the location of the program.



Pemulihan Ekosistem Mangrove Pasca Insiden YYA-1 Tahun 2019

Selama tahun 2022 PHE ONWJ melanjutkan pemeliharaan dan *monitoring* mangrove restorasi sebagai bagian dari pemulihan ekosistem mangrove pada wilayah terdampak tumpahan minyak Sumur YYA-1 tahun 2019. Upaya restorasi di area Kabupaten Karawang, Kabupaten Bekasi dan Kabupaten Administrasi Kepulauan Seribu dilakukan berdasarkan Surat Arahan Dirjen Pengendalian Pencemaran dan Kerusakan Lingkungan Kementerian Lingkungan Hidup dan Kehutanan (PPKL KLHK) No.S.123/PPKL/PPKPL/PKL-1/4/2020 tertanggal 16 April 2020.

Penanaman mangrove dilaksanakan dengan pengayaan sebanyak tiga kali individu terpapar tumpahan minyak. Pemantauan pasca-pemulihan dilaksanakan setiap 6 bulan selama 2 tahun, sesuai Surat Arahan Dirjen PPKL KLHK, dan ditargetkan selesai pada tahun 2023. Selama tahun 2022, PHE ONWJ telah menyelesaikan verifikasi final untuk area Kabupaten Karawang dan Kabupaten Bekasi pada bulan Desember dan ditutup dengan Berita Acara PPKL KLHK No. BA-104/PPKL/PSPKPL/PKL.1/12/2022 tertanggal 9 Desember 2022. Selanjutnya verifikasi final untuk area Kabupaten Administrasi Kepulauan Seribu akan dilaksanakan pada semester 1 tahun 2023.

Mangrove Ecosystem Recovery Post the 2019 YYA-1 Incident

In 2022, PHE ONWJ continued to maintain and monitor mangrove restoration as part of the mangrove ecosystem recovery in areas affected by the YYA-1 Well oil spill in 2019. The implementation of restoration efforts in the areas of Karawang Regency, Bekasi Regency and Thousand Islands Administrative Regency was based on the Instruction Letter of the Director General of Pollution and Environmental Damage Control at the Ministry of Environment and Forestry (PPKL KLHK) No.S.123/PPKL/PPKPL/PKL-1/4/2020 dated April 16, 2020.

Mangrove planting was carried out by planting three times the number of individuals exposed to the oil spills. Post-recovery monitoring is carried out every 6 months for 2 years, based on the Instruction Letter of the Director General of Pollution and Environmental Damage Control at the Ministry of Environment and Forestry (PPKL KLHK), with completion target in 2023. During 2022, PHE ONWJ completed final verification for the Karawang Regency and Bekasi Regency areas in December with the issuance of PPKL KLHK document No. BA-104/PPKL/PSPKPL/PKL.1/12/2022 dated December 9, 2022. The Company conducted the final verification for the Thousand Islands Administrative Regency area in the first half of 2023.



Pemulihan Ekosistem Mangrove Pada Area Terdampak YYA-1 PHE ONWJ

Mangrove Ecosystem Recovery in YYA-1 PHE ONWJ Affected Areas

Area Pemulihan Ekosistem Mangrove Mangrove Ecosystem Recovery Area	Jumlah Lokasi Number of Locations	Jumlah Pengayaan Mangrove (Batang) Number of Mangrove Enrichment (trees)	Realisasi Tahun Year of Realization	Status Verifikasi PPKL KLHK PPKL KLHK Verification Status
Kabupaten Karawang Karawang Regency	6	53.000	2020	2022 (Selesai)* (Completed)*
Kabupaten Bekasi Bekasi Regency	2	10.500	2020	2022 (Selesai)* (Completed)*
Kabupaten Administrasi Kepulauan Seribu Thousand Islands Administrative Regency	4	63.100	2021	2023 (Belum Selesai) (Uncompleted)

Keterangan: *Berita Acara Verifikasi Lapangan Pemulihan PPKL KLHK No. BA-104/PPKL/PSPKPL/PKL.1/12/2022 tertanggal 9 Desember 2022.

Note: * Minutes of PPKL KLHK Recovery Field Verification No. BA-104/PPKL/PSPKPL/PKL.1/12/2022 dated December 9, 2022.

Restorasi ekosistem mangrove yang dilakukan PHE ONWJ di sekitar wilayah kerja memberikan dampak positif secara ekologis, sosial ekonomi masyarakat. Ekosistem mangrove yang terbentuk menyediakan zona perlindungan keanekaragaman hayati, menjaga kualitas air sumur penduduk, memberikan perlindungan terhadap permukiman pesisir dari ancaman abrasi, intrusi air laut dan gelombang laut yang ekstrim. Ekosistem mangrove juga mampu menyerap CO₂ yang termasuk gas rumah kaca melalui proses fotosintesis, dengan kemampuan mangrove dalam menyimpan karbon maka peningkatan emisi karbon di alam dapat dikurangi atau dengan kata lain mendukung upaya mitigasi perubahan iklim.

Secara sosial ekonomi, PHE ONWJ terus mendorong semangat bersama melalui program sosial lingkungan yang berbasis masyarakat pesisir. Di setiap lokasi program restorasi mangrove telah terbentuk kelompok masyarakat mitra binaan yang mengambil peran sebagai orang tua asuh pohon. Di samping itu, melalui program REMAJA terbentuk dua kawasan eco eduwisata pesisir yang rutin dikunjungi oleh wisatawan, yaitu Hutan Pendidikan Kapal Keanekaragaman Hayati GreenThink di Cilamaya Girang Kabupaten Subang dan Pusat Restorasi dan Pembelajaran Mangrove (PRPM) Pasirputih Kabupaten Karawang.

PHE ONWJ's mangrove ecosystem recovery around the working area has had a positive ecological and socio-economical impact on the community. The mangrove ecosystem that has been formed provides a biodiversity protection zone, maintains the water quality of residents' wells, and provides protection for coastal settlements from the threat of abrasion, seawater intrusion, and extreme sea waves. Mangrove ecosystems are also able to absorb CO₂, which is a greenhouse gas through the photosynthesis process, thus with mangroves' ability to store carbon, increased carbon emissions in nature can be reduced, which supports climate change mitigation efforts.

Socio-economically, PHE ONWJ continues to encourage collective spirit through social-environmental programs based on coastal communities. In each location of the mangrove restoration program, groups of community partners have been formed who take on the role of tree foster parents. In addition, through the REMAJA program, two coastal eco edu-tourism areas were formed which have been regularly visited by tourists, namely the GreenThink Education Forest Biodiversity Boat in Cilamaya Girang, Subang Regency and the Pasirputih Mangrove Restoration and Learning Center (PRPM), Karawang Regency.



Berdasarkan hasil kajian dampak positif restorasi mangrove PHE ONWJ yang dilakukan pihak eksternal yaitu PPLH IPB pada tahun 2022, kontribusi program terhadap perbaikan lingkungan mencakup:

1. Meningkatkan tutupan vegetasi mangrove terabrasi di pesisir utara Jawa Barat sebesar 1,43 %.
2. Penambahan ruang terbuka hijau (RTH) Kabupaten Karawang berdasarkan target kebutuhan RTH dalam RPJMD tahun 2021-2026 yakni berkontribusi sebesar 38,2%.
3. Pengkayaan 5 spesies mangrove antara lain *Rhizophora mucronata*, *Rhizophora stylosa*, *Avicennia marina*, *Avicennia alba*, dan *Excoecaria agallocha*. Serta pengkayaan 2 jenis tanaman asosiasi mangrove yaitu *Cerbera manghas* dan *Casuarina equisetifolia*.
4. Terbentuknya habitat konservasi 76 spesies satwa (avifauna) dilindungi dan langka berdasarkan peraturan dan Red List IUCN.
5. Sumbangan serapan karbon sebesar 11.158 Ton CO₂eq.
6. Perbaikan kualitas air sumur penduduk antara lain menurunkan suhu dan meningkatkan *Dissolved Oxygen*, mengontrol nilai pH, menurunkan kekeruhan, biofilter logam berat, dan menurunkan kadar bakteri *coliform* dan *fecal coliform*.

PHE ONWJ secara rutin melakukan pemantauan terhadap spesies-spesies dilindungi dan langka, yang berada dalam daftar satwa liar dilindungi PP No. 7 Tahun 1999, PerMenLHK No. P.92 Tahun 2018, PerMenLHK No. P.106 Tahun 2018, Appendices CITES, Red List IUCN. Pada tahun 2022 hasil pemantauan terhadap 76 spesies avifauna pada lokasi program restorasi mangrove pantai utara Jawa diketahui terdapat 23 spesies dilindungi peraturan nasional, 3 spesies termasuk Appendice CITES, dan 76 spesies termasuk dalam Red List IUCN. Detail mengenai Daftar spesies satwa liar di wilayah program konservasi PHE ONWJ terdapat pada bagian Lampiran 2. [304-4]

Based on the results of a study on the positive impact of PHE ONWJ's mangrove restoration conducted by an external party, PPLH IPB, in 2022, the program's contribution to environmental improvement, including:

1. Increase the cover of abrasive mangrove vegetation on the north coast of West Java by 1.43%.
2. Additional green open space (RTH) to Karawang Regency, with 38.2% contribution to the target for green open space needs in the 2021-2026 Medium Term Development Plan (RPJMD).
3. Enrichment of 5 mangrove species including *Rhizophora mucronata*, *Rhizophora stylosa*, *Avicennia marina*, *Avicennia alba*, and *Excoecaria agallocha*. As well as enrichment of 2 types of mangrove association plants, *Cerbera manghas* and *Casuarina equisetifolia*.
4. The establishment of a conservation habitat for 76 protected and endangered animal species (avifauna) based on regulations and the IUCN Red List.
5. Contribution of carbon absorption of 11,158 tons of CO₂eq.
6. Improving the water quality of resident wells, including lowering the temperature and increasing *Dissolved Oxygen*, controlling pH values, reducing turbidity, biofiltering heavy metals, and reducing levels of coliform and fecal coliform bacteria.

PHE ONWJ regularly monitors protected and endangered species on the list of protected wild animals in Government Regulation No. 7 of 1999, Regulation of Minister of Environment and Forestry No. P.92 of 2018, Regulation of Minister of Environment and Forestry No. P.106 of 2018, CITES Appendices, IUCN Red List. In 2022 the results of monitoring 76 species of avifauna at the mangrove restoration program site on the North Coast of Java found that 23 species are protected by national regulations, 3 species are included in the CITES Appendices, and 76 species are included in the IUCN Red List. Details regarding the List of wild animal species in the PHE ONWJ conservation program area can be found in Appendix 2. [304-4]



Kategori Category	Jumlah Spesies Number of Species		
	2022	2021	2020
Dilindungi Peraturan Protected under Regulation	23	23	22
CITES Appendix I	2	2	2
CITES Appendix II	1	1	1
Endangered	1	1	1
Vulnerable	2	2	2
Near Threatened	5	5	4
Least Concern	67	62	58

Keterangan:

- Appendix I – daftar seluruh spesies tumbuhan dan satwa liar yang dilarang dalam segala bentuk perdagangan internasional.
- Appendix II – daftar spesies yang tidak terancam kepunahan, tetapi mungkin terancam punah bila perdagangan terus berlanjut tanpa adanya pengaturan.
- Endangered (EN: Terancam), Vulnerable (VU: Rentan), Near Threatened (NT: Hampir Terancam), Least Concern (LC: Risiko Rendah).

Note:

- Appendix I – a list of all wild plant and animal species that are prohibited in all forms of international trade.
- Appendix II – list of species that are not threatened with extinction but may be threatened with extinction if trade continues without regulation.
- Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC).

Menjaga Lingkungan Preserving the Environment

Penerapan operasi unggul berkelanjutan dalam pengelolaan lingkungan dijalankan dengan mematuhi kepatuhan dan biaya lingkungan. PHE ONWJ juga memulai pemanfaatan sumber energi ramah lingkungan dengan menggunakan panel surya, serta mengelola pemakaian air dan limbah untuk meminimalkan dampak negatif terhadap lingkungan.

Kepatuhan dan Biaya Lingkungan [F.4]

Kami berkomitmen mematuhi regulasi yang ditetapkan pihak berwenang maupun standar yang berlaku di lingkup nasional dan global, guna meminimalkan dampak dari kegiatan operasi terhadap lingkungan di wilayah kerja PHE ONWJ. Pada tahun 2022, PHE ONWJ juga telah melakukan berbagai langkah sebagai bentuk kepatuhan di antaranya sertifikasi ulang ISO14001:2015 Sistem Manajemen Lingkungan, ISO 45001:2018 Sistem Manajemen K3, dan ISO 50001:2018 Sistem Manajemen Energi. Perusahaan juga melakukan evaluasi terhadap seluruh Divisi dan dievaluasi melalui pencapaian indikator kinerja kunci (KPI), audit SUPREME PERTAMINA, capaian PERCA, dan pelaporan kepada pihak-pihak berwenang.

Sustainable operational excellence in environmental management is implemented by complying with environmental compliance and costs. PHE ONWJ has also started utilizing environmentally friendly energy sources, such as solar panels, as well as managing the use of water and waste to minimize negative impacts on the environment.

Environmental Compliance and Costs [F.4]

We are committed to complying with regulations established by the authorities as well as applicable national and global standards, to minimize the impact of our operations on the environment in the working area of PHE ONWJ. In 2022, PHE ONWJ has also taken various measures as a form of compliance including recertifying ISO 14001:2015 Environmental Management System, ISO 45001:2018 OHS Management System, and ISO 50001:2018 Energy Management System. The Company also evaluates all divisions and is evaluated through the achievement of key performance indicators (KPIs), SUPREME PERTAMINA audits, PERCA achievements, and reports to the authorities. During the reporting period, the Company never received



Selama periode pelaporan Perusahaan tidak pernah mendapatkan sanksi terkait pelanggaran sangkaan ketidakpatuhan regulasi yang mengatur pengelolaan lingkungan. [2-27]

Komitmen Perusahaan mengelola lingkungan juga diwujudkan dengan menyediakan biaya pengelolaan lingkungan. Total biaya lingkungan tahun 2022 mencapai Rp31.797.156.685 atau setara USD2.192.907 yang digunakan untuk:

1. Pengembangan sistem pengelolaan lingkungan berkelanjutan, pemantauan dan penataan terhadap peraturan lingkungan, serta penerapan inovasi dan pendukung PROPER yang mencapai Rp10.885.108.949 atau USD750.697.
2. *Monitoring* sumur pantau lokasi pemulihan lahan, penanaman dan penyulaman mangrove pada lokasi terdampak akibat kejadian tumpahan minyak Sumur YYA-1 dan pipa BZZA yang mencapai Rp5.545.441.321 atau USD382.444.
3. Kesiapan penanggulangan tumpahan minyak yang mencapai Rp15.366.606.415 atau USD1.059.766.

Pelaksanaan Pemulihan 2022

Pada tahun 2022, PHE ONWJ sudah menyelesaikan kewajiban pemulihan area terdampak pasca insiden YYA-1. Detail mengenai hasil kegiatan pelaksanaan pemulihan terdapat pada Lampiran 3.

Pengelolaan Material

Perusahaan menggunakan beberapa material untuk mendukung kegiatan operasi. Sejalan dengan kebijakan menerapkan operasi unggul. Selama tahun 2022, Perusahaan melakukan berbagai upaya yang ditujukan untuk efisiensi pemakaian material, salah satunya Marunda Warehouse Management System. Kebijakan efisiensi pemakaian material secara tidak langsung turut mempengaruhi volume timbulan limbah. Secara keseluruhan volume timbulan limbah pada tahun 2022 turun 24% dari tahun 2021. [ENV-7.C1] [ENV-7.C2,C3]

Penggunaan Material Ramah Lingkungan [F.5]

Material utama dalam kegiatan operasi Perusahaan adalah hidrokarbon. Perusahaan juga menggunakan bahan kimia sebagai material pembantu untuk membantu proses pemisahan hidrokarbon dalam produksi minyak mentah dan gas bumi. Kedua material tersebut bersifat tidak ramah lingkungan.

sanctions over alleged violations of non-compliance with regulations on environmental management. [2-27]

The Company's commitment to managing the environment is also realized by earmarking funds for environmental management. Total environmental funds in 2022 reached Rp31,797,156,685 or USD2,192,907 which were used for:

1. Development of a sustainable environmental management system, monitoring and structuring of environmental regulations, as well as the implementation of innovation and PROPER support which amounted to Rp10,885,108,949 or USD750,697.
2. Monitoring wells at land restoration locations, planting and replanting of mangroves at locations affected by the YYA-1 well oil spill, and the BZZA pipe which reached Rp 5,545,441,321 or USD382,444.
3. Preparedness for oil spill handling which reached Rp15,366,606,415 or USD1,059,766.

Recovery Implementation 2022

In 2022, PHE ONWJ has completed the obligation to restore the affected areas following the YYA-1 incident. Details regarding the results of the recovery implementation activities can be found in Appendix 3.

Material Management

The Company uses several materials to support operations. It is in line with the policy of operational excellence implementation. During 2022, the Company made various efforts for efficient use of material, including the Marunda Warehouse Management System. Material efficiency policy indirectly affects the volume of waste generation. Total volume of waste generated in 2022 decreased by 24% from 2021. [ENV-7.C1] [ENV-7.C2,C3]

Use of Environmentally Friendly Materials [F.5]

The main material in the Company's operations is hydrocarbons. The Company also uses chemicals as auxiliary materials for the process of separating hydrocarbons in the production of crude oil and natural gas. Both of these materials are not environmentally friendly.



Penggunaan material ramah lingkungan masih bersifat terbatas yakni pada penyediaan sumber energi yang digunakan. Sampai dengan tahun 2022 PHE ONWJ menggunakan energi baru dan terbarukan (EBT) yang bersumber dari:

1. Pemakaian panel surya dengan total 1.464,29 GJ, mendukung 17,77% dari total penggunaan listrik yang digunakan dan dimanfaatkan untuk pendukung operasional.
2. Pemakaian biodiesel B30 dengan total volume mencapai 30.219.294,00 Liter pada tahun 2022.

Pengelolaan Air dan Efluen [F.8]

Air dibutuhkan untuk keperluan operasi dan fasilitas pendukung termasuk kebutuhan domestik. Sumber air berasal dari air laut, air tanah, dan air yang dibeli dari pihak ketiga. Air laut menjadi sumber utama kebutuhan untuk diproses menjadi air baku melalui desalinasi yang menggunakan *sea water reverse osmosis* (SWRO). Lokasi pengambilan air laut adalah sekitar anjungan dan termasuk zona larangan menangkap ikan karena pertimbangan keselamatan, sehingga tidak ada nelayan yang melakukan kegiatan menangkap ikan dan terdampak dari kegiatan pengambilan air laut. Pengambilan air laut dilakukan dengan pemantauan agar tidak berlebihan. Jumlah volume pengambilan air laut selama tahun 2022 untuk proses desalinasi mencapai 41.903,03 m³. Air limbah desalinasi dilepaskan kembali ke laut berdasarkan Lampiran III KepMen LHK No SK.1159/MENLHK/SETJEN/PLA.4/11/2021 tentang Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah. [303-1a,1b,1c][303-2a]

PHE ONWJ juga menggunakan air tanah untuk fasilitas di darat. Rata-rata debit pengambilan air tanah pada tahun 2022 adalah 4,18 m³/hari. Titik pengambilan air tanah berada di dalam area Perusahaan sehingga tidak ada yang digunakan bersamaan dengan masyarakat dan tidak berdampak terganggunya sumber air tanah masyarakat. Kami melakukan pemantauan untuk menghindari pengambilan air tanah berlebihan. Jumlah volume pemakaian air tanah tahun 2022 mencapai 1.524,50 m³ atau setara 1,52 ML, berkurang dari tahun 2021 sebesar 1.671,84 m³ atau setara 1,67 ML. [303-1a,1b,1c][303-2a]

Pada dasarnya jumlah volume air diambil sama dengan total air digunakan, sehingga PHE ONWJ tidak melakukan penampungan air. Tidak ada air yang diambil dan dikonsumsi, berasal dari area stress air (*water stress*). Total

The use of environmentally friendly materials is still limited to the supply of energy sources. Until 2022, PHE ONWJ used new and renewable energy (NRE) from the following sources:

1. Solar panels with a total of 1,464.29 GJ, supporting 17.77% of the total use of electricity for operational support.
2. Use of Biodiesel B30 with a total volume of 30,219,294.00 liters in 2022.

Water and Effluent Management [F.8]

Water is needed for operational purposes and support facilities including domestic needs. Water sources come from seawater, groundwater, and water purchased from third parties. Seawater is the main source, which is processed into raw water from desalination through the seawater reverse osmosis (SWRO) process. The location of the seawater withdrawal is around the platform, which is in the no-fishing zone due to safety matters. Therefore, no fishermen and fishing activities are impacted by seawater withdrawal. The activities are monitored to prevent excessive withdrawal. The total volume of seawater withdrawal during 2022 for the desalination process reached 41,903.03 m³. Desalination wastewater discharged into the sea refers to Appendix III to Minister of Environment and Forestry Decree No. SK.1159/MENLHK/SETJEN/PLA.4/11/2021 on Technical Approval for Fulfillment of Wastewater Quality Standards. [303-1a,1b,1c][303-2a]

PHE ONWJ also uses groundwater for onshore facilities. The average debit of groundwater withdrawal in 2022 was 4.18 m³/day. The groundwater withdrawal spots are located within the Company's area, which is not shared with the community, thus it does not affect the community's groundwater sources. We carry out monitoring to avoid excessive withdrawal of groundwater. The total volume of groundwater use in 2022 reached 1,524.50 m³ or 1.52 ML, a decrease from 2021 of 1,671.84 m³ or 1.67 ML. [303-1a,1b,1c][303-2a]

Essentially, the total volume of water withdrawal is equal to the total water used, thus PHE ONWJ does not store water. No water withdrawal or consumption originating from water stress areas. The total volume of water withdrawal or



volume air diambil dan digunakan tahun 2022 mencapai 71.160,91 m³ (71,16 ML) dengan debit rata-rata 194,96 m³/hari yang seluruhnya merupakan air baru. Jumlah tersebut bertambah 16,22% dari tahun 2021 sebesar 61.230,21 m³ (61,23 ML). Pemanfaatan air disertai pengelolaan buangan air bekas pakai (efluen) melalui proses *reduce, reuse, dan recycle (3R)*, dengan total volume tahun 2022 mencapai 1.121,12 m³, atau setara 1,58 % dari total air diambil dan digunakan, serta berkurang dari tahun 2021 sebesar 4.164 m³. [303-3][303-5][ENV-1.C1,C2,C3,C4,C5]

consumption in 2022 reached 71,160.91 m³ (71.16 ML) with an average debit of 194.96 m³/day, all of which is new water. This number increased by 16.22% from 61,230.21 m³ (61.23 ML) in 2021. Utilization of water is carried out along with management of effluent through *reduce, reuse, and recycle (3R)* process, with a total volume of 1,121.12 m³ in 2022, or 1.58% of the total water withdrawn and used, a decrease from 4,164 m³ in 2021. [303-3][303-5][ENV-1.C1,C2,C3,C4,C5]

Volume Pemakaian Air Berdasarkan Sumbernya [303-5][ENV-1.C1,C2]

Volume of Water Use based on Source

Sumber Air Water source	2022		2021		2020	
	m ³	ML	m ³	ML	m ³	ML
Air Laut Seawater	69.363,41	69,36	59.273,37	59,27	71.753,06	71,75
Air Tanah Groundwater	1.524,50	1,52	1.671,84	1,67	1.566,47	1,57
Membeli Dari Pihak Ketiga Purchasing from Third Party	273	0,27	285,00	0,28	288,00	0,29
Jumlah Total	71.160,91	71,16	61.230,21	61,23	73.607,53	73,61

Volume Pemakaian Air Berdasarkan Pemanfaatan [303-5a][303-5][ENV-1.C1,C2]

Volume of Water Use based on Purpose

Bentuk Pemanfaatan Purpose	2022		2021		2020	
	m ³	ML	m ³	ML	m ³	ML
Proses Produksi Production process	20.682,00	20,68	10.228,00	10,23	23.685,00	23,69
Fasilitas Pendukung Support Facilities	50.478,91	50,47	50.900,30	50,90	49.922,53	49,92
Jumlah Total	71.160,91	71,16	61.128,30	61,13	73.607,63	73,61

Lebih lanjut, total volume air terproduksi tahun 2022 mencapai 5.304.693 m³, bertambah 2,46% dari tahun 2021 sebesar 5.177.191 m³. Air terproduksi dikelola dengan cara diolah di WWTP menggunakan unit *Wemco Depurator* dan *Oxidation Advanced Process System (AOP)* untuk mengurangi tingkat pencemaran. PHE ONWJ melibatkan laboratorium eksternal untuk pengukuran olahan air terproduksi secara berkala, dan memastikan pemenuhan baku mutu yang ditetapkan Pemerintah. Olahan air terproduksi dari WWTP dilepaskan ke laut di sekitar anjungan melalui *sump pile*. Kami memiliki Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah ke Laut Lampiran III Kep.MenLHK No. SK.1159/Menlhk/Setjen/PLA.4/11/2021 dari KLHK untuk fasilitas lepas pantai, dan Lampiran II Kep. Men KLHK No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 untuk fasilitas di OPF Balongan. [303-2][303-3][303-4][ENV-2.C1]

Furthermore, the total volume of produced water in 2022 reached 5,304,693 m³, an increase of 2.46% from 5,177,191 m³ in 2021. Produced water is managed by treating it at WWTP using a *Wemco Depurator* unit and *Oxydation Advanced Process System (AOP)* to reduce contamination levels. PHE ONWJ involves an external laboratory to measure produced water treatment regularly and ensures compliance with the quality standards set by the Government. Treated produced water from WWTP is disposed into the sea around the platform through *sump piles*. We have Technical Approval for Fulfillment of Wastewater Quality Standards to the Sea Attachment III Kep. MenLHK No. SK.1159/Menlhk/Setjen/PLA.4/11/2021 from the Ministry of Environment and Forestry for offshore facilities, and Attachment II to Kep. Men KLHK No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 for facilities at OPF Balongan. [303-2][303-3][303-4][ENV-2.C1]



Berdasarkan hasil pengukuran tahun 2022, diketahui kualitas olahan air terproduksi telah memenuhi baku mutu sesuai Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah Ke Laut Lampiran III Kep.MenLHK No.SK.1159/Menlhk/Setjen/PLA.4/11/2021 dan Lampiran II Kep. Men KLHK No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 untuk fasilitas di OPF Balongan. Pengolahan air terproduksi dan efluen lain pada periode pelaporan menurunkan beban pencemaran air limbah sebesar 0,82 ton minyak dan lemak, turun dari tahun 2021 sebesar 312,38 ton. Perusahaan tidak pernah menerima laporan perihal gangguan pada kualitas maupun ekosistem air laut yang menjadi lokasi pembuangan olahan air terproduksi. [303-2]

Based on the measurement results for 2022, it is known that the quality of processed produced water has met the quality standards in accordance with the Technical Approval for Compliance with Marine Wastewater Quality Standards in Appendix III to the Minister of Environment and Forestry Decree No.SK.1159/Menlhk/Setjen/PLA.4/11/2021 and Appendix II to the Minister of Environment and Forestry Decree No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 for facilities at OPF Balongan. The treatment of produced water and other effluents during the reporting period reduced the pollution load of wastewater by 0.82 tons of oil and grease, a decrease from 312.38 tons in 2021. The Company has never received any reports regarding disturbances to the quality or ecosystem of seawater where the treated water is disposed of. [303-2]

Bentuk Limbah, Metode Pengolahan, dan Volume Limbah B3 Cairan (m³) [306-3][306-4][306-5]
Forms of Waste, Management Methods, and Volume of Hazardous Liquid Waste (m³)

Kegiatan Activity	Bentuk Limbah Waste Form	Metode Pengelolaan Management Method	2022	2021	2020
Produksi Production	Air Terproduksi Produced Water	Diolah di WTP, dengan pemantauan berkala, dan dilepaskan ke badan air. Treated in WTPP, with regular monitoring, and disposed into water bodies.	5.304.693,00	5.177.191,00	6.293.665,00

Rata-rata Hasil Pengukuran Olahan Air Limbah Berdasarkan IPLC [303-4]
Average Results of Treated Effluent Measurement Based on IPLC

Jenis Air Limbah Types of Effluent	Parameter	Baku Mutu Quality standards	Metode Pengukuran Measurement Method	Hasil Pengukuran Measurement Results		
				2022	2021	2020
Air terproduksi dari fasilitas di lepas pantai. Produced water from offshore facilities	Minyak dan lemak Oil and fat	35 mg/L	SNI 06-6989.10-2004	10,08	8,08	141,40
Air terproduksi dari Fasilitas OPF Balongan Produced water from OPF Balongan facilities	COD	200 mg/L	SNI 6989.2.2009	69,218	90,417	1,588
	Minyak dan lemak Oil and fat	25 mg/L	SNI 6989.2.2009	0,860	0,860	0,078
	Sulfida terlarut Dissolved Sulfide	0,5 mg/L	SNI 6989.70.2009	0,021	0,015	4,326
	Ammonia (sebagai NH4-N) Ammonia (as NH4-N)	5 mg/L	SNI 06-6989.30.2005	0,269	1,835	0,652
	Phenol Total Total Phenol	2 mg/L	SNI 06-6989.21-2004	0,026	0,138	52,538



Jenis Air Limbah Types of Effluent	Parameter	Baku Mutu Quality standards	Metode Pengukuran Measurement Method	Hasil Pengukuran Measurement Results		
				2022	2021	2020
	Temperatur Temperature	40°C	SNI 06-6989.13-2005	21,609	28,733	12,957
	pH	6-9	SNI 06-7989 11.2004	7,248	6,991	0,009
	Arsen (As) Arsenic (As)	0,1 mg/L	APHA Ed 22 nd 3114.B 3500-As-2012	0,005	0,005	0,006
	Kadmium (Cd) Cadmium (Cd)	0,05 mg/L	SNI 6989.16-2009	0,003	0,003	0,004
	Kromium Total (Cr ⁺) Total Chromium (Cr ⁺)	0,05 mg/L	SNI 6989.17-2009	0,002	0,006	0,001
	Merkuri (Hg) Mercury (Hg)	0,002 mg/L	APHA Ed 22 nd 3114:3 3500-Hg.2012	0,001	0,001	0,014
	Nikel (Ni) Nickel (Ni)	0,2 mg/L	SNI 6989.18-2009	0,002	0,003	0,358
	Seng (Zn) Zinc (Zn)	5 mg/L	SNI 06-6989.7.2009	0,022	0,024	0,028
	Tembaga (Cu) Copper (Cu)	2 mg/L	SNI 6989.6-2009	0,022	0,015	0,015

PENGELOLAAN EFLUEN [F.14] [303-4]

Pemanfaatan air disertai pengelolaan buangan air bekas pakai (efluen) melalui proses 3R. Jumlah volume efluen pada tahun 2022 mencapai 90.584,44 m³ (90,54ML), bertambah 11,07% dari tahun 2021 mencapai 81.557,44 m³ (81,56 ML). Pengelolaan efluen dilakukan sesuai dengan jenisnya, sehingga selama tahun 2022 Perusahaan tidak terdapat kasus ketidakpatuhan terkait pembuangan dan pengelolaan efluen.

EFFLUENT MANAGEMENT [F.14] [303-4]

Utilization of water is carried out along with effluent management through the 3R process. The total effluent volume in 2022 reached 90,584.44 m³ (90.54ML), an increase of 11.07% from 81,557.44 m³ (81.56 ML) in 2021. Effluent management is carried out according to its type, thus in 2022 the Company did not encounter any cases of non-compliance regarding effluent disposal and management.

Volume Pengelolaan Efluen Berdasarkan Sumbernya [F.14] [303-2]

Effluent Management Volume based on Source

Sumber Air Effluent Source	2022		2021		2020	
	m ³	ML	m ³	ML	m ³	ML
Air Desalinasi Desalinated Water	41.903,03	41,93	32.767,07	32,77	32.598,58	32,59
Air Limbah Domestik Domestic Effluent	30.606,34	30,06	27.720,14	27,72	27.307,82	27,31
Air Limbah Saniter Sanitary Effluent	18.075,07	18,07	21.070,23	21,07	20.278,99	20,28
Jumlah Total	90.584,44	90,58	81.557,44	81,56	80.183,39	80,18

Keterangan:

- Air desalinasi, yaitu penggunaan air limbah dari reject water RO
- Air limbah domestik dan saniter, yaitu air limbah yang berasal dari aktivitas hidup manusia sehari-hari

Note:

- Desalinated water is the use of effluent from RO reject water
- Domestic and sanitary effluents are effluents originating from daily activities



Pengelolaan Efluen Air Desalinasi Dari Unit Lepas Pantai ^[303-2]

Pengelolaan efluen pada fasilitas unit lepas pantai dilakukan dengan cara diolah di fasilitas pengolahan air limbah, pengukuran kualitas olahan efluen secara berkala, dan kemudian dialirkan ke badan air yakni laut. Kualitas olahan efluen telah memenuhi standar baku mutu berdasarkan Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah ke Laut Lampiran III Kep.MenLHK No. SK.1159/Menlhk/Setjen/PLA.4/11/2021 dari KLHK untuk fasilitas lepas pantai; dan Lampiran II Kep. Men KLHK No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 untuk fasilitas di OPF Balongan.

Desalinated Water Effluent Management from Offshore Units ^[303-2]

Effluent at offshore unit facilities is managed by treating it at a wastewater treatment facility, measuring the quality of the treated effluent periodically, and disposing it into water bodies, particularly the sea. The quality of treated effluent has met quality standards based on the Technical Approval of Fulfillment of Wastewater Quality Standards to the Sea for offshore facilities, set out in Appendix III to the Ministry of Environment and Forestry Decree No. SK.1159/Menlhk/Setjen/PLA.4/11/2021; and for facilities at OPF Balongan in Appendix II to the Ministry of Environment and Forestry Decree No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022.

Volume Buangan Efluen Ke Badan Air pada Fasilitas Lepas Pantai (m³) ^[303-2]

Effluent Disposal Volume into Water Bodies at Offshore Facilities (m³)

Jenis Efluen Effluent Type	2022	2021	2020
Air Limbah Domestik Domestic Effluent	30.606,34	27.720,14	27.307,82
Air Limbah Saniter Sanitary Effluent	18.075,07	21.070,23	20.278,99
Air Desalinasi Desalinated Water	41.903,03	32.767,07	32.598,58
Jumlah Total	90.584,44	81.557,44	80.185,39

Hasil Pemantauan Kualitas Buangan Efluen Ke Badan Air Pada Fasilitas Lepas Pantai

Results of Monitoring the Quality of Effluent Disposal to Water Bodies at Offshore Facilities

Jenis Efluen Effluent Type	Parameter	Baku Mutu Quality Standard	Metode Pengungkapan Disclosure Method	Hasil Result		
				2022	2021	2020
Air Limbah Drainase Dek Deck Drainage Effluent	Minyak Bebas Free Oil	Nihil Nil	Visual	Nihil Nil	Nihil Nil	Nihil Nil
Air Limbah Domestik Domestic Effluent	Benda Terapung dan Buih Busa Floating Objects and Foam	Nihil Nil	Visual	Nihil Nil	Nihil Nil	Nihil Nil
Air Limbah Saniter Sanitary Effluent	Residu Chlorine Chlorine Residue	mg/l	Standard Method 4500-Cl	0,22	0,22	0,17

Keterangan: Baku Mutu berdasarkan Lampiran III KepMen LHK No SK.1159/MENLHK/SETJEN/PLA.4/11/2021 tentang Persetujuan Teknis Pemenuhan Baku Mutu Air Limbah

Note: Quality Standards based on Appendix III to Minister of Environment and Forestry Decree No. SK.1159/MENLHK/SETJEN/PLA.4/11/2021 on Technical Approval for Fulfillment of Wastewater Quality Standards



Pengelolaan Efluen Dari Pemakaian Air Pada Fasilitas Di Daratan [303-2a]

Pengelolaan efluen pada fasilitas di daratan dilakukan dengan cara diolah di instalasi pengolahan air limbah (IPAL), pengukuran kualitas olahan efluen secara berkala dan dialirkan ke badan air yakni laut. Kualitas olahan efluen selama tahun 2022 telah memenuhi standar baku mutu berdasarkan Lampiran II Kep. Men KLHK No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 untuk fasilitas di OPF Balongan. Total volume buangan efluen ke badan air pada fasilitas daratan tahun 2022 mencapai 1.818 m³.

Management of Effluent from Water Consumption in Onshore Facilities [303-2a]

Effluent at onshore facilities is managed by treating it at a wastewater treatment plant (WWTP), measuring the quality of the treated effluent periodically, and disposing it into water bodies, particularly the sea. The quality of treated effluent in 2022 has met the quality standards based on Appendix II to the Ministry of Environment and Forestry Decree No.SK.3874/MENLHK-PKTL/PDLUK/PLA.4/4/2022 for facilities at OPF Balongan. The total volume of effluent discharged into water bodies at onshore facilities in 2022 reached 1,818 m³.

Volume Buangan Efluen Ke Badan Air pada Fasilitas Daratan (m³) [303-5a]

Effluent Disposal Volume into Water Bodies at Onshore Facilities (m³)

Jenis Efluen Effluent Type	2022	2021	2020
Air Terproduksi Produced Water	1.818	7.664	17.757

Pengelolaan Efluen Dari Pemakaian Air di Kantor Pusat [303-2a]

Pengolahan efluen di Kantor Pusat dilakukan melalui IPAL milik pengelola gedung. Sebagian olahan efluen dialirkan ke saluran pembuangan, dan ada yang digunakan kembali untuk pemeliharaan atau penyiraman tanaman. Kualitas efluen telah memenuhi standar baku mutu berdasarkan Peraturan Gubernur DKI Jakarta No.69 Tahun 2013 Tentang Baku Mutu Air Limbah Bagi Kegiatan dan/atau Usaha.

Management of Effluent from Water Consumption at the Head Office [303-2a]

Effluent at the Head Office is treated in the WWTP owned by the building management. Some of the treated effluent is disposed into sewers, and some is reused for plant maintenance or watering. The effluent has met the quality standards based on Jakarta Governor Regulation No. 69 of 2013 on Wastewater Quality Standards for Activities and/or Businesses.

Efisiensi Pemakaian Air [ENV-1.C5]

Selama tahun 2022 Perusahaan melanjutkan efisiensi pemakaian air, dengan hasil Absolut Efisiensi Pemakaian Air mencapai 1.121,12 m³. Upaya yang dilakukan antara lain:

- Konservasi air melalui *Batch* dan/atau *Sequence Drilling System* menghemat sebesar 403 m³;
- Penggunaan air PDAM untuk mengurangi pengambilan air tanah sebesar 576 m³/tahun atau 0,81% dari total kebutuhan air;
- Penerapan Teknologi *Reverse Osmosis (RO)* Pada Program Pemberdayaan Masyarakat di TPI Sambung Jaya Mulya Desa Karangreja Kabupaten Cirebon sebesar 142 m³.

Water Efficiency [ENV-1.C5]

In 2022, the Company continued to use water efficiently, with the results of Absolute Water Use Efficiency reaching 1,121.12 m³. The efforts include:

- Water conservation through *Batch* and/atau *Sequence Drilling System* saves 403 m³;
- Using PDAM water to reduce groundwater withdrawal by 576 m³/year or 0.81% of the total water needs;
- Application of *Reverse Osmosis (RO)* Technology in the Community Empowerment Program at TPI Sambung Jaya Mulya, Karangreja Village, Cirebon Regency, with an area of 142 m³.



Hasil Absolut Efisiensi Pemakaian Air (m³) [ENV-1.C5]

Absolute Result of Water Use Efficiency (m³)

Uraian Description	2022	2021	2020
Proses Produksi Production Process	403,22	713	713
Fasilitas Pendukung Support Facilities	576	3.451	3.451
Kegiatan yang berhubungan dengan Comdev Comdev related Activities	141,90	0	0
Jumlah Total	1.121,12	4.164	4.164

Pengelolaan Limbah [11.5.1]

Limbah yang dikelola dengan prinsip 3R, yakni *reduce*, *reuse*, *recycle* atau mengurangi, menggunakan kembali, dan daur ulang. Pelaksanaan 3R dapat dilakukan sendiri, maupun diserahkan kepada pihak ketiga.

Pengelolaan Limbah Pemboran dan Sampah [F.13]

[F.14][306-1][306-2]

Timbulan limbah bukan bahan berbahaya dan beracun (non-B3) dari kegiatan operasi pemboran PHE ONWJ adalah limbah pemboran yakni lumpur pemboran dan serbuk pemboran, sesuai Surat Keputusan Kelayakan Izin Lingkungan SK.1159/MENLHK/SETJEN/PLA.4/11/2021. Pengelolaan diserahkan kepada pihak ketiga berizin untuk diolah dengan cara ditimbun. Lebih lanjut, Tidak ada limbah Non-B3 yang dilepaskan kembali ke laut.

Seluruh limbah B3 dan non-B3 yang dikelola oleh pihak ketiga berizin telah dilakukan pengawasan setiap periode PROPER dan dilaporkan ke KLHK. Metode pengawasan dilakukan secara langsung dan melalui dokumen serta direviu oleh PHE ONWJ dan Pemerintah. Adapun untuk limbah lainnya hanya dilakukan reviu oleh pihak internal saja.

Total volume limbah pemboran tahun 2022 mencapai 3.026 ton, bertambah 118,20% dari tahun 2021 sebesar 1.386,82 ton. Peningkatan volume limbah ini dikarenakan adanya peningkatan jumlah sumur yang di bor. Limbah pemboran ditempatkan di tempat penampungan sementara, dan kemudian diserahkan seluruhnya kepada pihak ketiga untuk dikelola. Total volume limbah dari kegiatan pendukung dan produksi pada tahun 2022 mencapai 128,10 ton, bertambah 32,95% dari tahun 2021 sebesar 96,35 ton. Sebanyak 3.026 ton atau 100% dari total limbah kegiatan pemboran dikelola pihak ketiga berizin. [306-3][306-4][306-5]

Waste Management [11.5.1]

Waste is managed according to the 3R principle, which is *reduce*, *reuse*, and *recycle*. Implementation of 3R can be done by the Company or handed over to a third party.

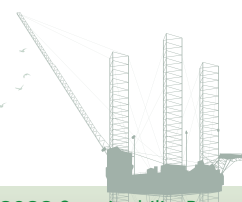
Drilling Waste and Garbage Management [F.13][F.14]

[306-1][306-2]

Non-hazardous waste generation from PHE ONWJ's drilling operations is drilling waste, such as drilling mud and drill cuttings, according to the Minister of Environment and Forestry Decree No. SK.1159/MENLHK/SETJEN/PLA.4/11/2021 on the Environmental Feasibility Permit. The waste management is handed over to a licensed third party to be processed by disposing it in the landfill. In addition, no disposal of non-hazardous waste into the sea.

All hazardous and non-hazardous waste managed by licensed third parties has been monitored in every period of PROPER and reported to the Ministry of Environment and Forestry. The monitoring method is carried out directly and through documents to be reviewed by PHE ONWJ and the Government. Meanwhile, other types of waste are only reviewed by internal parties.

The total volume of drilling waste in 2022 reached 3,026 tons, an increase of 118.20% from 1,386.82 tons in 2021. The increase in waste volume was due to an increase in the number of wells drilled. Drilling waste is placed in a temporary storage site, and then diverted entirely to a third party to be managed. The total volume of waste from production and support activities in 2022 reached 128.10 tons, an increase of 32.95% from 96.35 tons in 2021. A total of 3,026 tons or 100% of the total waste from drilling activities has been managed by licensed third parties. [306-3][306-4][306-5]



Bentuk Limbah, Metode Pengelolaan, dan Volume Limbah Non-B3 (Ton) [F.13][F.14][306-1][306-2]

Form of Waste, Management Method, and Volume of Non-hazardous Waste (Tons)

Kegiatan Activity	Bentuk Limbah Waste Form	Metode Pengelolaan Management Method	Volume		
			2022	2021	2020
Pemboran Drilling	Lumpur Bor	Diserahkan kepada pihak ketiga Sent to a third party	1.332	610,72	417,00
	Drilling mud				
	Serbuk Bor	3.026	1.386,82	2.177,00	
	Drill cuttings				
Jumlah Total					
Pendukung Support	Padatan Solid	Pemanfaatan kembali dan penimbunan Reuse and landfilled	128,10	96,35	130,12

Pengelolaan Limbah Padatan Non-B3 (Ton) [306-3][306-4][306-5]

Non-hazardous Solid Waste Management (Tons)

Uraian Description	Volume Timbulan Limbah dan Dimanfaatkan Sendiri Volume of Waste Generation and Own Use			Volume Timbulan Limbah dan Dikirim Kepada Pihak Ketiga Volume of Waste Generation and Sent to Third Party		
	2022	2021	2020	2022	2021	2020
Limbah organik lepas pantai. Offshore organic waste	14,12	12,61	13,56	13,04	11,67	11,38
Limbah anorganik lepas pantai. Offshore inorganic waste	6,97	6,22	6,49	16,17	15,60	17,35
Kayu (Marunda SB) Wood (Marunda SB)	77,80	50,25	78,00	0,00	0,00	0,00

Mengenai sampah yang berasal dari kegiatan pendukung dan produksi, dilakukan pengelolaan dengan cara dimanfaatkan ulang sebagai bahan baku industri lain dan kerajinan oleh kelompok masyarakat binaan PHE ONWJ. Selain itu ada sampah yang diserahkan kepada pihak ketiga untuk langsung di kelola di area *landfill*.

Regarding waste originating from support and production activities, management is carried out by re-using it as raw material for other industries and crafts by PHE ONWJ assisted community groups. In addition, there is waste that is handed over to third parties to be directly managed in the landfill area.

Pengelolaan Limbah B3

Timbulan limbah B3 yang berbentuk padatan berasal dari penggunaan beberapa material dalam kegiatan produksi, sedangkan limbah B3 cair yakni air terproduksi dari proses produksi. Limbah B3 padatan dan cair dikelola dengan cara diserahkan kepada pihak ketiga untuk diolah dengan cara dimanfaatkan kembali, dimusnahkan, dan ditimbun. Tujuannya mencegah pencemaran terhadap lingkungan termasuk badan air yang menjadi tujuan pembuangan olahan air terproduksi. [306-1][306-2]

Hazardous Waste Management

Hazardous solid waste is generated from the use of several materials in production activities, while hazardous liquid waste is the produced water from the production process. Hazardous solid and liquid waste is managed by a third party for processing by reusing, destroying, and landfilling. It aims to prevent pollution of the environment including bodies of water that are the destination for disposal of treated produced water. [306-1][306-2]



Total volume timbunan limbah B3 padatan pada periode pelaporan mencapai 193,02 ton, bertambah 18,26% dari tahun 2021 sebesar 163,22 ton. Timbunan limbah B3 dikelola dengan cara diserahkan kepada pihak ketiga untuk diolah dengan cara dimanfaatkan kembali, dimusnahkan dan ditimbun sebanyak 192,46 ton atau 99,71%, dan sebagian lainnya disimpan di tempat penyimpanan sementara sebelum jadwal pengiriman ke pihak ketiga sebesar 0,56 ton atau 0,29% dari total limbah yang dihasilkan. [306-3][306-4][306-5]

The total volume of hazardous solid waste generated in the reporting period reached 193.02 tons, an increase of 18.26% from 163.22 tons in 2021. A total of 192.46 tons or 99.71% of hazardous waste generation was managed by third parties for processing by reusing, destroying, and landfilling, while the rest was stored in temporary storage before the scheduled delivery to third parties of 0.56 tons or 0.29% of the total waste generated. [306-3][306-4][306-5]

Bentuk Limbah, Metode Pengelolaan, dan Volume Limbah B3 Padatan dan Cair (Ton) [306-3][306-4][306-5]
Waste Form, Management Method, and Hazardous Solid and Liquid Waste Volume (Tons)

Kegiatan Activity	Bentuk Limbah Waste Form	Metode Pengelolaan Management Method	Volume		
			2022	2021	2020
Produksi Production	Padatan dan cair Solid and liquid	Disimpan sementara di TPS, dimanfaatkan kembali, diserahkan ke pihak ketiga, dan dimusnahkan. Stored in the temporary storage (TPS), reused, sent to third parties, and destroyed.	1,10	2,42	2,07
Pendukung Supporting	Padatan dan cair Solid and liquid	Disimpan sementara di TPS, dimanfaatkan kembali, diserahkan ke pihak ketiga, dan dimusnahkan. Stored in the temporary storage (TPS), reused, sent to third parties, and destroyed.	191,92	160,80	121,12
Total			193,02	163,22	123,19

Pengelolaan Limbah B3 Padatan dan Cair [306-3][306-4][306-5]
Hazardous Solid and Liquid Waste Management

Jenis Limbah Waste Type	Volume Timbunan Limbah B3 (Ton) Volume of Hazardous Waste Generation (Ton)			Bentuk Pengelolaan Form of Management
	2022	2021	2020	
Oli bekas Used oil	45,42	14,53	15,97	Pemanfaatan kembali Reused
Limbah medis (non-infeksius) Medical waste (non-infectious)	0,12	0,12	0,03	Dimusnahkan Destroyed
Limbah medis (infeksius) Medical waste (infectious)	1,07	1,27	0,42	Dimusnahkan Destroyed



Jenis Limbah Waste Type	Volume Timbunan Limbah B3 (Ton) Volume of Hazardous Waste Generation (Ton)			Bentuk Pengelolaan Form of Management
	2022	2021	2020	
Majun/sarung tangan Rags/gloves	7,73	6,57	6,96	Ditimbun Landfilled
Kemasan terkontaminasi Contaminated packaging	71,64	68,44	27,15	
Baterai bekas Used batteries	0,52	0,98	0,20	
Residu proses produksi Production process residue	-	-	-	
Bahan terkontaminasi minyak Oil contaminated material	30,36	38,10*	63,54	
Sisa bahan kimia Chemical residue	27,43	2,33*	1,72	
Toner Bekas Used toner	-	0,01	-	
Lampu bekas Used lamps	0,28	0,53	0,33	
Tabung freon Freon tubes	0,18	0,21	0,21	
Absorbent dan filter bekas Used absorbents and filters	5,76	4,93	4,60	
Sludge IPAL WWTP Sludge	1,10	2,42	2,07	
Residu dasar tangki Tank bottom residue	1,40	22,80	-	

Keterangan:

*Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021 karena adanya hasil identifikasi ulang terhadap jenis limbah bahan terkontaminasi minyak dan sisa bahan kimia. [2-4]

Note:

*Restatements from the 2021 Sustainability Report were due to the waste type re-identification results of oil contaminated materials and chemical residues. [2-4]

Selama tahun 2022, PHE ONWJ melanjutkan upaya-upaya untuk mengurangi timbunan limbah. Hasil absolut dapat mengurangi limbah bukan B3 pada periode pelaporan mencapai 98,89 ton, sedangkan untuk limbah B3 sebanyak 3,07 ton.

In 2022, PHE ONWJ continued its efforts to reduce waste generation. The absolute result of non-hazardous waste reduction in the reporting period reached 98.89 tons, while for hazardous waste was 3.07 tons.

Hasil Absolut 3R Limbah Non-B3 Padatan (Ton)

Absolute Results of Non-hazardous Solid Waste 3R (Tons)

Kegiatan Activity	Volume		
	2022	2021	2020
Fasilitas Pendukung Support Facilities	97,01	86,75*	97,68*
Kegiatan Berhubungan <i>Community Development</i> Community Development Related Activities	1,88	0,33	0,37
Hasil Absolut 3R Limbah Non-B3 Padatan Absolute Results of Non-hazardous Solid Waste 3R	98,89	87,08*	98,05

Keterangan: *Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021 karena adanya penambahan program 3R untuk jenis sampah palet kayu. [2-4]

Note: *Restatements from the 2021 Sustainability Report were due to the addition of the 3R program for types of wood pallet waste. [2-4]



Hasil Absolut 3R Limbah B3 Padatan dan Cair (Ton)

Absolute Results of Hazardous Solid and Liquid Waste 3R (Tons)

Kegiatan Activity	Volume		
	2022	2021	2020
Pengurangan oli bekas di KL Gas Lift Waste oil reduction at KL Gas Lift	-	-	1,66
Pengurangan oli bekas melalui optimasi proses di unit pembangkit Lima/LP3SU Used oil reduction through process optimization at the Lima/LP3SU generating unit	-	-	1,00
Pengurangan limbah medis/obat kedaluwarsa Medical waste/expired drugs reduction	-	-	0,05
Pengurangan limbah <i>sludge</i> IPAL WWTP <i>sludge</i> reduction	1,32	-	0,00
Pengurangan limbah majun dan sarung tangan Waste rags and gloves reduction	-	0,39	0,19
Pengurangan Minyak Pelumas Bekas dengan Metode Sistro Used lubricants reduction with Sistro method	1,75	-	-
Total Absolut Pengurangan Limbah Total Absolute Waste Reduction	3,07	0,39	2,71

Pengelolaan Tumpahan/Kebocoran Migas [F.15][ENV-6]

Selama tahun 2022, tidak ada peristiwa tumpahan minyak dan/atau kebocoran gas yang terjadi di wilayah kerja PHE ONWJ. Penjelasan mengenai pengelolaan tumpahan minyak dan/atau kebocoran gas, disampaikan dalam bahasan Keselamatan pada Laporan ini.

Pengaduan Terkait Lingkungan Hidup Migas [F.16]

[SOC-9.A1]

Pada tahun 2022, PHE ONWJ menerima 3 pengaduan dari masyarakat dan/atau pemangku kepentingan lain, terkait pengelolaan lingkungan hidup. Perusahaan langsung menindaklanjuti setiap pengaduan sesuai prosedur dan mekanisme yang berlaku.

Management of Oil and Gas Spills/Leaks [F.15][ENV-6]

In 2022, there were no oil spills and/or gas leaks that occurred in the PHE ONWJ working area. An explanation regarding the management of oil spills and/or gas leaks is presented in the Safety discussion in this Report.

Complaints Related to the Oil & Gas Environment

[F.16] [SOC-9.A1]

In 2022, PHE ONWJ received 3 complaints from the community and/or other stakeholders regarding environmental management. The company immediately followed up on every complaint according to the applicable procedures and mechanisms.



Pengaduan Terkait Lingkungan Hidup Tahun 2022 dan Tindak Lanjutnya [F.16]

Environmental Complaints in 2022 and Follow-up

Perihal Pelaporan Subject of Complaint	Tindak Lanjut Follow-up
Masyarakat Desa Sedari Sedari Village community	
<p>Tidak adanya informasi Zona Aman di sekitar wilayah operasi MB-2.</p> <p>There was no Safe Zone information around the MB-2 operating area.</p>	<p>Perusahaan melakukan koordinasi dan musyawarah dengan Pemerintah Desa Sedari dan PIC keamanan Polda Jabar di MB-2. Hasil dan rekomendasi berupa:</p> <ul style="list-style-type: none"> - Pelibatan masyarakat Desa Sedari untuk pengelolaan wisata pantai melalui program CSR Pemberdayaan masyarakat. - Memformulasikan bentuk informasi ke masyarakat terdekat MB2 secara periodik bekerjasama dengan fungsi HSSE. <p>The Company coordinated and deliberated with the Sedari Village Government and the West Java Regional Police security PIC in MB-2. The results and recommendations are as follows:</p> <ul style="list-style-type: none"> - Involving the Sedari Village community in the management of beach tourism through the Community Empowerment CSR program. - Formulating forms of information to the nearest community of MB2 periodically in collaboration with the HSSE function.
Lembaga Bantuan Hukum Cakra Cakra Legal Aid Institute	
<p>Tuntutan terkait pembayaran kompensasi Insiden Tumpahan Minyak YYA yang terjadi pada tahun 2019 kepada masyarakat yang tidak lolos verifikasi.</p> <p>Claims regarding payment of compensation for the YYA Oil Spill Incident that occurred in 2019 to people who did not pass verification.</p>	<p>Melakukan koordinasi dengan Tim Pokja Kompensasi Kabupaten Karawang, Pemerintah Kabupaten Karawang, dan Kajari Kabupaten Karawang.</p> <p>Coordinating with the Karawang Regency Compensation Working Group Team, the Karawang Regency Government, and the District Attorney's Office of Karawang Regency.</p>
Serikat Nelayan Subang Subang Fishermen's Union	
<p>Kerusakan jaring nelayan disebabkan adanya temuan tumpahan minyak di perairan laut Kabupaten Subang.</p> <p>Damage to fishermen's nets due to oil spill found in the sea waters of Subang Regency.</p>	<ul style="list-style-type: none"> - Melakukan koordinasi dengan pihak pelapor dan KUD/TPI setempat. - Perusahaan melakukan pengambilan sampel terhadap tumpahan minyak yang mengenai jaring nelayan. - Berdasarkan hasil uji lab/<i>finger print</i> didapatkan hasil bahwa tumpahan minyak tersebut bukan berasal dari PHE ONWJ. <p>Coordinating with complainants and local Village Unit Cooperative (KUD)/Fish Auction Place (TPI).</p> <ul style="list-style-type: none"> - The Company took samples of oil spills that hit fishermen's nets. - The lab/<i>finger print</i> test results found that the oil spill did not come from PHE ONWJ.

Rencana Pengembangan

Pada tahun 2023, PHE ONWJ bersiap melanjutkan proyek Optimasi Pengembangan Lapangan (OPL) migas lepas pantai YY di perairan utara Karawang, Jawa Barat. Sampai dengan akhir tahun 2022, Perusahaan telah melaksanakan berbagai tahapan. Sumur YYA-1RWST ini merupakan *re-entry* dan *side-track* dari sumur Relief Well YYA-1RW dengan melakukan *refurbishment* instalasi lama. Perusahaan melakukan perubahan profil produksi pasca-insiden sebelumnya, sehingga diperlukan penambahan peralatan baru, yang sebelumnya tidak ada pada Anjungan YYA sebelum insiden. Faktor lain adalah perubahan Anjungan YYA yang sebelumnya

Expansion Plan

For 2023, PHE ONWJ is preparing to continue the YY offshore oil & gas Field Development Optimization (OPL) project in the northern waters of Karawang, West Java. Until the end of 2022, the Company has carried out various stages. The YYA-1RWST well is a re-entry and side-track of the YYA-1RW Relief Well by refurbishing the old installation. The company made changes to the production profile following the previous incident and needed to add new equipment, which was previously unavailable at the YYA Platform before the incident. Another factor is the YYA Platform change from the previously unmanned platform (NUI) to a manned platform. The entire process is carried





unmanned platform (NUI)/anjudangan tak berpenghuni menjadi *manned platform* (anjudangan berpenghuni). Seluruh proses dijalankan dengan tetap mengedepankan aspek keamanan dan keselamatan kerja, serta keandalan fasilitas operasi. [ENV-8.C1]

Perbedaan dengan basis desain menjadikan hampir semua peralatan *eksisting* yang ada pada kondisi anjudangan sebelumnya, tidak dapat digunakan kembali. Hal ini didasari hasil inspeksi dan tes fungsi yang dilakukan sebelum di-*refurbish* akibat terkena semburan hidrokarbon dari sumur saat insiden kebocoran Sumur YYA terjadi. Secara keseluruhan, Perusahaan hanya dapat menggunakan kembali material sebatas struktur anjudangan, dengan nilai diperkirakan sekitar 8% dari nilai estimasi proyek. Ke depan, Sumur YYA-1RWST diharapkan dapat menjadi salah satu bagian dari sumur produksi di lapangan ONWJ dan dapat memberikan kontribusi secara signifikan atas kenaikan produksi di PHE ONWJ. Cadangan Optimasi Pengembangan Lapangan YY mencapai 2,7 Million Barrels of Oil (MMBO) dan 3,1 Billion Cubic Feet (BCF). [ENV-8.C2]

out with priority to work safety and security aspects, as well as the reliability of operating facilities. [ENV-8.C1]

The difference with the design basis makes almost all of the existing equipment in the previous platform condition unusable. This is based on the results of inspections and function tests prior to the refurbishment, resulting from being exposed to a burst of hydrocarbons from the well when the YYA Well leak incident occurred. Overall, the Company can only reuse materials limited to the platform structure, with an estimated value of around 8% of the estimated project value. Going forward, the YYA-1RWST well is expected to become a part of the production wells in the ONWJ field and can contribute significantly to raising production at PHE ONWJ. YY Field Development Optimization Reserves reached 2.7 million Barrels of Oil (MMBO) and 3.1 Billion Cubic Feet (BCF). [ENV-8.C2]



Kinerja Keberlanjutan Pengelolaan Sosial
Social Management Sustainability Performance

**Operasi Unggul Berkelanjutan
Untuk Kesejahteraan Bersama**
Sustainable Operational Excellence for
Shared Welfare



Keselamatan dan Kesehatan Kerja (K3)

Occupational Health and Safety (OHS)

Komitmen PHE ONWJ menerapkan operasi unggul berkelanjutan, juga ditujukan untuk mendukung kesejahteraan bersama para pemangku kepentingan, termasuk pekerja dan masyarakat di sekitar wilayah operasi. Sesuai topik material, pelaporan mengungkapkan Informasi terkait aspek ketenagakerjaan yakni keselamatan dan kesehatan kerja (K3), serta keselamatan proses. Selain itu PHE ONWJ mendistribusikan sebagian dari nilai ekonomi diperoleh untuk meningkatkan taraf hidup masyarakat melalui program-program pemberdayaan.

PHE ONWJ's commitment to implementing sustainable operational excellence is also aimed at supporting the shared welfare of the stakeholders, including employees and the community around the operating area. According to material topics, the report discloses information on employment aspects, particularly occupational health and safety (OHS) and process safety. In addition, PHE ONWJ distributes a portion of the generated economic value to improve the community's life through empowerment programs.

LINGKUNGAN BEKERJA LAYAK DAN AMAN [F.21][SHS-1.C3][11.9.1]

Pengelolaan K3 dan keselamatan proses menjadi faktor penting bagi PHE ONWJ dalam menerapkan operasi unggul berkelanjutan, dengan tujuan mendukung terciptanya lingkungan kerja layak dan aman, serta mengurangi setiap risiko terhadap keselamatan dan kesehatan pekerja, masyarakat, maupun lingkungan. Pengelolaan K3 mengikat seluruh (100%) pekerja PHE ONWJ maupun kontraktor/pemasok, dan dijalankan berdasar regulasi yang ditetapkan Pemerintah, serta sesuai standar di PERTAMINA, nasional, maupun global. Evaluasi dilakukan melalui penilaian pencapaian indikator kinerja utama (KPI), audit SUPREME, pelatihan, penerapan *Contractor Safety Management System* (CSMS), dan pelaporan kepada pihak-pihak berwenang. Selama tahun 2022 Perusahaan mencatatkan tidak ada kecelakaan kerja maupun peristiwa keselamatan proses yang bersifat fatal. [3.3][403-1][403-8][11.9.2]

DECENT AND SAFE WORKING ENVIRONMENT [F.21][SHS-1.C3][11.9.1]

OHS management and process safety are important factors for PHE ONWJ in implementing sustainable operational excellence, aiming at supporting the creation of a decent and safe work environment, as well as reducing any risks to the safety and health of employees, community and the environment. OHS management applies to all (100%) employees of PHE ONWJ and contractors/suppliers, based on Government regulations, and in accordance with PERTAMINA, national and global standards. Evaluation is carried out by assessing the achievement of key performance indicators (KPI), SUPREME audits, training, implementing the *Contractor Safety Management System* (CSMS), and reports to the authorities. During 2022, the Company recorded zero work accidents or fatal process safety incidents. [3.3][403-1][403-8][11.9.2]

Standar Penerapan K3 PHE ONWJ [403-1] ONWJ PHE OHS Implementation Standards

Standar PERTAMINA PERTAMINA Standards	Standar Nasional National Standards	Standar Global Global Standard
<ul style="list-style-type: none"> SUPREME HSSE Golden Rules 15 Corporate Life Saving Rules 	<ul style="list-style-type: none"> SMK3 PP No.50 Tahun 2012 Perkap No.24 Sistem Manajemen pengamanan Government Regulation No. 50 of 2012 on OHSMS National Police Chief Regulation No. 24 on Security Management System 	<ul style="list-style-type: none"> ISO 45001:2018 Sistem Manajemen K3 ISO 45001:2018 OHS Management System



Identifikasi Risiko K3 dan Pengelolannya [403-2]

[403-8]

PHE ONWJ melakukan identifikasi terhadap risiko yang membahayakan keselamatan dan kesehatan pekerja, masyarakat, lingkungan, dan aset perusahaan. Setiap risiko K3 dikelola dengan fokus membangun kontrol efektif, dimulai dari *organization influences*, *supervision factor*, *precondition*, *substandard act* atau *condition* hingga *post-incident*. Perusahaan terus berupaya meminimalkan risiko yang ditimbulkan sehingga kesinambungan operasi bisa terjaga. Sesuai ketentuan yang berlaku, setiap kejadian terkait K3 maupun keselamatan proses, ditindaklanjuti dengan investigasi dan upaya perbaikan guna pencegahan berkelanjutan. Investigasi dilakukan secara internal maupun melibatkan pihak independen. Lebih lanjut, setiap tahun PHE ONWJ melakukan internal audit terkait K3 di seluruh wilayah operasional. PHE ONWJ juga telah melakukan pengelolaan risiko K3 yang terdapat pada bagian Lampiran 4. [11.9.3]

OHS Risk Identification and Management [403-2]

[403-8]

PHE ONWJ identifies risks that endanger the safety and health of employees, the community, the environment, and company assets. Every OHS risk management focuses on building effective controls, starting from organization influences, supervision factors, preconditions, and substandard acts or conditions up to post-incidents. The company continues to minimize the risks to maintain the continuity of operations. Under applicable regulations, every incident related to OHS and process safety is followed up with investigations and corrective measures for sustainable prevention. Investigations are carried out internally or with the involvement of independent parties. Every year PHE ONWJ conducts an internal OHS audit in all operating areas. PHE ONWJ has also carried out OHS risk management which is contained in Appendix 4. [11.9.3]

Perusahaan memiliki mekanisme bagi pekerja untuk meninggalkan situasi kerja yang membahayakan keselamatan dan kesehatannya. Sesuai kebijakan HSSE di PHE ONWJ, setiap pekerja memiliki otoritas menghentikan pekerjaan, yang tertuang di dalam Tata Kerja Organisasi (TKO), Program Observasi dan Intervensi (PHEONWJ-Q-TKO-0008), dan Pengamatan Keselamatan Kerja (PEKA). Pada TKO Program Observasi dan Intervensi terdapat program *Time Out for Safety* (TOFS) atau program *Stop Work Authority*, di mana setiap pekerja memiliki otoritas dalam menghentikan pekerjaan atau aktivitas apabila tidak aman, ragu-ragu dan perubahan dari rencana kerja awal. Selama tahun 2022 tidak ada penghentian pekerjaan yang diikuti pemindahan pekerja karena kondisi membahayakan dan/atau mengancam keselamatan maupun kesehatan pekerja PHE ONWJ. [403-2]

The Company has a mechanism for employees to leave work situations that endanger their safety and health. PHE ONWJ HSSE policy stipulates that every employee of PHE ONWJ has the authority to stop work, as set out in the Organizational Work Procedure (TKO), Observation and Intervention Program (PHEONWJ-Q-TKO-0008), and Work Safety Observation (PEKA). The TKO of Observation and Intervention Program also includes the Out for Safety Team (TOFS) program or the Stop Work Authority program, in which each employee has the authority to stop work or activity if it is unsafe, in doubt, and changes from the initial work plan. During 2022, there was no halt of work followed by the relocation of employees due to conditions that endanger and/or threaten the safety or health of PHE ONWJ employees. [403-2]



Kesehatan Kerja dan Pekerja [403-3][403-10][SHS-1.C1][SHS-2.C1][11.9.4][11.9.7]

Pemenuhan kesehatan pekerja dilaksanakan Departemen Occupational Health–Industrial Hygiene (OH-IH), melalui program preventif (pencegahan), kuratif (pengobatan), dan promotif (promosi). Selama tahun 2022, Perusahaan melakukan beberapa upaya mendukung penerapan kesehatan kerja untuk meminimalkan risiko terhadap kesehatan para pekerja, di antaranya: [SHS-2.C2][SHS-2.C3]

- Promotif dan Preventif
 1. *Health promotion, education and campaign:* Menerbitkan informasi kesehatan dalam berbagai media, kampanye dan sosialisasi terkait kesehatan umum dan kesehatan kerja, serta program peningkatan perilaku hidup sehat lainnya untuk pekerja seperti program berhenti merokok, *low cholesterol menu* dan *sport day* di lokasi kerja;
 2. *Health Risk Assessment:* Melakukan pengkajian risiko kesehatan di tempat kerja;
 3. *Industrial Hygiene Measurement & Monitoring:* Melakukan pengukuran dan pemantauan bahaya kesehatan baik pada area kerja maupun personal;
 4. Memberikan rekomendasi dan mitigasi terhadap bahaya Kesehatan yang belum memenuhi standar;
- Kuratif
 1. Memberikan layanan konsultasi dan pengobatan penyakit umum (misalnya konsultasi terkait keluhan kesehatan yang dirasakan pekerja saat berada di lokasi kerja);
 2. Melakukan penanganan penyakit terkait pekerjaan (PAK), dengan penegakan diagnosis klinis; penentuan pajanan yang dialami pekerja di tempat kerja; penentuan hubungan antara pajanan dengan penyakit; penentuan kecukupan pajanan; penentuan faktor individu yang berperan; penentuan faktor lain di luar tempat kerja; penentuan diagnosis okupasi;
 3. Memberikan fasilitas tanggap darurat & evakuasi medis;

PHE ONWJ mengikutsertakan seluruh pekerja pada jaminan kesehatan yang dikelola BPJS Kesehatan dan *Health Care Third Party Administrator*, guna menjamin mereka mendapatkan akses layanan kesehatan untuk penyakit bukan akibat kerja. Pada tahun 2022,

Occupational and Employee Health [403-3][403-10][SHS-1.C1][SHS-2.C1][11.9.4][11.9.7]

The Occupational Health–Industrial Hygiene (OH-IH) Department is responsible for employee health through preventive, curative, and promotive health programs. In 2022, the Company made several efforts to support the implementation of occupational health to minimize risks to employees' health, including: [SHS-2.C2][SHS-2.C3]

- Promotive and Preventive
 1. *Health promotion, education and campaign:* Publishing health information in various media, campaigns, and dissemination on general and occupational health, as well as other health behavior improvement programs for employees such as smoking cessation program, *low cholesterol menu*, and *sports day* at work locations;
 2. *Health Risk Assessment:* Conduct health risk assessment in the workplace;
 3. *Industrial Hygiene Measurement & Monitoring:* Measures and monitors health hazards in both work and personal areas;
 4. Provide recommendations and mitigation of health hazards that do not meet standards;
- Curative
 1. Provide consulting services and treatment of common diseases (consultation regarding the employees' health complaints while at the work site);
 2. Handle occupational diseases (PAK), by establishing a clinical diagnosis; determining the exposure experienced by employees in the workplace; determining the relationship between exposure and disease; determination of exposure adequacy; determination of individual defining factors; determination of other factors outside the workplace; determination of occupational diagnosis;
 3. Provide emergency response & medical evacuation facilities.

PHE ONWJ enrolls all employees in health insurance managed by BPJS Kesehatan and Health Care Third Party Administrator, to ensure they have access to health services for non-occupational diseases. In 2022, the Company paid Rp2,600,901,635 for BPJS Kesehatan premiums/



Perusahaan membayarkan premi/iuran kepesertaan BPJS Kesehatan sebesar Rp2.600.901.635. Sesuai kesepakatan dengan penyelenggara jaminan kesehatan, karyawan mendapatkan layanan kesehatan pada fasilitas kesehatan/ rumah sakit yang telah disepakati bersama, termasuk yang dikelola PT Pertamina Bina Medika IHC. [403-6]

Berdasarkan hasil pemeriksaan kesehatan, selama tahun 2022 ada beberapa sumber dan jenis pekerjaan yang berisiko tinggi terhadap kesehatan pekerja PHE ONWJ. Selama tahun 2022 Perusahaan telah melakukan beberapa upaya untuk mencegah timbulnya PAK yang terdapat pada Lampiran 5. [403-3][403-7][403-10]

Pelibatan Pekerja Mengelola K3 [SHS-1.C1][11.9.5]

Perusahaan mendorong pekerja dalam pengelolaan K3 melalui partisipasi, konsultasi, dan komunikasi, serta investigasi. Mekanisme pelibatan pekerja di antaranya melalui rapat Panitia Pembina Keselamatan dan Kesehatan Kerja (P2K3). Selama tahun 2022, keanggotaan P2K3 ada 32 orang, terdiri dari 13 orang (40,63%) perwakilan manajemen dan 19 orang (59,38%) perwakilan pekerja. Setiap tiga bulan PHE ONWJ mengirimkan laporan kegiatan rapat P2K3 ke Dinas Tenaga Kerja Transmigrasi dan Energi Provinsi DKI Jakarta. [403-2][403-4]

contributions. Under the agreement with the health insurance provider, employees receive health services at mutually agreed health facilities/hospitals, including those managed by PT Pertamina Bina Medika IHC. [403-6]

The results of medical examinations in 2022 found several sources and types of work that pose a high risk to the health of PHE ONWJ employees. During 2022, the Company has made several efforts to prevent the emergence of occupational diseases, which is described in Appendix 5. [403-3][403-7][403-10]

Employee Involvement in Managing OHS [SHS-1.C1][11.9.5]

The company encourages employees in the OHS management through participation, consultation, communication, and investigations. The employee involvement includes participation in the Occupational Health and Safety Advisory Committee (P2K3) meetings. During 2022, there were 32 members of P2K3, consisting of 13 management representatives (40.63%) and 19 employee representatives (59.38%). PHE ONWJ sends a quarterly report on P2K3 meeting activities to the Jakarta Provincial Manpower, Transmigration and Energy Agency. [403-2][403-4]

Keanggotaan Lembaga Bersama P2K3

P2K3 Joint Institution Membership

Tahun Year	Jumlah Anggota Number of Members	Perwakilan Manajemen Management Representatives		Perwakilan Pekerja Employee Representatives	
		Jumlah Total	%	Jumlah Total	%
2022	32	13	40,63	19	59,38
2021	32	13	40,63	19	59,38
2020	146	67	45,89	79	54,11

Pelatihan K3 Untuk Pekerja [SHS-2.C2][11.9.6]

Pada periode pelaporan PHE ONWJ menyelenggarakan 13 kegiatan pelatihan keselamatan kerja dan keselamatan proses bagi karyawan maupun pekerja kontraktor. Total peserta sebanyak 1.637 orang, dengan jumlah jam pelatihan mencapai 30.434 jam. Detail mengenai pelatihan K3 terdapat pada Lampiran 6. [403-5]

OHS Training for Employees [SHS-2.C2][11.9.6]

During the reporting period, PHE ONWJ held 1 occupational safety and process safety training for employees and contractor workers. Total participants were 1,637 people, with a total of 30,434 hours of training. Details regarding OHS training can be found in Appendix 6. [403-5]



Pencegahan dan Mitigasi K3 Terkait Hubungan Bisnis [403-7][11.9.8]

Pengelolaan K3 bersifat menyeluruh, termasuk untuk kontraktor dan pihak-pihak yang memiliki hubungan bisnis dengan PHE ONWJ.

- Pengelolaan K3 untuk kontraktor.
 - » Melakukan *kickoff meeting* setelah kontraktor dinyatakan menjadi pemenang dari suatu pengadaan, yang dihadiri oleh Top Management Kontraktor dan Management dari PHE ONWJ.
 - » Melaksanakan Penilaian Sebelum Bekerja (PSB), untuk memastikan persyaratan kontrak termasuk *equipment* (jumlah, spesifikasi, dan sertifikasi) dan *readiness man power* (Medical Check Up, *training mandatory*, *training kompetensi*, dan SBTC) telah dipenuhi dan sesuai dengan persyaratan yang telah ditentukan.
 - » Mempersiapkan proses administrasi (IFP/SVRC) untuk memasuki wilayah yang akan dikunjungi oleh Kontraktor/pemasok.
 - » Melakukan induksi kepada Kontraktor/pemasok sebagai media untuk mengkomunikasikan hal-hal terkait lapangan, aspek keselamatan, kesehatan kerja, keamanan, dan lingkungan di wilayah kerja yang akan dikunjungi.
 - » Melakukan pengawasan kepada Kontraktor/pemasok saat bekerja di wilayah PHE ONWJ oleh *Area Authority (AA)* dan *Project Representative*.
 - » Secara periodik akan dilakukan Penilaian Berjalan (PB) dan *Service Performance Review (SPR)* kepada kontraktor untuk memastikan pelaksanaan pekerjaan fisik telah dilakukan sesuai dengan HSSE Plan yang disepakati.
 - » Melaksanakan Penilaian Akhir (PA) untuk setiap pekerjaan yang telah selesai di PHE ONWJ.
 - » Menyelenggarakan Forum Komunikasi HSSE Kontraktor, yang dihadiri oleh Pimpinan Tertinggi dari kontraktor dan jajaran Manajemen PHE ONWJ. Pada kegiatan tersebut membahas terkait aspek HSSE, *sharing session*, dan pemberian penghargaan The Best Contractor.

OHS Prevention and Mitigation Related to Business Relations [403-7][11.9.8]

OHS management is inclusive, which applies to contractors and parties who have a business relationship with PHE ONWJ.

- OHS management for contractors:
 - » Conduct a kick-off meeting after the contractor is declared the winner of a tender, which is attended by the Contractor's Top Management and PHE ONWJ Management.
 - » Conduct Pre-Job Activity (PSB), to ensure that contract requirements including equipment (amount, specifications, and certification) and manpower readiness (Medical Check Up, mandatory training, competency training, and SBTC) have been met and are in accordance with predetermined requirements.
 - » Prepare administrative process (IFP/SVRC) to enter the area to be visited by the Contractor/supplier.
 - » Conduct inductions to contractors/suppliers as a medium for communicating matters related to the field, aspects of occupational health, safety, security, and environmental protection in the working area to be visited.
 - » Supervise Contractors/suppliers while working in PHE ONWJ area by Area Authority (AA) and Project Representative.
 - » Periodically a Current Assessment (PB) and Service Performance Review (SPR) will be carried out on contractors to ensure that the physical work has been carried out in accordance with the agreed HSSE Plan.
 - » Carry out a Final Assessment (PA) for every completed work at PHE ONWJ.
 - » Organized a Contractor HSSE Communication Forum, which was attended by the highest management of the contractor and PHE ONWJ management, discussing HSSE aspects, sharing sessions, and awarding The Best Contractor.



- Pengelolaan K3 untuk pemangku kepentingan lain yang berada/datang di wilayah operasi PHE ONWJ.
 - » Mempersiapkan proses administrasi terkait perizinan untuk memasuki wilayah kerja yang akan dikunjungi oleh pemangku kepentingan.
 - » Menyediakan Alat Pelindung Diri (APD) yang sesuai dengan wilayah kerja yang akan dikunjungi oleh pemangku kepentingan.
 - » Melakukan induksi kepada pemangku kepentingan sebagai media untuk mengkomunikasikan hal-hal terkait lapangan, aspek keselamatan, kesehatan kerja, keamanan, dan lingkungan yang akan memasuki area PHE ONWJ.
 - » Tetap melakukan pengawasan kepada pemangku kepentingan saat berada di wilayah kerja yang dikunjungi.
- OHS management for other stakeholders who are in/visiting the PHE ONWJ operating area.
 - » Prepare administrative process for a permit to enter work area that will be visited by stakeholders.
 - » Provide personal protective equipment (PPE) according to the work area that will be visited by stakeholders.
 - » Conduct inductions to stakeholders as a medium to communicate matters related to the field, and aspects of occupational health, safety, and environmental protection to enter the PHE ONWJ area.
 - » Continue to monitor stakeholders while in the visited work area.

Realisasi Penerapan K3 [403-9][403-10][11.9.10][11.9.11]

[SHS-3.C1]

Selama tahun 2022 PHE ONWJ mencatatkan jumlah jam kerja aman mencapai 38,31 juta jam. Untuk kinerja terkait fatalitas, *Lost Time Injury* (LTI), *Restricted Work Day Cases* (RWDC), dan *Medical Treatment Case* (MTC). Secara umum pengelolaan K3 selama periode pelaporan berjalan dengan baik, sehingga tidak sampai mengganggu kegiatan operasi Perusahaan. [SHS-3.C2]

OHS Implementation Realization [403-9][403-10][11.9.10]

[11.9.11] [SHS-3.C1]

In 2022, PHE ONWJ recorded total safe man hours at 38.31 million hours. In general, OHS management during the reporting period ran properly, thus there was no disruption to the Company's operations. For performance regarding fatalities, *Lost Time Injury* (LTI), *Restricted Work Day Cases* (RWDC), and *Medical Treatment Cases* (MTC) are presented in the table below. [SHS-3.C2]



Pencatatan Jam Kerja Selamat Berdasarkan Kelompok Kerja [403-9]

Safe Man Hours Based on Working Groups

Kelompok Pekerja Employee Group	2022	2021	2020
Pekerja PHE ONWJ PHE ONWJ employees	860.756	1.199.255	1.013.348
Pekerja Kontraktor Contractor employees	8.764.969	7.472.374	8.066.196
Jumlah Total	9.625.725	8.671.629	9.079.544
Jumlah Jam Kerja Aman Pekerja Total Safe Man Hours	38.309.832	28.684.107	20.012.478

Pencatatan Peristiwa Kecelakaan Kerja [403-9]

Workplace Accidents

Tingkat Kecelakaan Kerja Workplace Accident Rate	2022	2021	2020
Fatality	0	0	0
Lost Time Injury (LTI)	0	0	0
Restricted Work Day Cases (RWDC)	2	2	0
Medical Treatment Case	1	0	2
Jumlah Total	3	2	2

Pencatatan Peristiwa Kecelakaan Kerja Berdasarkan Jenis Peristiwa dan Kelompok Pekerja [403-9]

Workplace Accident Incidents by Type of Incident and Employee Group

Kelompok Pekerja Employee Group	MTC			RWDC			LTI			Fatality		
	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
Pekerja PHE ONWJ PHE ONWJ employees	0	0	0	0	0	0	0	0	0	0	0	0
Pekerja Kontraktor Contractor employees	1	0*	2*	2	2	0*	0	0	0	0	0	0

Keterangan: *Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021 [2-4]

Note: *Restatements from the 2021 Sustainability Report [2-4]

Pencatatan Nilai TRIR [403-9]

Total Recordable Injury Rates

Tahun Year	Threshold	Aktual Actual
2022	0,13	0,31
2021	0,59	0,23
2020	0,55	0,22

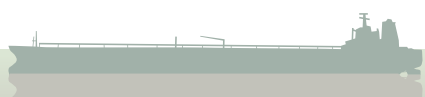
Pengelolaan Keselamatan Proses [SHS-6.C1] [SHS-1.C2]

[SHS-1.C3]

PHE ONWJ berupaya untuk selalu melaksanakan kegiatan operasi secara aman, handal dan berwawasan lingkungan dengan menerapkan standar tinggi terhadap aspek Keselamatan, Kesehatan Kerja dan Lindung Lingkungan (K3LL), Keselamatan Proses, serta Pengamanan. Penanganan bahaya Keselamatan Proses dilakukan dengan cara menjaga integritas aset untuk mencegah terjadinya kegagalan operasi dan kebocoran material

Process Safety Management [SHS-6.C1] [SHS-1.C2] [SHS-1.C3]

PHE ONWJ endeavors to carry out safe, reliable and environmentally friendly operations activities in a manner by applying high standards to the aspects of Occupational Health, Safety, and Environmental Protection (HSE), Process Safety and Security. The safety process hazards is handled by maintaining the integrity of assets to prevent operational failures and leakage of hazardous materials that can cause fires, accidents, environmental pollution, and other impacts



berbahaya yang menyebabkan terjadinya kebakaran, kecelakaan, pencemaran lingkungan, dan dampak lain terhadap lingkungan sosial di sekitar wilayah operasional. PHE ONWJ juga mengelola risiko terkait Keselamatan Proses dengan menerapkan *Process Safety & Integrity Management (PSIM)* agar dapat terus dievaluasi dan dilakukan perbaikan berkelanjutan.

on the social environment around the operating area. PHE ONWJ also manages process safety risks by implementing *Process Safety & Integrity Management (PSIM)* to evaluate and make continuous improvement.

Pencapaian Process Safety Incident Rate (PSIR)³ [403-9]

Process Safety Incident Rate (PSIR)³

Tahun Year	Jumlah Insiden Total Incidents		PSIR IOGP ⁴		PSIR PHE ONWJ	
	Tier 1 ¹	Tier 2 ²	Tier 1 ¹	Tier 2 ²	Tier 1 ¹	Tier 2 ²
2022	0	1	0,12	0,37	0	0,11
2021	0	1	0,12*	0,38*	0	0,12
2020	0	6	0,12*	0,35*	0	0,81

Keterangan:

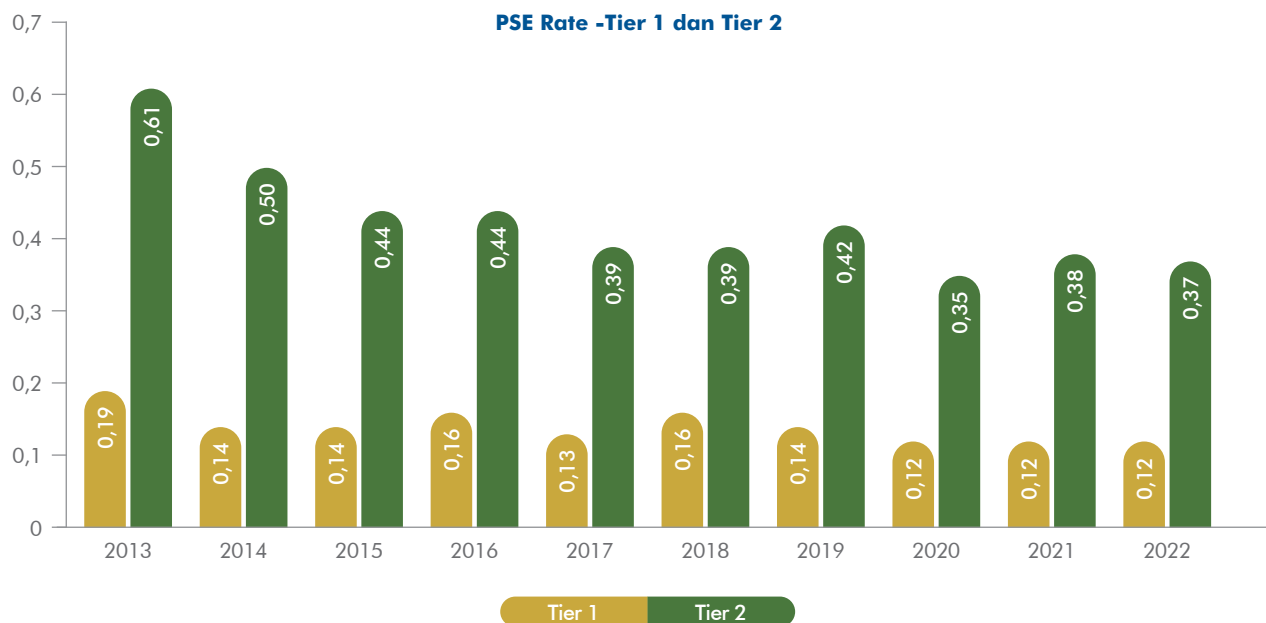
*Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021 [2-4]

1. Insiden yang termasuk Tier 1 adalah: Kebocoran Gas Mudah Terbakar (≥ 500 kg) dan/atau Oil (≥ 7 BBL), Pekerja *Injury Lost Work Day Case* dan/atau *fatality*, serta Kerusakan akibat Fire atau Explosion ≥ \$100.000.
2. Insiden yang termasuk Tier 2 adalah: Kebocoran Gas Mudah Terbakar (≥ 50 kg) dan/atau Oil (≥ 1 BBL), Pekerja *No Injury* atau *Injury* namun tidak *Lost Work Day Case*, serta Kerusakan akibat Fire atau Explosion ≥ \$2.500.
3. Rumus perhitungan PSIR = (Jumlah Insiden / manhours (exclude construction)) x 1.000.000.
4. IOGP adalah International Standard yang menyediakan data PSIR sebagai perbandingan.
5. IOGP belum mempublikasikan data PSIR untuk tahun 2020 dan 2021.

Note:

*Restatements from Sustainability Report 2021[2-4]

1. Incidents classified as Tier 1 are: Leakage of Combustible Gas (≥ 500 kg) and/or Oil (≥ 7 bbl), Employee Injury Lost Work Day Case and/or fatality, and Damage due to Fire or Explosion ≥USD100,000.
2. Incidents classified as Tier 2 are: Leakage of Combustible Gas (≥ 50 kg) and/or Oil (≥ 1 bbl), Employee No Injury or Injury but without Lost Work Day Case, and Damage due to Fire or Explosion ≥ USD2,500.
3. PSIR calculation formula = (Number of Incidents/manhours (exclude construction)) x 1,000,000.
4. IOGP is an International Standard that provides PSIR data for comparison.
5. IOGP has not published PSIR data for 2020 and 2021.



Pengembangan Pengelolaan K3 dan Keselamatan Proses [SHS-3.C3] [SHS-3.C4]

Salah satu risiko yang dihadapi PHE ONWJ yang bergerak di hulu migas adalah tumpahan/kebocoran minyak mentah maupun gas bumi. Sejalan dengan komitmen menerapkan operasi unggul, Perusahaan berupaya meningkatkan pengelolaan K3 dan keselamatan proses untuk mencegah tumpahan/kebocoran minyak mentah maupun gas bumi yang ditentukan berdasarkan hasil evaluasi indikator kinerja elemen PSIM. Program-program penguatan yang telah dilaksanakan pada 2022 adalah:

- Percepatan proyek perbaikan dan penggantian pipeline atau *Pipeline Repair & Replacement Project (PRRP)*
- Survei dan perbaikan sistem perlindungan korosi atau *Cathodic Protection*
- Pengendalian produksi pasir dari sumur yang dapat menggerus ketebalan pipa
- Pemberian bahan kimia biosida untuk mencegah terjadinya korosi mikrobiologis

PENGANGKUTAN DAN PENYALURAN PRODUK

Transportasi minyak dan gas di PHE ONWJ disalurkan melalui sistem jaringan pipa alir bawah laut. Fluida yang diproduksi dari sumur-sumur produksi dipisahkan antara fasa *liquid* dan gas pada setiap *station* di masing-masing area. Terdapat 10 aktif *station* pada lapangan di PHE ONWJ, yaitu Zulu, Papa, Mike-Mike, KLA, Lima, Bravo, Echo, Uniform, Foxtrot dan GG. Di setiap *station* tersebut *liquid* yang sudah dipisahkan akan dipindahkan menggunakan pompa menuju *central plant*. Selanjutnya, di *central plant* akan dipisahkan untuk fasa minyak dan air, di mana fasa minyak akan ditransfer selanjutnya menuju tanker untuk dijual. Adapun untuk gas, di area Barat gas akan dipindahkan melalui Kompresor di area Mike-Mike kepada pembeli di Muara Karang (PLN), dan untuk gas di area Timur gas akan dipindahkan melalui Kompresor di area Bravo kepada pembeli di area Timur (Pupuk Kujang Cilamaya, BBG, dan Pertagas Niaga). Selain itu, untuk transportasi produksi gas, terdapat satu pembeli lainnya yaitu RU VI Balongan yang menerima pasokan gas langsung dari lapangan GG. Selama tahun 2022, tidak ada insiden yang terjadi pada proses penyaluran produk di PHE ONWJ. [SHS-4.C1] [SHS-4.C2]

Lebih lanjut, PHE ONWJ melakukan pelibatan kepada masyarakat untuk turut menjaga fasilitas penyaluran sehingga tidak sampai menimbulkan ancaman keselamatan kepada masyarakat maupun lingkungan.

Development of OHS Management and Process Safety [SHS-3.C3] [SHS-3.C4]

As a company engaged in the upstream oil and gas sector, PHE ONWJ encounters several risks, including oil spills and natural gas leaks. In line with the commitment to implementing operational excellence, the Company has made some efforts to improve OHS management and process safety to prevent oil spills and natural gas leaks based on the evaluation results of the PSIM element performance indicators. The Company has implemented the following strengthening programs in 2022:

- Acceleration of Pipeline Repair & Replacement Project (PRRP)
- Survey and repair of cathodic protection system
- Control of sand production from wells which can erode the pipeline thickness.
- Application of chemical biocides to prevent microbiological corrosion.

PRODUCT TRANSPORTATION AND DISTRIBUTION

Oil and gas transportation at PHE ONWJ is distributed through a subsea pipeline network system. The fluid from the production wells is separated between the liquid and gas phases at each station in each area. There are 10 active stations on the field at PHE ONWJ, namely Zulu, Papa, Mike-Mike, KLA, Lima, Bravo, Echo, Uniform, Foxtrot, and GG. At each station, the separated liquid will be transferred using a pump to the central plant. Subsequently, the oil and water phases will be separated at the central plant, where the oil phase will be transferred to tankers for sale. Meanwhile, gas in the West area will be transferred via Compressors in the Mike-Mike area to buyers in Muara Karang (PLN), and gas in the East area will be transferred via Compressors in the Bravo area to buyers in the East area (Pupuk Kujang Cilamaya, BBG, and Pertagas Niaga). One of the buyers, RU VI Balongan, receives gas supplies directly from the GG field. During 2022, no incidents occurred in the product distribution process at PHE ONWJ.

[SHS-4.C1] [SHS-4.C2]

PHE ONWJ engages the community to take part in maintaining distribution facilities so that they do not pose a safety threat to the community or the environment. One of the Company's activities was the dissemination to



Salah satu kegiatan yang dilakukan, yaitu Perusahaan memberikan sosialisasi kepada masyarakat terkait keberadaan jarak terbatas dan terlarang di sekitar Fasilitas Obyek Vital Nasional (OBVITNAS). [SHS-4.C3]

LAYANAN DAN TANGGUNG JAWAB PRODUK [F.26,

F.27, F.28, F.29]

Produk PHE ONWJ adalah minyak mentah dan gas bumi, sehingga tidak ada yang didistribusikan langsung kepada konsumen akhir dalam bentuk bahan bakar minyak, gas olahan maupun produk petrokimia lain. Proses produksi dan penyaluran migas telah melalui evaluasi keamanan sehingga selama tahun 2022 tidak ada peristiwa maupun dampak yang membahayakan keamanan maupun keselamatan masyarakat dan lingkungan serta tidak terdapat produk yang ditarik kembali. Penyaluran migas kepada pembeli dilakukan berdasarkan perjanjian jual beli yang telah disetujui SKK Migas, dan tidak ada pembatalan perjanjian jual beli yang dibatalkan/dihentikan. [SHS-5.C1] [SHS-5.C2][SHS-5.C3]

PENGELOLAAN RISIKO KEAMANAN

PHE ONWJ melakukan pengelolaan risiko keamanan dengan menerapkan Sistem Manajemen Pengamanan yang mengacu pada Peraturan Kepolisian Negara Republik Indonesia Nomor 7 Tahun 2019 Tentang Pemberian Bantuan Pengamanan Pada Objek Vital Nasional dan Objek Tertentu. PHE ONWJ melakukan beberapa pendekatan dalam mengelola keamanan untuk kegiatan operasi yang eksisting, termasuk asesmen terhadap ancamannya terhadap keberlanjutan kegiatan operasi, antara lain yaitu: [SHS-7.C1] [SHS-7.C2] [SHS-7.C.A2] [SHS-7.C.A3]

- Security risk assessment
- Stakeholder engagement
- Integrated community base security
- Security base technology
- Kerja sama bantuan pengamanan dengan TNI-POLRI (perjanjian kerja sama)

Lebih lanjut, untuk meningkatkan kesadaran pekerja terkait pengelolaan keamanan, PHE ONWJ melakukan melakukan *security awareness* kepada karyawan berupa penyebaran *broadcast*, *banner*, poster, pamflet, memberikan sosialisasi dan partisipasi fungsi lain terkait Sistem Manajemen Pengamanan, serta *upskilling* dan pelatihan pengamanan kepada petugas keamanan. [SHS-7.C3]

the community on the restricted and prohibited distances around the National Vital Object Facility (OBVITNAS).

[SHS-4.C3]

SERVICE AND PRODUCT RESPONSIBILITY [F.26, F.27, F.28,

F.29]

PHE ONWJ's products are crude oil and natural gas, thus there is no direct distribution to end consumers in the form of fuel oil, refined gas, or other petrochemical products. The process of production and distribution of oil and gas has gone through a safety evaluation. In 2022, there were no events or impacts that endangered the security or safety of the community and the environment, and no products were recalled. Distribution of oil and gas to buyers is carried out based on a sale and purchase agreement that has been approved by SKK Migas, and there has been no cancellation or termination of the sale and purchase agreement. [SHS-5.C1][SHS-5.C2][SHS-5.C3]

SECURITY RISK MANAGEMENT

PHE ONWJ manages security risks by implementing a Security Management System that refers to the Republic of Indonesia National Police Chief Regulation Number 7 of 2019 on the Provision of Security Assistance to National Vital Objects and Certain Objects. PHE ONWJ takes several approaches in managing security for existing operations, including an assessment of threats to the continuity of operations, namely: [SHS-7.C1] [SHS-7.C2] [SHS-7.C.A2] [SHS-7.C.A3]

- Security risk assessment
- Stakeholder engagement
- Integrated community base security
- Security base technology
- Security assistance cooperation with Armed Forces (TNI) National Police (POLRI) (cooperation agreement)

In addition, to increase employee awareness regarding security management, PHE ONWJ conducts security awareness for employees in the form of distributing broadcasts, banners, posters, and pamphlets, providing dissemination and participation of other functions related to the Security Management System, as well as upskilling and security training for security officers. [SHS-7.C3]





Bersama Memberdayakan Masyarakat Empowering Community Together

Penerapan operasi unggul yang berkelanjutan di PHE ONWJ tidak terlepas dari dukungan masyarakat, sehingga keberadaan masyarakat harus dikelola dengan baik. Maka dari itu, PHE ONWJ telah memiliki kebijakan pelibatan dan pengembangan masyarakat. Perusahaan berkomitmen mengelola dukungan masyarakat melalui pengendalian dampak negatif dari kegiatan operasi, serta pemberdayaan masyarakat melalui pelaksanaan tanggung jawab sosial (CSR). PHE ONWJ juga secara berkala melakukan monitoring evaluasi untuk semua program pemberdayaan masyarakat serta penyusunan studi indeks kepuasan masyarakat (IKM) terhadap beberapa program unggulan. Selama tahun 2022 PHE ONWJ mengalokasikan biaya CSR sebesar Rp4,21 miliar dengan penerima manfaat sebanyak 15.189 kepala keluarga. Secara berkala Perusahaan melakukan evaluasi untuk memastikan efektivitas pelaksanaan kegiatan pemberdayaan masyarakat. [3.3]

DAMPAK OPERASI DAN PENGADUAN MASYARAKAT

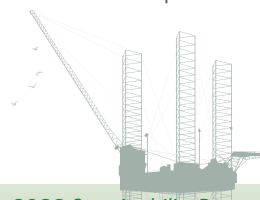
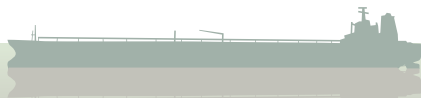
[F.23, F.24][SOC-9.C1][11.15.1]

PHE ONWJ memahami kegiatan operasi yang dilakukan berpotensi menimbulkan dampak terhadap masyarakat di sekitar wilayah kerja Perusahaan. Secara khusus Perusahaan belum melakukan *assessment* terkait potensi

The implementation of sustainable operational excellence at PHE ONWJ cannot be separated from community support, therefore the community must be managed properly. Hence, PHE ONWJ has had a policy on community involvement and development. The Company is committed to managing community support by controlling negative impacts from operating activities, as well as community empowerment through the implementation of corporate social responsibility (CSR). PHE ONWJ also regularly conducts monitoring evaluations for all community empowerment programs as well as preparation of community satisfaction index (IKM) studies on several flagship programs. In 2022, PHE ONWJ allocated Rp4.21 billion for CSR funds with 15,189 households as beneficiaries. Periodically the Company conducts evaluations to ensure the effectiveness of the implementation of community empowerment activities. [3.3]

IMPACT OF OPERATIONS AND COMMUNITY COMPLAINTS [F.23, F.24][SOC-9.C1][11.15.1]

PHE ONWJ understands that the operating activities carried out have the potential to impact the community around the Company's working area. In particular, the Company has not conducted an assessment of the potential impact on



dampak terhadap masyarakat di sekitar wilayah kerja. Namun demikian, pada periode pelaporan PHE ONWJ mencatat beberapa dampak aktual dari kegiatan operasi PHE ONWJ, yang disampaikan masyarakat setempat. Perusahaan telah melakukan tindak lanjut atas laporan/pengaduan tersebut. [413-1][11.15.2]

PHE ONWJ menyediakan mekanisme pengaduan masyarakat yang terintegrasi dengan mekanisme pengaduan PHE Subholding Upstream sebagai induk perusahaan. Segala bentuk keluhan, laporan maupun pengaduan lain dapat disampaikan melalui bagian Communication Relations dan Community Involvement Development (CID). Selama periode pelaporan, ada 12 pengaduan yang disampaikan masyarakat, dan telah ditindaklanjuti guna meminimalkan kerugian yang ditimbulkan, baik terhadap masyarakat maupun PHE ONWJ. Wilayah operasi PHE. [SOC-12.C1][SOC-12.C2][11.15.3]

Bentuk Pengaduan Masyarakat PHE ONWJ dan Tindak Lanjut yang Dilakukan Perusahaan [413-2]

the community around the working area. However, during the reporting period, PHE ONWJ recorded several actual impacts from PHE ONWJ's operations, which were reported by the local community. The company has followed up on the report/complaint. [413-1][11.15.2]

PHE ONWJ provides a public complaint mechanism that is integrated with the complaint mechanism of PHE Subholding Upstream as the parent company. All forms of complaints, reports, and other grievances can be submitted to the Communication Relations and Community Involvement Development (CID) department. During the reporting period, there were 12 complaints submitted by the community, and these have been followed up to minimize the losses incurred, both to the community and PHE ONWJ. [SOC-12.C1][SOC-12.C2][11.15.3]

Forms of Community Complaints to PHE ONWJ and Follow-Up by the Company [413-2]

Bentuk Dampak Form of Impact	Uraian Description
<p>Aktivitas kegiatan perikanan tangkap nelayan menjadi terbatas karena keberadaan anjungan dan mobilitas kapal kerja.</p> <p>Fishermen's capture fisheries activities became limited caused of platforms and the mobility of work vessels.</p>	<p>Tindak Lanjut Follow-up</p> <p>Perusahaan menindaklanjuti aduan dari 2 orang nelayan Kabupaten Subang dan 10 orang nelayan Kabupaten Karawang tentang kerusakan jaring akibat adanyaeceran minyak di perairan Kabupaten Subang dan Karawang dengan melakukan verifikasi langsung ke lapangan bersama dengan Dinas terkait.</p> <p>The company followed up on complaints of 2 fishermen from Subang Regency and 10 fishermen from Karawang Regency regarding damage to the nets caused by oil spills in the waters of Subang and Karawang Regencies by conducting direct verification in the field together with the relevant agencies.</p> <hr/> <p>Hasil Didapat Outcome</p> <p>Dilakukan ganti rugi kepada 2 orang nelayan yang berasal dari Kabupaten Subang dan 10 orang nelayan di Kabupaten Karawang</p> <p>Compensation was made to 2 fishermen from Subang Regency and 10 fishermen from Karawang Regency</p>

Selama periode pelaporan tidak ada penduduk asli dan masyarakat adat yang bertempat tinggal di wilayah kerja, dan terdampak kegiatan operasi Perusahaan. Tidak ada perselisihan terkait pembebasan lahan maupun pemindahan penduduk dengan mereka. [411-1][413-1]

During the reporting period, there were no indigenous people and traditional communities living in the working area and were affected by the Company's operations. There were no disputes over land acquisition or relocation. [411-1][413-1]



KEGIATAN TANGGUNG JAWAB SOSIAL [F.25][SOC-13.C1][SOC-13.C2][11.14.1]

Keberadaan PHE ONWJ telah memberikan manfaat ekonomi langsung maupun tidak langsung terhadap masyarakat. Salah satu bentuk manfaat ekonomi langsung adalah pemanfaatan pro bono fasilitas yang dibangun untuk mendukung operasi Perusahaan. Selain itu masyarakat lokal di sekitar wilayah operasional PHE ONWJ telah merasakan manfaat signifikan tidak langsung lainnya melalui pelaksanaan program-program CID/CSR sebagai bentuk kontribusi Perusahaan terhadap peningkatan kesejahteraan masyarakat. Pelaksanaan program/kegiatan CID/CSR juga menjadi bentuk dukungan pada pencapaian Tujuan Pembangunan Berkelanjutan (TPB). Selama tahun 2022, Perusahaan berhasil merealisasikan beberapa program pemberdayaan yang bermanfaat bagi masyarakat sekitar. Detail mengenai realisasi program pemberdayaan terdapat pada Lampiran 7. Adapun terdapat juga beberapa Program Unggulan Bidang CSR pada Tahun 2022 yang terdapat pada Lampiran 8. [203-1][203-2][11.14.5]

Pendanaan program/kegiatan berasal dari anggaran Program Pemberdayaan Masyarakat (PPM). Realisasi dana disalurkan tahun 2022 mencapai Rp4,21 miliar, bertambah 10,65% dari tahun 2021 sebesar Rp3,80 miliar. Dana tersebut didistribusikan pada program/kegiatan pemberdayaan masyarakat dan bidang sosial kemasyarakatan lainnya. Evaluasi keberhasilan program/kegiatan yang dilaksanakan dilakukan dengan mekanisme *focus group discussion* (FGD) bersama dengan masyarakat dan pelaksana program. Hasil evaluasi pada tahun 2022 adalah sebagai berikut: [413-1][SOC-9.C3]

1. Perlu dilakukan penguatan kapasitas dan kelembagaan kelompok pelaksana program.
2. Kelompok pelaksana program diharapkan agar lebih inovatif dan dapat melahirkan ide-ide baru.
3. Program Pemberdayaan Masyarakat (PPM) harus berorientasi pada kemajuan bersama, bukan hanya kemajuan segelintir pihak.
4. Pengajuan program harus dilandaskan analisis prioritas kebutuhan masyarakat di desa.

SOCIAL RESPONSIBILITY ACTIVITIES [F.25][SOC-13.C1][SOC-13.C2][11.14.1]

The existence of PHE ONWJ has provided direct and indirect economic benefits to the community. One form of direct economic benefit is the use of pro bono facilities to support the Company's operations. In addition, local communities around the operating areas of PHE ONWJ have received other significant indirect benefits through the implementation of CID/CSR programs as the Company's contribution to improving community welfare. The implementation of CID/CSR programs/activities is also a form of support for achieving the Sustainable Development Goals (SDGs). During 2022, the Company succeeded in realizing several empowerment programs that benefited the surrounding community. In addition, PHE ONWJ has also conducted a social mapping study update and PROPER document preparation programme assistance. Details regarding the realization of the empowerment programs are in Appendix 7. There are also several flagship programs of CSR in 2022, which are presented in Appendix 8. [203-1][203-2][11.14.5]

Funding for the programs/activities comes from the Community Empowerment Program (PPM) budget. Realized funds disbursed in 2022 reached Rp4.21 billion, an increase of 10.65% from Rp3.80 billion in 2021. The funds were distributed to community empowerment and other social community programs/activities. The accomplishments of programs/activities are evaluated through a focus group discussion (FGD) along with the community and program implementers. The results of the evaluation in 2022 are as follows: [413-1][SOC-9.C3]

1. It is necessary to strengthen the capacity and institution of the program implementing group.
2. The program implementing group is expected to be more innovative and able to generate new ideas.
3. The Community Empowerment Program (PPM) must be oriented towards mutual growth, not just a few.
4. Program proposal must be based on an analysis of the priority needs of the community in the village.



Realisasi dan Penyaluran Dana CSR [413-1]
Realization and Distribution of CSR Funds

Bidang Sector	Dana Tersalur (Rp) Distributed Funds (Rp)		
	2022	2021	2020
Pendidikan Education	525.525.000	511.200.000	294.885.000
Kesehatan Health	408.361.000	630.703.800	1.100.121.900
Ekonomi Economy	1.087.975.000	565.937.580	394.800.000
Infrastruktur Infrastructure	994.299.000	834.920.000	565.937.580
Lingkungan Environment	710.475.000	234.250.000	1.298.890.000
Bencana Alam Natural Disaster	194.856.500	164.020.345	410.742.061
Studi Study	291.930.000	-	-
Pemberdayaan Masyarakat Community Empowerment	-	866.950.000	1.139.085.000
Jumlah Total	4.213.421.500	3.807.981.725	5.304.461.541

Tanggap Bencana

PHE ONWJ juga melaksanakan kegiatan tanggap bencana, sebagai kepatuhan pada PROPER KLHK. Pada tahun 2022, terdapat beberapa kegiatan tanggap bencana, baik yang terjadi di sekitar wilayah operasi Perusahaan maupun di tempat lain di Indonesia:

- Latihan Pergelaran Peralatan Penanggulangan Tumpahan Minyak (*Wetdrill Exercise*) dan Latihan Kering Komunikasi dan Pelaporan (*Tabletop Exercise*), pada bulan Juni 2022.
- Pelatihan *Fire Fighting* Sertifikasi Kemenaker Kelas D, pada bulan Juli 2022.
- Pelatihan *Fire Fighting* Sertifikasi Kemenaker Kelas D, pada bulan Agustus 2022.
- Pelatihan OPRC IMO level 3 – Pelatihan Penanggulangan Tumpahan Minyak Tingkat Manajer atau administrator, pada bulan November 2022.
- *Focus Group Discussion (FGD) Emergency Response & Crisis Management (ERCM) Subholding Upstream*, pada bulan Desember 2022.
- Pelatihan *Incident Command System* dan *Incident Management Team*, pada bulan Desember 2022.

Disaster Response

PHE ONWJ also carries out disaster response activities, as compliance with KLHK's PROPER. In 2022, there were several response activities for disasters occurring around the Company's operating areas and elsewhere in Indonesia:

- Oil Spill Response Equipment Exercise (*Wetdrill Exercise*) and Communication and Reporting Dry Exercise (*Tabletop Exercise*), in June 2022.
- Fire Fighting Training for Ministry of Manpower Certification Class D, in July 2022.
- Fire Fighting Training for Ministry of Manpower Certification Class D, in August 2022.
- IMO level 3 OPRC Training – Oil Spill Response Training Manager or administrator Level, in November 2022.
- Focus Group Discussion (FGD) on Emergency Response & Crisis Management (ERCM) Subholding Upstream, in December 2022.
- Incident Command System and Incident Management Team training, in December 2022.

Penanganan terhadap masyarakat terdampak tumpahan minyak sumur YYA-1 telah selesai dilaksanakan di tahun 2021. Sehingga di tahun 2022 tidak ada kelanjutan penanganan.

The handling of communities affected by the YYA-1 well oil spill has been completed in 2021. There were no more handling activities in 2022.



Menjaga Karyawan dan Konsumen

Retaining Employees and Consumers

KESETARAAN BEKERJA, PEKERJA ANAK, DAN PEKERJA PAKSA [F.18, F.19][11.11.1][11.12.1]

PHE ONWJ berkomitmen memberikan kesempatan setara kepada setiap individu untuk bekerja di Perusahaan, melalui proses rekrutmen terbuka dan transparan. Pada tahun 2022 PHE ONWJ menerima 8 pekerja baru, terdiri dari 7 pekerja laki-laki dan 1 perempuan. Selama periode pelaporan ada 11 karyawan yang pensiun dan 1 resign dari PHE ONWJ, dengan tingkat perputaran mencapai 3%.

[401-1][11.10.2]

Bidang usaha PHE ONWJ adalah eksplorasi dan produksi migas, sehingga memiliki regulasi ketat dalam ketenagakerjaan. Tidak ada kegiatan operasi Perusahaan yang mempekerjakan pekerja anak (di bawah usia 16 tahun). Perusahaan memberlakukan jam kerja sesuai UU Ketenagakerjaan, dan selama tahun 2022 tidak ada insiden kerja paksa. Untuk kegiatan produksi migas di anjungan berlangsung 24 jam, sehingga berlaku jam kerja khusus sesuai Peraturan Perusahaan periode 2022-2024 dan Perjanjian Kerja Bersama (PKB) PHE yang berlaku di Subholding Upstream. PKB PHE juga mengatur hubungan industrial antara Perusahaan dengan pekerja, dan melindungi seluruh (100%) pekerja PHE ONWJ. [2-30][407-1][408-1][409-1][11.12.2] [SOC-3.A.5]

EQUALITY IN EMPLOYMENT, CHILD LABOR, AND FORCED LABOR [F.18, F.19][11.11.1][11.12.1]

PHE ONWJ is committed to providing equal opportunities for every individual to work at the Company, through an open and transparent recruitment process. In 2022 PHE ONWJ hired 8 new employees, consisting of 7 male and 1 female. During the reporting period 11 employees retired and 1 resigned from PHE ONWJ, with a turnover rate of 3%. [401-1][11.10.2]

PHE ONWJ's line of business is oil and gas exploration and production, which has strict regulations on manpower. There are no Company operations that employ child labor (under 16 years of age). The Company enforces working hours according to the Law on Manpower, and during 2022 there were no cases of forced labor. Oil and gas production activities on platforms run for 24 hours, thus there are special working hours applied in accordance with Company Regulations for the 2022-2024 period and the Collective Labor Agreement (CLA) Subholding Upstream. The CLA of PHE also regulates industrial relations between the Company and employees, as well as protecting all (100%) PHE ONWJ employees. [2-30][407-1][408-1][409-1][11.12.2] [SOC-3.A.5]

Jumlah Pekerja Baru Berdasarkan Gender, Wilayah Penempatan, dan Kelompok Umur [401-1][SOC-5.C2]

Number of New Employees by Gender, Placement Area, and Age Group

Tahun Year	Gender Gender		Wilayah Penempatan Placement Area			Kelompok Usia Age Group				Jumlah Total
	Pria Male	Wanita Female	Kantor Office	Offshore	Onshore	<30	31-40	41-50	>50	
2022	7	1	7	0	1	6	1	1	0	8
2021	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0



Tingkat Perputaran Pekerja [403-1]

Employee Turnover Rate

Uraian Description	2022	2021	2020
Jumlah Pekerja Di Awal Tahun Number of Employees at the Beginning of the Year	401	474	504
Penerimaan Pekerja Baru New Employee Recruitment	8	0	3
Pekerja Berhenti (Mengundurkan Diri, Pensiun, Meninggal Dunia) Employee Leaving (Resigned, Retired, Passed)	12	19	20
Jumlah Pekerja Di Akhir Tahun Number of Employees at the End of the Year	396	402	485
Rasio Perputaran Pekerja (%) Employee Turnover Ratio (%)	3%	5%	4%

Tingkat Perputaran Pekerja Berdasarkan Gender [401-1]

Employee Turnover Rate by Gender

Uraian Description	2022		2021		2020	
	Laki-laki Male	Perempuan Female	Laki-laki Male	Perempuan Female	Laki-laki Male	Perempuan Female
Jumlah Pekerja di Awal Tahun Number of Employees at the Beginning of the Year	367	34	433	41	460	44
Penerimaan Pekerja Baru New Employee Recruitment	6	1	0	0	3	0
Pekerja Berhenti (Mengundurkan diri , Pensiun, Meninggal dunia) Employee Leaving (Resigned, Retired, Passed)	11	1	18	1	19	1
Jumlah Pekerja di Akhir Tahun Number of Employees at the End of the Year	362	36	367	35	443	42
Rasio Perputaran Pekerja (%) Employee Turnover Ratio (%)	3%	3%	5%	3%	4%	2%

Keterangan:

Pada Januari 2021 terdapat 467 slot organisasi yang terisi penuh. Selanjutnya pada 1 April 2021 terjadi reorganisasi yang menyebabkan perubahan jumlah slot organisasi dari 467 menjadi 435. Dari 435 slot organisasi terisi 402 pekerja.

Note:

In January 2021, there were 467 organizational slots filled. On April 1, 2021, a reorganization took place which caused a change in the number of organizational slots from 467 to 435. Out of 435 organizational slots, 402 were filled.

Tingkat Perputaran Pekerja Berdasarkan Wilayah Penempatan [401-1]

Employee Turnover Rate by Placement Area

Uraian Description	2022			2021			2020		
	Office	Offshore	Onshore	Office	Offshore	Onshore	Office	Offshore	Onshore
Jumlah Pekerja di Awal Tahun Number of Employees at the Beginning of the Year	167	223	11	235	227	12	260	232	12
Penerimaan Pekerja Baru New Employee Recruitment	7	0	1	0	0	0	2	1	0



Uraian Description	2022			2021			2020		
	Office	Offshore	Onshore	Office	Offshore	Onshore	Office	Offshore	Onshore
Pekerja Berhenti (Mengundurkan diri, Pensiun, Meninggal dunia) Employee Leaving (Resigned, Retired, Passed)	3	8	1	11	8	0	13	7	0
Jumlah Pekerja di Akhir Tahun Number of Employees at the End of the Year	167	219	12	167	223	12	245	228	12
Rasio Perputaran Pekerja (%) Employee Turnover Ratio (%)	2%	4%	8%	7%	4%	0%	5%	3%	0%

Tingkat Perputaran Pekerja Berdasarkan Kelompok Usia ^[401-1]

Employee Turnover Rate by Age Group

Uraian Description	2022				2021				2020			
	<30	31-40	41-50	>50	<30	31-40	41-50	>50	<30	31-40	41-50	>50
Jumlah Pekerja di Awal Tahun Number of Employees at the Beginning of the Year	42	156	117	86	76	176	149	73	98	179	147	80
Penerimaan Pekerja Baru New Employee Recruitment	6	1	1	0	0	0	0	0	0	0	0	3
Pekerja Berhenti (Mengundurkan diri , Pensiun, Meninggal dunia) Employee Leaving (Resigned, Retired, Passed)	1	0	0	11	0	2	3	14	0	2	0	18
Jumlah Pekerja di Akhir Tahun Number of Employees at the End of the Year	46	161	116	75	61	160	117	64	78	179	152	76
Rasio Perputaran Pekerja (%) Employee Turnover Ratio (%)	2%	0%	0%	15%	0%	1%	3%	22%	0%	1%	0%	24%

Dalam proses rekrutmen dan pengembangan karir, PHE ONWJ mengutamakan kesempatan bagi masyarakat lokal yakni warga negara Indonesia (WNI). Seluruh (100%) posisi dalam manajemen senior dijabat oleh WNI dengan latar belakang beragam. Perusahaan mengedepankan pendekatan keberagaman dalam manajemen, dan memberikan kesempatan setara kepada setiap karyawan untuk membangun karir berdasarkan penilaian kinerja setiap pekerja, tanpa mempertimbangan latar belakang gender, agama, suku, ras, afiliasi politik dan faktor diskriminatif lain. [202-2][405-1][405-2][SOC-5.C1][SOC-3.C3][11.11.2][11.11.4][11.14.3][SOC-5.A2]

In the recruitment and career development process, PHE ONWJ prioritizes opportunities for Indonesian citizens. All (100%) positions in senior management are held by Indonesian citizens with diverse backgrounds. The Company promotes diversity in management and provides equal opportunities for every employee to build a career based on performance, regardless of gender, religion, ethnicity, race, political affiliation, or factors. [202-2][405-1][405-2][SOC-5.C1][SOC-3.C3][11.11.2][11.11.4][11.14.3][SOC-5.A2]

Berdasarkan data pada Fungsi Human Capital, hingga 31 Desember 2022 pekerja PHE ONWJ terdiri atas pekerja inti (core) termasuk pekerja PERTAMINA, dan anak perusahaan PHE Subholding Upstream lainnya. Para pekerja ditempatkan di berbagai fasilitas produksi dan operasi PHE ONWJ maupun pada fungsi SSO PHE Subholding Upstream. Tidak ada pekerja paruh waktu maupun pekerja borongan. Seluruh pekerja yang sudah bekerja selama minimal 6 bulan, baik PWTT maupun PWT menerima evaluasi kinerja rutin tanpa membedakan jabatan maupun gender. Hasil penilaian digunakan sebagai pertimbangan kenaikan jenjang karir. Berdasarkan hasil penilaian selama tahun 2022, ada 158 karyawan atau 60,3% yang mendapatkan promosi jabatan. [401-1][404-3]

Data on the Human Capital Function showed that as of December 31, 2022, PHE ONWJ employees consisted of core employees including PERTAMINA employees, and other PHE Subholding Upstream subsidiaries. Employees are placed in various PHE ONWJ production and operations facilities as well as in the SSO PHE Subholding Upstream function. There are no part-time workers or piece workers. All employees who have worked for a minimum of 6 months, both permanent employees (PWTT) and contract employees (PWT) receive regular performance evaluations regardless of position or gender. Based on the appraisal results during 2022, 158 employees or 60.3% were promoted. [401-1][404-3]

Jumlah Pekerja PHE ONWJ dan Pekerja Lain di PHE ONWJ Berdasarkan Status Kepegawaian dan Gender
 Number of Employees of PHE ONWJ and Other Workers at PHE ONWJ by Employment Status and Gender

Status Kepegawaian Employment Status	2022			2021			2020		
	Pria Male	Wanita Female	Jumlah Total	Pria Male	Wanita Female	Jumlah Total	Pria Male	Wanita Female	Jumlah Total
Pekerja Waktu Tidak Tertentu (PWTT) Permanent Employees	359	36	395	367	35	402	433	42	475
Pekerja Waktu Tertentu (PWT) Contract Employees	1	0	1	0	0	0	0	3	3
Jumlah Total	360	36	396	367	35	402	433	45	478



Jumlah Pekerja PHE ONWJ, dan Pekerja Lain di PHE ONWJ Berdasarkan Status Kepegawaian dan Penempatan

Number of Employees of PHE ONWJ, and Other Workers at PHE ONWJ by Employment Status and Placement

Status Kepegawaian Employment Status	2022			2021			2020		
	Office	Offshore	Onshore	Office	Offshore	Onshore	Office	Offshore	Onshore
Pekerja Waktu Tidak Tertentu (PWTT) Permanent Employees	166	219	10	167	223	12	243	227	5
Pekerja Waktu Tertentu (PWT) Contract Employees	1	0	0	0	0	0	2	1	0
Jumlah Total	167	219	10	167	223	12	245	228	5
		398			402			478	

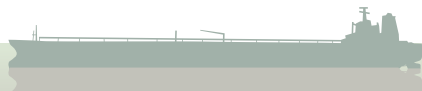
Jumlah Pekerja PHE ONWJ dan Pekerja Lain di PHE ONWJ Berdasarkan Jenjang Jabatan dan Gender ^[11.11.4]

Number of PHE ONWJ Employees, and Other Workers at PHE ONWJ Based on Level of Position and Gender

Jenjang Jabatan Level of Position	2022			2021			2020		
	Pria Male	Wanita Female	Jumlah Total	Pria Male	Wanita Female	Jumlah Total	Pria Male	Wanita Female	Jumlah Total
General Manager	1	0	1	1	0	1	1	0	1
Senior Manager	2	0	2	2	0	2	4	0	4
Vice President	0	0	0	0	0	0	0	0	20
Manager	11	0	11	12	1	13	18	2	71
Assistant Manager/Setara Assistant Manager/equivalent	93	10	103	80	8	88	94	6	382
Jumlah Total	107	9	117	93	9	104	117	8	478

Keterangan: Sejak 2021, PHE ONWJ sudah tidak ada terdapat Vice President (VP) dikarenakan VP setara dengan General Manager (GM).

Note: Since April 2021, PHE ONWJ no longer have Vice President (VP) because the position is equivalent to General Manager (GM).



PHE ONWJ berkomitmen melibatkan pekerja dalam membangun hubungan industri yang kondusif. Beberapa bentuk pelibatan pekerja: [SOC-6.C1]

1. *Management Walk Through*, dilaksanakan berkala 1x dalam sebulan
2. *Production Safety Meeting*, dilaksanakan berkala setiap bulan

Remunerasi Pekerja dan Upah Minimum Regional

[F.20] [SOC-5.a.2]

Sejalan dengan kebijakan yang ditetapkan PERTAMINA, Perusahaan memberlakukan *gender pay gap nol* persen antara remunerasi bagi pekerja laki-laki dan perempuan. Secara keseluruhan, nilai remunerasi terendah pekerja PHE ONWJ, masih lebih besar 43% dari ketentuan upah minimum regional (UMR) di wilayah kerja Perusahaan berdasar ketetapan Pemerintah. Perusahaan memberikan tunjangan berupa jaminan kesehatan (asuransi kesehatan dan BPJS) kepada seluruh pekerja; serta tunjangan lain yakni tunjangan profesi, tunjangan manajemen (jika menduduki posisi manajerial), dan tunjangan tidak tetap lainnya seperti lembur, Tunjangan Hari Raya (THR), dan tunjangan pejabat sementara yang hanya diberikan kepada Pekerja Waktu Tidak Tertentu (PWTT). [202-1] [401-2] [405-2][11.10.3][11.11.5]

PHE ONWJ menjamin hak pekerja perempuan untuk bekerja kembali pada posisi sama atau sebanding, setelah selesai cuti hamil dan melahirkan. Perusahaan memfasilitasi kebutuhan pekerja perempuan yang mengemban peran ganda sebagai ibu dan sebagai pekerja. Selama tahun 2022 terdapat 3 pekerja perempuan yang melahirkan dan semuanya (100%) telah bekerja kembali, tidak ada pekerja perempuan yang mengundurkan diri setelah selesai menjalani cuti melahirkan dalam setahun terakhir. [401-3][11.10.4][11.11.3]

Pelatihan dan Pengembangan Kemampuan Pekerja

[F.22][SOC-7.C1]

Perusahaan memberikan kesempatan setara kepada setiap pekerja untuk mengikuti pelatihan dan pendidikan guna peningkatan kompetensi/keahlian mereka, termasuk pelatihan transisi bagi pekerja yang memasuki masa purna bakti. Realisasi biaya pelatihan pekerja tahun 2022 adalah USD467.049,3 dengan total kegiatan mencapai 130.210 jam pelatihan, dan 397 peserta. Dengan demikian rata-rata jam pelatihan peserta adalah 9 jam, sementara rata-rata jam pelatihan per pekerja adalah 328 jam. [404-1][404-2] [SOC-7.C2][11.10.6][11.11.7]

PHE ONWJ is committed to engaging employees in building conducive industrial relations. Some forms of employee engagement are: [SOC-6.C1]

1. *Management Walk Through*, held periodically once a month.
2. *Production Safety Meeting*, held regularly every month.

Employee Remuneration and Regional Minimum Wage

[F.20] [SOC-5.a.2]

In line with the PERTAMINA policy, the Company enforces a zero percent gender pay gap between remuneration for male and female employees. Overall, the lowest remuneration value for PHE ONWJ employees is still 43% higher than the regional minimum wage (UMR) in the Company's working area based on Government regulations. The company provides benefits in the form of health security (health insurance and BPJS) to all employees; as well as other benefits, such as professional allowances, management allowances (if occupying a managerial position), and other non-permanent benefits such as overtime, Religious Holiday Allowance (THR), and temporary official benefits which are only given to Indefinite Time Workers (PWTT). [202-1] [401-2][405-2][11.10.3][11.11.5]

PHE ONWJ guarantees the right of female employees to return to work in the same or equal position, after completing maternity and childbirth leave. The Company facilitates the needs of female employees who carry out dual roles as mothers and as workers. During 2022, there were 3 female employees who gave birth and all of them (100%) have returned to work, none of them resigned after completing maternity leave in the last one year. [401-3][11.10.4] [11.11.3]

Employee Competency Training and Development

[F.22][SOC-7.C1]

The Company provides equal opportunities for every employee to attend training and education to improve their competence/skills, including transitional training for employees entering their retirement period. The actual cost of employee training in 2022 was USD467,049.3 with a total of 130,210 hours of training and 397 participants. Thus the average hours of training per participant was 9 hours, while the average hours of training per employee was 328 hours. [404-1][404-2][SOC-7.C2][11.10.6][11.11.7]



Jumlah Jam dan Peserta Pelatihan Berdasarkan Gender ^[404-1]

Number of Training Hours and Participants by Gender

Uraian Description	2022		2021		2020	
	Laki-laki Male	Perempuan Female	Laki-laki Male	Perempuan Female	Laki-laki Male	Perempuan Female
Total Jam Pelatihan Total Hours of Training	20.945	831	1.304	120	12.048	616
Jumlah Pekerja yang Mengikuti Pelatihan Number of Employees Attending Training	336	29	127	13	120	21
Rata-rata Jam Pelatihan per Pekerja Average Hours of Training per Employee	62,34	28,66	10,27	9,23	100,4	29,3

Jumlah dan Persentase Peserta Pelatihan Berdasarkan Jenjang Jabatan

Number and Percentage of Training Participants by Level of Position

Jenjang Jabatan Level of Position	2022		2021		2020	
	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
Eksekutif Executive	14	4	16	4	9	3
Staf Staff	246	67	263	67	185	69
Non-Staf Non-Staff	105	29	114	29	73	27
Jumlah Total	365	100	393	100	267	100

Jenis Pelatihan dan Jumlah Peserta Berdasarkan Jenjang Jabatan

Type of Training and Number of Participants by Level of Position

Jenjang Jabatan Level of Position	2022		2021		2020	
	Sertifikasi Certification	HSSE	Sertifikasi Certification	HSSE	Sertifikasi Certification	HSSE
Eksekutif Executive	3	2	7	4	2	7
Staf Staff	109	79	149	135	85	100
Non-Staf Non-Staff	102	63	45	63	72	1
Jumlah Total	214	143	201	202	159	108

Pada tahun 2022, terdapat 11 karyawan yang memasuki usia pensiun. Perusahaan menyelenggarakan pelatihan bagi mereka: ^[11.10.7]

- Pelatihan PMPK batch 1 pada 1 -5 Agustus 2022 yang dihadiri oleh 10 pekerja.
- Pelatihan PMPK batch 2 untuk Eksekutif pada 5 – 9 September 2022 yang dihadiri oleh 5 Management Zone 5.

In 2022, there were 11 employees entering retirement age. The Company organized training for them, as follows: ^[11.10.7]

- PMPK batch 1 training on August 1 – 5, 2022, which was attended by 10 employees.
- PMPK training for Executives Batch 2 on September 5 – 9, 2022 which was attended by 5 Management Zone 5.



Realisasi Penyelenggaraan Pelatihan Pekerja [404-2]
 Realization of the Employee Training Implementation

Tahun Year	Total Biaya (USD) Total Costs (USD)	Total Jam Pelatihan Total Hours of Training	Rerata Berdasarkan Peserta Average by Participant		Rerata Berdasarkan Pekerja Average by Employee	
			Jumlah Total	Rerata Average	Jumlah Total	Rerata Average
2022	451.769,76	36.928	300	123	396	93
2021	195.205,49	12.758	328	38,90	402	31,70
2020	896.505,05	5.008	267	18,80	478	10,40

KESETARAAN LAYANAN KEPADA KONSUMEN DAN SURVEI KEPUASAN [F.27][F.30][11.19.1][F.17]

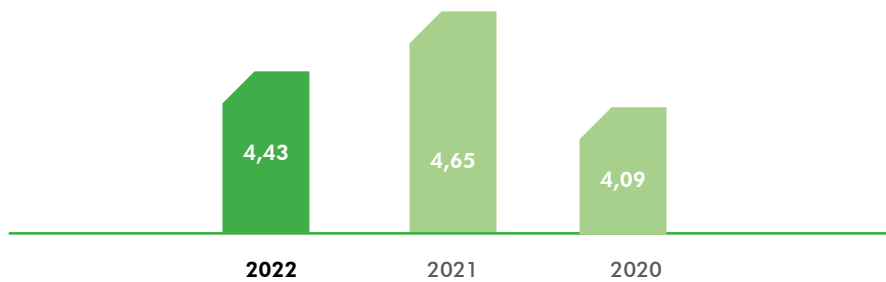
Seluruh pemasaran produk Perusahaan telah diatur oleh Pemerintah melalui SKK Migas sebagai regulator di sektor hulu migas sehingga tidak ada bentuk persaingan usaha di antara perusahaan kontraktor kontrak kerja sama (KKKS). Pemasaran produk dilaksanakan berdasarkan perjanjian jual beli yang disetujui SKK Migas. PHE ONWJ berkomitmen memberikan layanan yang sama kepada setiap konsumen sesuai perjanjian jual beli yang telah ditetapkan. Untuk menjaga layanan, PHE ONWJ secara berkala melakukan survei kepuasan konsumen dan hasil pada tahun 2022 mencapai nilai 4,43 dengan skala penilaian 1-5. [11.19.2]

EQUAL SERVICE TO CONSUMERS AND SATISFACTION SURVEY [F.27][F.30][11.19.1][F.17]

All marketing of the Company's products has been regulated by the Government through SKK Migas as the regulator in the upstream oil and gas sector, thus there is no form of business competition between cooperation contract contractors (KKKS). Product marketing is carried out based on a sale and purchase agreement approved by SKK Migas. PHE ONWJ is committed to providing the same service to every consumer in accordance with the sale and purchase agreement. To maintain service quality, PHE ONWJ regularly conducts consumer satisfaction surveys and in 2022, earned a score of 4.43 on a scale of 1-5. [11.19.2]



Hasil Survei Kepuasan Konsumen [F.30]
Customer Satisfaction Survey Results



Sesuai jenis produk yang dihasilkan, Laporan ini tidak menyertakan informasi terkait labelisasi dan informasi produk, pengaduan terkait pelanggaran privasi pelanggan, penilaian dampak dan insiden ketidakpatuhan terhadap kesehatan dan keselamatan pelanggan, serta insiden ketidakpatuhan pada ketentuan labelisasi dan informasi produk. Selain itu tidak ada insiden ketidakpatuhan pada aturan komunikasi pemasaran, mengingat proses pemasaran migas sepenuhnya diatur SKK Migas. [416-1][416-2][417-1][417-2][417-3][418-1]

According to the type of products, this report does not include information related to labeling and product information, complaints regarding violations of customer privacy, impact assessments, and non-compliance incidents on customer health and safety, as well as incidents of non-compliance with labeling and product information. In addition, there were no incidents of non-compliance with marketing communication rules, considering that the oil and gas marketing process is fully regulated by SKK Migas. [416-1][416-2][417-1][417-2][417-3][418-1]

INSIDEN TERKAIT DISKRIMINASI

PHE ONWJ berkomitmen menghormati hak asasi manusia (HAM) dengan mendukung penerapan *Respectful Workplace Policy* yang dideklarasikan PT Pertamina (Persero). Penerapan *Respectful Workplace Policy* memastikan seluruh lingkungan kerja PHE ONWJ, yang bebas dari diskriminasi, kekerasan, pelecehan atau *zero harassment*. Penerapan *Respectful Workplace Policy* diikuti dengan sosialisasi termasuk prosedur pelaporan bila terjadi diskriminasi, kekerasan, maupun pelecehan. Selama tahun 2022, tidak ada laporan insiden terkait diskriminasi. Perusahaan menyediakan mekanisme untuk menyampaikan keluhan terkait diskriminasi dalam bekerja maupun keluhan ketenagakerjaan lain, yakni melalui *call center* Pertamina 135. [406-1][SOC-8.C1][11.11.6][SOC-5.c1]

INCIDENTS RELATED TO DISCRIMINATION

PHE ONWJ is committed to respecting human rights (HAM) by supporting the implementation of the *Respectful Workplace Policy* declared by PT Pertamina (Persero). The adoption of the *Respectful Workplace Policy* ensures that the entire work environment of PHE ONWJ is free from discrimination, violence, and zero harassment. The application of the *Respectful Workplace Policy* is followed by dissemination including reporting procedures in the event of discrimination, violence or harassment. During 2022, there were no reports on discriminatory incidents. The Company provides a mechanism to file complaints related to discrimination at work and other employment complaints, through the Pertamina 135 call center. [406-1][SOC-8.C1][11.11.6][SOC-5.c1]



PERJANJIAN KERJA BERSAMA DAN KEBEBASAN BERPENDAPAT [SOC-6.C2][11.13.1][SOC-6.A3]

PHE ONWJ menerapkan PKB PHE dan PP PHE ONWJ. PKB tersebut disusun oleh perwakilan pekerja dalam wadah serikat pekerja PHE. PKB yang berlaku di PHE melindungi seluruh pekerja PHE dan PHE ONWJ. PHE ONWJ memastikan setiap pekerja ataupun mitra kerja yang bekerja sama menjadi bagian dari rantai pasok tidak melakukan hal-hal yang menghambat kebebasan berpendapat. [11.13.2]

PENGHORMATAN TERHADAP HAK ASASI MANUSIA

[2-23][412-1][11.17.2][11.17.3][11.17.4]

PHE ONWJ memiliki komitmen menghormati hak asasi manusia (HAM) yang mencakup seluruh kegiatan operasional. PT Pertamina Hulu Energi Subholding Upstream PERTAMINA sebagai perusahaan induk PHE ONWJ telah melakukan *Human Rights Due Diligence*, menggunakan alat ukur Penilaian Risiko Bisnis dan HAM (PRISMA) yang dikembangkan Kementerian Hukum dan HAM. Hasil penilaian adalah sangat memuaskan. [SOC-1.C1][SO-1.C2][SOC-1.C5][SOC-3.C3]

Selain itu PHE ONWJ bersama PERTAMINA melaksanakan berbagai program seperti *Respectful Workplace*, guna mencegah terjadinya diskriminasi dan pelecehan di lingkungan kerja. PERTAMINA juga mengembangkan alat audit PERTAMINA *Industrial Peace Level* (PIPL) untuk menjamin keberlanjutan dan keselarasan pengelolaan *industrial peace*, sehingga pekerja merasa nyaman dan aman selama bekerja. [SOC-3.C2]

Selama tahun 2022 Perusahaan juga melaksanakan berbagai kegiatan termasuk sosialisasi dan pelatihan untuk mendukung penerapan HAM, termasuk kepada petugas keamanan: [412-2][410-1][SOC-1.C4][11.18.2]

1. Seluruh (100%) petugas keamanan (*security*) telah mendapatkan pendidikan dan sertifikasi pendidikan satpam dari Kepolisian RI. Dalam pendidikan tersebut, personel *security* mendapatkan materi HAM yang akan mendukung mereka bertugas dengan baik. [SOC-3.C1][SOC-3.A.2]

COLLECTIVE LABOR AGREEMENT AND FREEDOM OF EXPRESSION [SOC-6.C2][11.13.1][SOC-6.A3]

PHE ONWJ implements PKB PHE and PP PHE ONWJ. The PKB was prepared by worker representatives within the PHE workers' union. The CLA in force at PHE protects all PHE and PHE ONWJ workers. PHE ONWJ ensures that every worker or work partner who collaborates as part of the supply chain will not do things that hamper freedom of expression. [11.13.2]

RESPECT FOR HUMAN RIGHTS [2-23][412-1][11.17.2][11.17.3]

[11.17.4]

PHE ONWJ has a commitment to respecting human rights (HAM) covering all operating activities. PT Pertamina Hulu Energi Subholding Upstream as the holding company of PHE ONWJ has conducted Human Rights Due Diligence, using the Business and Human Rights Risk Assessment (PRISMA) measurement tool developed by the Ministry of Law and Human Rights. The result of the assessment is very satisfactory. [SOC-1.C1][SO-1.C2][SOC-1.C5][SOC-3.C3]

In addition, PHE ONWJ along with PERTAMINA carries out various programs such as *Respectful Workplace*, to prevent discrimination and harassment in the work environment. PERTAMINA has also developed the PERTAMINA *Industrial Peace Level* (PIPL) audit tool to ensure the sustainability and harmony of industrial peace management to make employees feel comfortable and safe while working. [SOC-3.C2]

During 2022 the Company also carried out various activities including outreach and training to support the implementation of human rights, including for security officers: [412-2][410-1][SOC-1.C4][11.18.2]

1. All (100%) security officers have received education and security officer education certification from the Indonesian National Police. In this education, security personnel receive human rights material that will support them in carrying out their duties properly. [SOC-3.C1][SOC-3.A.2]



Selama tahun 2022 PHE ONWJ melakukan investasi untuk pengembangan, dengan total nilai USD120.737.592 juta. Perusahaan belum menyertakan klausul terkait HAM dalam perencanaan investasi yang merupakan fase awal dalam proses realisasi pengembangan. Namun seluruh kegiatan yang telah dijalankan tetap memperhatikan dan menghormati aspek-aspek HAM, sehingga selama tahun 2022 PHE ONWJ tidak pernah dihadapkan pada insiden kekerasan HAM terhadap masyarakat adat maupun kelompok rentan lain. Perusahaan juga tidak melakukan akuisisi lahan untuk kepentingan pengembangan. [F.3] [412-3][411-1][SOC-1.C3][SOC-10.C1][SOC-11.C1][SOC-11.C2] [SOC-3.A.1] [SOC-3.A.3] [11.16.2][11.17.2][11.181]

ASESMEN KRITERIA SOSIAL DAN HAM TERHADAP PEMASOK BARU [SOC-4.C1] [SOC-4.C3] [SOC-4.A1]

Sejalan dengan komitmen PHE ONWJ berkontribusi pada kesejahteraan bersama, Perusahaan memastikan kontraktor/pemasok menerapkan kriteria sosial dalam operasional mereka. Mekanisme yang digunakan PHE ONWJ untuk memastikan kepatuhan penerapan kriteria sosial adalah dengan mengimplementasikan CSMS *full cycle* yang terdiri dari enam tahap, yaitu Penilaian Risiko, Penilaian Kualifikasi, Seleksi, Penilaian Sebelum Bekerja, Penilaian Berjalan, dan Penilaian Akhir. Hal tersebut sesuai dengan Pedoman Tata Kerja Nomor: PTK-005/SKKMA0000/2018/SO tentang Pengelolaan Kesehatan, Keselamatan Kerja dan Lindungan Lingkungan di Kegiatan Usaha Hulu Minyak dan Gas Bumi. Persyaratan terkait kriteria sosial diatur pada tahap Penilaian Kualifikasi, Penilaian Berjalan, dan Penilaian Akhir PTK-005/SKKMA0000/2018/SO Sub Elemen 4.7 Bahaya terhadap Aspek Sosial.

Seluruh kontraktor/pemasok kategori risiko sedang dan tinggi yang akan mengikuti proses pengadaan di PHE ONWJ harus menjalani pemeriksaan menggunakan mekanisme tersebut dan memenuhi nilai minimum yang telah dipersyaratkan, yaitu Kontrak Risiko Tinggi: $\geq 60\%$ dan Kontrak Risiko Sedang: $\geq 54.3\%$.

During 2022 PHE ONWJ invested a total value of USD 120,737,592 million in development. The company has not included clauses on human rights in the investment plan which is the initial phase in the development realization process. However, all activities that have been carried out pay attention to and respect human rights aspects. Therefore, in 2022 PHE ONWJ has never been faced with incidents of human rights violations against indigenous peoples or other vulnerable groups. The Company did not acquire land for development purposes. [F.3] [412-3][411-1][SOC-1.C3][SOC-10.C1][SOC-11.C1][SOC-11.C2] [SOC-3.A.1] [SOC-3.A.3] [11.16.2] [11.17.2][11.181]

ASSESSMENT OF SOCIAL AND HUMAN RIGHTS CRITERIA FOR NEW SUPPLIERS [SOC-4.C1] [SOC-4.C3] [SOC-4.A1]

In line with PHE ONWJ's commitment to contribute to shared welfare, the Company ensures that contractors/suppliers apply social criteria in their operations. The mechanism used by PHE ONWJ to ensure compliance with the application of social criteria is to implement a full cycle CSMS consisting of six stages, namely Risk Assessment, Pre-Qualification, Selection, Pre-Job Activity, Work in Progress, and Final Evaluation. This is in accordance with Work Procedure Guidelines Number: PTK-005/SKKMA0000/2018/SO on Management of Health, Safety, and Environmental Protection in Upstream Oil and Gas Business Activities. Requirements related to social criteria are regulated in the Qualification Assessment, Current Assessment, and Final Assessment stages PTK-005/SKKMA0000/2018/SO Sub Element 4.7 Hazards to Social Aspects.

All medium and high risk category contractors/suppliers who will participate in the procurement process at PHE ONWJ must undergo inspection using this mechanism and meet the required minimum value, namely High Risk Contracts: $\geq 60\%$ and Medium Risk Contracts: $\geq 54.3\%$.



Pada periode pelaporan PHE ONWJ memastikan setiap dampak negatif yang ditimbulkan dari kegiatan yang dijalankan kontraktor/pemasok telah ditindaklanjuti, di antaranya: [414-2][11.10.9]

- Melakukan pemantauan tindak lanjut dari hasil Penilaian Sebelum Bekerja dan memastikannya kembali pada saat Penilaian Berjalan dilakukan.
- Melakukan Penilaian Berjalan secara periodik, sebagai evaluasi performansi dari kontraktor.
- Melakukan perhitungan realisasi pencapaian KPI Kontraktor.
- Melakukan pemantauan tindak lanjut dari hasil Penilaian Berjalan, dan memastikan Kontraktor memenuhi rencana tindak lanjut yang telah direkomendasikan sesuai dengan target waktu yang telah ditetapkan.

Selain itu, PHE ONWJ juga menghormati hak asasi manusia yang diakui secara internasional sebagaimana ditetapkan dalam Hukum Hak Asasi Manusia berdasarkan Undang-Undang No.1 Tahun 1970, Internasional (International Bill of Human Rights), standar tenaga kerja yang diakui oleh Organisasi Buruh Internasional (International Labour Organization/(ILO), sebagaimana tercantum dalam Pernyataan ILO tentang Prinsip Dasar dan Hak di Tempat Kerja. PHE ONWJ menghormati hak individu yang berasal dari kelompok atau populasi yang mungkin sangat rentan terhadap dampak, termasuk masyarakat adat, perempuan, kelompok bangsa atau etnis, dan agama. PHE ONWJ memperlakukan semua karyawan yang bekerja untuk PHE ONWJ secara adil dan tanpa diskriminasi. Seluruh karyawan, staf agen, dan kontraktor/pemasok berhak untuk bekerja di lingkungan dan dalam kondisi yang menghormati hak serta martabat mereka. Hal ini sejalan dengan Komitmen dari Direktur Pertamina (Persero) untuk memastikan lingkungan kerja yang bebas dari diskriminasi, kekerasan, dan pelecehan di lingkungan PHE ONWJ demi terciptanya *Zero Harrasment* di lingkungan PHE ONWJ. [414-1] [SOC-2.C1] [SOC-2.C2][11.10.8][11.12.3]

KONTRIBUSI POLITIK

PHE ONWJ melarang keterlibatan Perusahaan dan seluruh pekerja dalam kontribusi politik, baik kepada individu politisi, partai politik maupun kegiatan politik. Selama tahun 2022 tidak ada kontribusi politik yang diberikan PHE ONWJ baik dalam bentuk dukungan finansial maupun penggunaan fasilitas Perusahaan. [415-1] [11.22.2]

During the reporting period, PHE ONWJ ensures that any negative impacts arising from activities carried out by contractors/suppliers have been followed up, including: [414-2][11.10.9]

- Monitor the follow-up of the results of the Pre-Job Activity and ascertain when the Work in Progress Assessment is carried out.
- Conduct periodic Work in Progress Assessment, as an evaluation of the contractors' performance.
- Calculate the realization of the achievement of Contractor KPIs.
- Monitor the follow-up of the results of the Work in Assessment and ensure that the Contractor fulfills the recommended follow-up plan in accordance with the set time target.

In addition, PHE ONWJ also respects internationally recognized human rights as stipulated in Human Rights Law based on Law No. 1 of 1970, International Bill of Human Rights, labor standards recognized by the International Labor Organization (ILO) as stated in the ILO Declaration on Fundamental Principles and Rights at Work. PHE ONWJ respects the rights of individuals belonging to groups or populations that may be particularly vulnerable to impacts, including indigenous peoples, women, national or ethnic groups, and religion. PHE ONWJ treats all employees who work for PHE ONWJ fairly and without discrimination. All employees, agency staff, and contractors/suppliers have the right to work in an environment and in conditions that respect their rights and dignity. This is in line with the Commitment from the Director of Pertamina (Persero) to ensure a work environment that is free from discrimination, violence and harassment to achieve *Zero Harassment* within the PHE ONWJ environment. [414-1] [SOC-2.C1] [SOC-2.C2] [11.10.8][11.12.3]

POLITICAL CONTRIBUTIONS

PHE ONWJ prohibits the Company's and all of the employees involvement in political contributions, whether to individual politicians, political parties or political activities. During 2022, PHE ONWJ did not make any political contributions, in the form of financial support or use of company facilities. [415-1] [11.22.2]





#BersamaKitaBisa



**Tata Kelola
Keberlanjutan**
Sustainability Governance

Struktur dan Tanggung Jawab Keberlanjutan

Sustainability Structure and Responsibilities

Komitmen PHE ONWJ membangun operasi unggul berkelanjutan disertai penerapan tata kelola keberlanjutan, dan disesuaikan dengan dinamika global yang terus berkembang. Penerapan tata kelola keberlanjutan didukung badan tata kelola Perusahaan, yang berperan memegang peran strategis dalam upaya mencapai Visi dan Misi PHE ONWJ.

PERUBAHAN ORGANISASI

Sejalan dengan dinamika yang berkembang di PT PHE Subholding Upstream sebagai induk perusahaan, struktur tata kelola keberlanjutan PHE ONWJ selama tahun 2022 mengalami penyesuaian selama periode pelaporan, yakni Penyempurnaan Organisasi Sub Holding Upstream PT. Pertamina Hulu Energi yang tertuang pada SK. No. KPTS-052/PHE00000/2022-S0. Perusahaan memberikan pemberitahuan minimum satu bulan sebelum adanya Perubahan organisasi. [402-1]

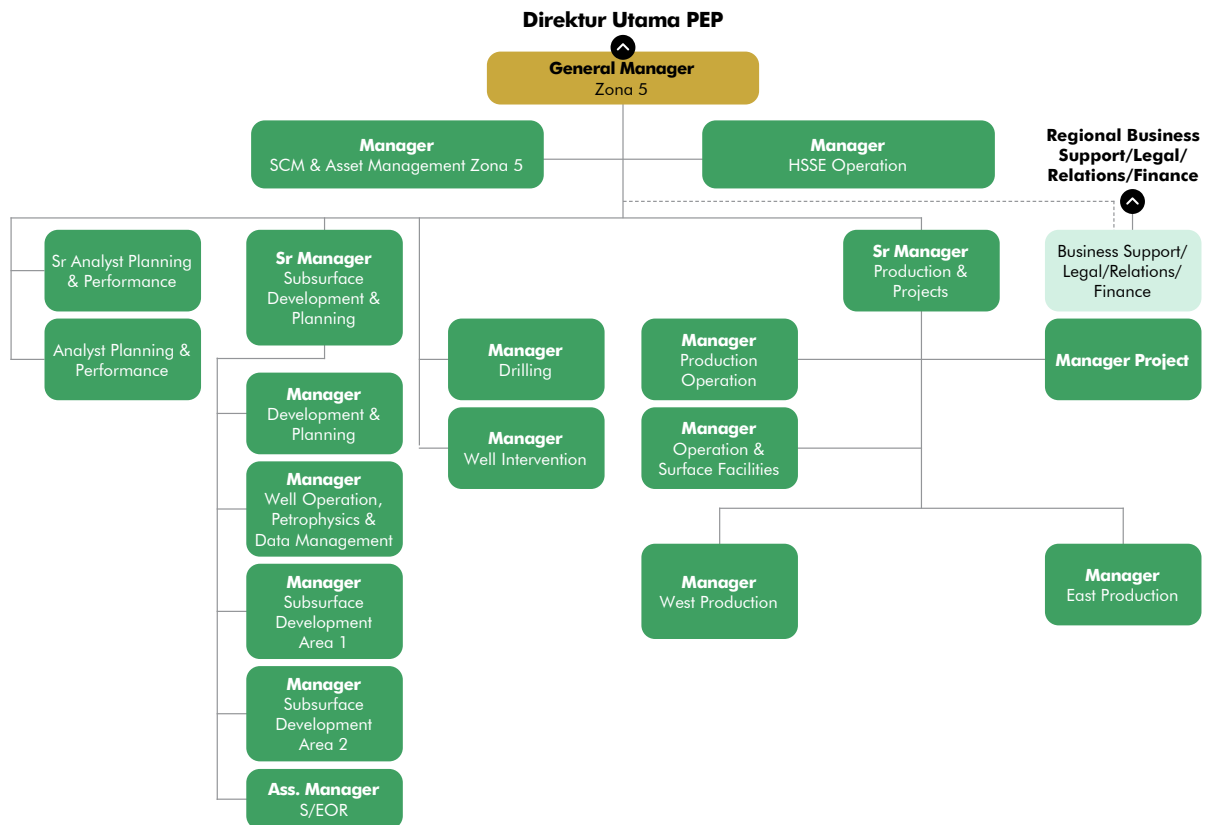
Berdasarkan perubahan organisasi, maka struktur organisasi PHE ONWJ per 31 Desember 2022 adalah sebagai berikut:

PHE ONWJ is committed to building sustainable operational excellence, which is supported by sustainable governance implementation, and adapted to the dynamics of global development. The implementation of sustainable governance is supported by the corporate governance body, which plays a strategic role in achieving the Vision and Mission of PHE ONWJ.

ORGANIZATIONAL CHANGE

In line with the dynamics that are developing at PT PHE Subholding Upstream as the holding company, PHE ONWJ sustainability governance structure underwent adjustments during the reporting period, particularly Organizational Improvement of SubHolding Upstream PT Pertamina Hulu Energi as stated in Decree No. KPTS-052/PHE00000/2022-S0. The Company gave a minimum notice of 1 month prior to changes of organization. [402-1]

Based on organizational changes, the organizational structure of PHE ONWJ as of December 31, 2022, is as follows:



PENANGGUNG JAWAB PENERAPAN KEBERLANJUTAN [E.1]

Berdasar struktur organisasi, pejabat tertinggi tata kelola keberlanjutan PHE ONWJ adalah Direktur, yang bertanggung jawab atas penerapan keberlanjutan termasuk pemenuhan tanggung jawab sosial dan lingkungan (TJSL). Direktur juga dibantu pejabat manajemen dalam mengelola Perusahaan. Sampai dengan akhir tahun 2022, terdapat 14 pejabat Perusahaan dengan gender 100% laki-laki. Direktur dapat mendelegasikan kewenangannya kepada General Manager dan Senior Manager sesuai fungsi masing-masing, dalam berkomunikasi dengan pemangku kepentingan. [2-9][2-13]

NOMINASI DAN PENGANGKATAN PEJABAT TERTINGGI KEBERLANJUTAN

Nominasi, penetapan, dan pengangkatan Direktur PHE ONWJ menjadi kewenangan Rapat Umum Pemegang Saham (RUPS). Proses yang berlangsung mempertimbangkan ketentuan persyaratan yang ditetapkan perundang-undangan. Pada periode pelaporan, Direktur dijabat oleh Wisnu Hindadari yang diangkat dan ditetapkan berdasarkan SKMJ-00003/K00000/2022-S8 tanggal 2 Februari 2022. [2-10] [2-11]

PERSON IN CHARGE OF SUSTAINABILITY IMPLEMENTATION [E.1]

Based on the organizational structure, the highest officer for sustainability governance at PHE ONWJ is the Director, who is responsible for implementing sustainability, including fulfilling social and environmental responsibility (CSR). The Director is also assisted by management in running the Company. Until the end of 2022, there were 14 company officers whose gender are all (100%) male. The Director can delegate his authority to General Manager and Senior Managers according to their respective functions, in communicating with stakeholders. [2-9][2-13]

NOMINATION AND APPOINTMENT OF HIGHEST SUSTAINABILITY OFFICER

The nomination, designation, and appointment of the Director's of PHE ONWJ is under the authority of the General Meeting of Shareholders (GMS). The ongoing process takes into account the requirements stipulated by law. In the reporting period, the Director was held by Wisnu Hindadari who was appointed and assigned based on SKMJ-00003/K00000/2022-S8 dated 2 February 2022. [2-10] [2-11]

Penilaian Risiko Terhadap Penerapan Keberlanjutan [E.3] Risk Assessment of Sustainability Implementation

PHE ONWJ bergerak pada sektor hulu migas yang memiliki risiko tinggi dan potensi dampak negatif terhadap penerapan keberlanjutan. Perusahaan menerapkan sistem pengelolaan risiko yang dijalankan Fungsi Safety, dan dilaksanakan dengan memastikan ketersediaan prosedur beserta personel kompeten untuk melakukan identifikasi, evaluasi, pengendalian, pemantauan dan pengelolaan risiko secara sistematis. Melalui penerapan sistem pengelolaan risiko, Perusahaan membuat identifikasi bahaya dan daftar risiko yang dapat mengakibatkan kerugian terhadap kesehatan, dan keselamatan pekerja, lingkungan, aset, masyarakat, pelanggan, dan/atau pemangku kepentingan lain. [2-25]

PHE ONWJ is engaged in the upstream oil and gas sector which has high risks and potential negative impacts on the implementation of sustainability. The Company's risk management system is implemented by the Safety Function by ensuring the availability of procedures and competent personnel to carry out systematic identification, evaluation, control, monitoring, and management of risks. Through the risk management system, the Company identifies hazards and a list of risks that may cause harm to the health and safety of employees, the environment, assets, communities, customers and/or other stakeholders. [2-25]



Secara berkala PHE ONWJ melakukan evaluasi risiko dengan mempertimbangkan berbagai hal, di antaranya persyaratan hukum, peraturan perundang-undangan, Sistem Tata Kerja PERTAMINA, reputasi, serta keuangan/biaya. Pengendalian risiko dilakukan proporsional, disertai pemantauan dan pengukuran dengan prioritas kegiatan penting berskala besar, serta dilengkapi dokumentasi tinjauan risiko yang terus diperbarui, mudah diakses dan dipahami oleh pihak-pihak yang bertanggung jawab atas keputusan-keputusan operasi. Secara berkala Direktur dan pejabat lain PHE ONWJ melakukan penilaian efektivitas penerapan sistem pengelolaan risiko, melalui koordinasi dengan Fungsi *Risk Management* dari PHE Subholding Upstream, dan PERTAMINA. Dalam pengelolaan bahaya dan risiko aktivitas operasional, PHE ONWJ menggunakan pedoman dari PHE Subholding Upstream, yaitu Health, Safety, Security, and Environment Risk Register (HSSE RR) yang merupakan KPI dari PHE ONWJ. Pada tahun 2022 target KPI ditetapkan 75% dengan pencapaian 85%. Detail mengenai pengelolaan risiko PHE ONWJ terdapat pada Lampiran 9. [2-12]

PHE ONWJ conducts risk evaluation periodically by considering various matters, including legal requirements, laws and regulations, PERTAMINA's Work System, reputation, and finances/costs. Risk control is conducted proportionally along with monitoring and measurement, prioritizing large-scale important activities, as well as complete documentation of continuously updated risk review, easy access and understandable by those responsible for making operational decisions. The Director and other officers of PHE ONWJ periodically evaluate the risk management system effectiveness, by coordinating with the Risk Management Function of PHE Subholding Upstream, and PERTAMINA. In managing the hazards and risks of operating activities, PHE ONWJ refers to PHE Subholding Upstream's Health, Safety, Security, and Environment Risk Register (HSSE RR), which is a KPI of PHE ONWJ. In 2022, the KPI target was set at 75%, with achievement reaching 85%. Details regarding the risk management of PHE ONWJ can be found in Appendix 9. [2-12]

Pencegahan Benturan Kepentingan dan Antikorupsi

Prevention of Conflict of Interest and Anti-Corruption

Salah satu aspek penting dalam penerapan tata kelola keberlanjutan untuk membangun operasi unggul berkelanjutan adalah praktik bisnis bersih, yang diwujudkan PHE ONWJ dengan dukungan pada pencegahan benturan kepentingan dan antikorupsi. Perusahaan memiliki Etika Kerja dan Bisnis (EKB) sebagai pedoman setiap pekerja dalam berkegiatan, serta membentuk fungsi Internal Audit dan Kepatuhan, guna memastikan kepatuhan pada regulasi. PHE ONWJ mewajibkan setiap pejabat Perusahaan menyampaikan Laporan Harta Kekayaan Penyelenggara Negara (LHKPN), menerapkan pengendalian gratifikasi, serta memberlakukan Sistem Pelaporan Pelanggaran (*whistleblowing system*/WBS) yang terintegrasi dengan PHE Subholding Upstream dan PERTAMINA. Seluruh pelaksanaan LHKPN, pengendalian gratifikasi dan WBS dilaporkan berkala kepada Komisi Pemberantasan Korupsi (KPK), PHE Subholding Upstream serta PERTAMINA untuk ditindaklanjuti. [3.3][11.20.1]

One of the important aspects of implementing sustainable governance to build sustainable operational excellence is clean business practices, and PHE ONWJ realizes it with support for the prevention of conflicts of interest and anti-corruption. The company has a Code of Conduct (CoC) as a guideline for every employee in their activities, as well as establishing an Internal Audit and Compliance function, to ensure compliance with regulations. PHE ONWJ requires every Company officer to submit a State Official Wealth Report (LHKPN), implement gratification control, and apply a Whistleblowing System (WBS) that is integrated with PHE Subholding Upstream and PERTAMINA. All of these are reported periodically to the Corruption Eradication Commission (KPK), PHE Subholding Upstream, and PERTAMINA for follow-up. [3.3][11.20.1]



KEPATUHAN DAN PENCEGAHAN BENTURAN KEPENTINGAN [2-15][2-27]

Setiap tahun Direktur dan seluruh pekerja PHE ONWJ mengisi komitmen *Code of Conduct*, dan *Conflict of Interest*. Mereka bekerja berdasarkan pedoman-pedoman tata kelola yang berlaku di PHE Subholding Upstream maupun PT Pertamina (Persero), yakni:

1. Pedoman Tata Kelola Perusahaan;
2. Pedoman Perilaku dan Etika Bisnis;
3. Pedoman Konflik Kepentingan.

Secara umum tingkat kepatuhan Perusahaan maupun pejabat PHE ONWJ selama tahun 2022 terbilang tinggi. Tingkat kepatuhan penyampaian LHKPN tahun 2022 mencapai 100% dari total 120 pejabat PHE ONWJ. Secara berkala Perusahaan mewajibkan pekerja dan pejabat PHE ONWJ mengisi Formulir Bulanan Integritas, dan Laporan Gratifikasi. Realisasi tingkat pengisian Formulir Bulanan Integritas tahun 2022 mencapai 96% atau lebih tinggi dari target 90%, sementara untuk pengendalian gratifikasi tidak ada laporan gratifikasi baik dalam bentuk barang maupun uang.

COMPLIANCE AND PREVENTION OF CONFLICT OF INTEREST [2-15][2-27]

Every year, the Director and all of the employees of PHE ONWJ fill out the Code of Conduct and Conflict of Interest commitments. They work based on the applicable governance guidelines at PHE Subholding Upstream and PT Pertamina (Persero), namely:

1. Code of Corporate Governance;
2. Code of Business Conduct and Ethics;
3. Code of Conflict of Interest.

In general, the level of compliance of the Company and PHE ONWJ officers during 2022 is relatively high. The compliance level for LHKPN submissions in 2022 reached 100% of 120 officers of PHE ONWJ. Periodically the Company requires PHE ONWJ employees and officers to fill out Integrity Monthly Forms and Gratification Reports. The actual filling rate for the 2022 Integrity Monthly Form reached 96% or exceeded the target of 90%, while for gratification control there were no gratification reports, either in kind or in cash.

Rasio/Persentase Karyawan Dalam Mengisi Form Bulanan Integritas dan Laporan Gratifikasi

Ratio/Percentage of Employees in Filling Monthly Integrity and Gratification Reports

Tahun Year	Target Pelaporan Kepatuhan Compliance Reporting Target	Realisasi Pelaporan Kepatuhan Compliance Reporting Realization
2022	90%	96%
2021	88%	93,40%
2020	89%	84,00%

Keterangan: KPI Manajer Compliance SHU
Note: KPI of SHU Compliance Manager

PENYAMPAIAN PELAPORAN DAN HAL KRITIS [2-16]

PHE ONWJ memiliki Sistem Pelaporan Pelanggaran (WBS), yang dapat diakses pemangku kepentingan untuk melaporkan setiap dugaan pelanggaran EKB. Perusahaan menjamin kerahasiaan pelapor, dan melindungi pelapor dari setiap usaha pembalasan oleh pihak-pihak yang dilaporkan. Pengungkapan informasi terkait WBS disampaikan dalam Laporan Tahunan 2022 PT Pertamina (Persero), karena pengelolaan WBS diintegrasikan ke WBS PERTAMINA.

FILING COMPLAINTS AND CRITICAL MATTERS [2-16]

PHE ONWJ has a Whistleblowing System (WBS), which can be accessed by stakeholders to report any alleged CoC violations. The Company guarantees the confidentiality of the whistleblowers and protects them from any attempts at retaliation by those being reported. Information on WBS is disclosed in the 2022 Annual Report of PT Pertamina (Persero), because the management of WBS is integrated into PERTAMINA's WBS.



Perusahaan juga memiliki mekanisme lain yang dapat dimanfaatkan pemangku kepentingan untuk menyampaikan hal-hal bersifat kritis, yang berkaitan dengan penerapan keberlanjutan. Seluruh hal yang disampaikan pada tahun 2022 telah ditindaklanjuti PHE ONWJ.

The Company also has other mechanisms that can be used by stakeholders to submit critical matters regarding implementation of sustainability. All matters submitted in 2022 have been followed up by PHE ONWJ.

Mekanisme Penyampaian Hal Kritis oleh Pemangku Kepentingan [2-16]

Mechanism for Submission of Critical Matters by Stakeholders

Pemangku Kepentingan Stakeholders	Mekanisme Mechanism	Frekuensi Kegiatan Activity Frequency
Pemegang Saham Shareholders	RUPS GMS	Tahunan & kebutuhan sesuai Anggaran Dasar Annually & as needed according to the Articles of Association
Pemerintah/Regulator Government/Regulators	Rapat Kerja Work Meeting	Tahunan & sesuai kebutuhan Annually & as needed
Pekerja Employees	Town Hall Meeting	2 kali dalam setahun & sesuai kebutuhan Twice a year & as needed.
	Management Walk Through	6 kali dalam setahun & sesuai kebutuhan 6 times a year & as needed.
Kontraktor/Pemasok Contractor/Supplier	Vendor Day	2 kali dalam setahun Twice a year
Masyarakat Community	Forum Group Discussion bersama Masyarakat	Tahunan & sesuai kebutuhan Annually & as needed

DUKUNGAN PADA ANTIKORUPSI

Sejalan penerapan tata kelola keberlanjutan, PHE ONWJ telah melakukan tinjauan internal terhadap proses bisnis yang berpotensi menimbulkan benturan kepentingan termasuk penyusunan dan korupsi, di antaranya pengadaan dan jasa, serta pengembangan. Untuk meminimalkan potensi pelanggaran, PHE ONWJ menerapkan sistem pengadaan berbasis teknologi informasi (*e-procurement*), yang terintegrasi dengan *Central and Integrated Vendor Database* (CIVD) SKK Migas. Secara berkala PHE ONWJ melaksanakan sosialisasi dan pelatihan terkait penerapan *e-procurement* bagi vendor/mitra kerja, dengan realisasi tahun 2022 ada tiga kegiatan sosialisasi. [205-1][205-2][1.20.2]

ANTI-CORRUPTION SUPPORT

In line with the implementation of sustainable governance, PHE ONWJ has conducted an internal review of business processes, such as procurement of goods and services, as well as development, that have the potential to cause conflicts of interest including bribery and corruption. In a bid to minimize potential violations, PHE ONWJ implements an information technology-based procurement system (*e-procurement*), which is integrated with the *Central and Integrated Vendor Database* (CIVD) of SKK Migas. Periodically PHE ONWJ conducts dissemination and training on the implementation of *e-procurement* for vendors/work partners. [205-1][205-2][1.20.2]



Selain itu pada tahun 2022 PHE ONWJ melakukan kegiatan lain terkait sosialisasi antikorupsi: [205-2][11.20.3]

1. Sosialisasi kewajiban pelaporan e-lhkpn KPK
2. Sosialisasi kewajiban pelaporan lhkpn PHE
3. Sosialisasi kewajiban laporan gratifikasi setiap bulan

Selama periode pelaporan tidak ada kasus dugaan korupsi yang terjadi, sehingga tidak ada prosedur hukum yang dilakukan PHE ONWJ terkait sangkaan korupsi. Perusahaan juga tidak pernah mendapat sanksi denda maupun sanksi hukum lain dari pihak berwenang karena dugaan ketidakpatuhan, termasuk terhadap ketentuan hukum terkait aspek ekonomi dan sosial. [205-3] [206-1][11.20.4] [2-27]

In 2022 PHE ONWJ carried out other activities related to anti-corruption dissemination, as follows: [205-2][11.20.3]

1. Dissemination of KPK e-lhkpn reporting obligations
2. Dissemination of the obligation to report PHE LHKPN
3. Dissemination of the obligation to report gratification every month

During the reporting period there were no cases of alleged corruption, so there were no legal procedures carried out by PHE ONWJ regarding alleged corruption. The company has also never received fines or other legal sanctions from the authorities due to alleged non-compliance, including with legal provisions on economic and social aspects. [205-3] [206-1][11.20.4][2-27]

Kebijakan dan Penetapan Remunerasi Pejabat Tata Kelola

Policy and Determination of Remuneration for Governance Officers

Kebijakan dan proses penetapan remunerasi Direktur dan pejabat lainnya ditentukan oleh PHE Subholding Upstream dan PT Pertamina (Persero), melalui mekanisme dan prosedur yang berlaku di PERTAMINA. Laporan ini tidak menyertakan total dan rasio remunerasi tahunan yang dibayarkan kepada pejabat Perusahaan maupun pekerja, karena PHE ONWJ bukan perusahaan terbuka. [2-19][2-20] [2-21]

The policy and process to determine remuneration for the Director and other officers are established by PHE Subholding Upstream and PT Pertamina (Persero), through the mechanisms and procedures that apply at PERTAMINA. This report does not include the total and annual remuneration ratio paid to Company officers and employees, because PHE ONWJ is not a public company. [2-19][2-20][2-21]

Pengembangan Kompetensi dan Penilaian Kinerja Keberlanjutan

Competency Development and Sustainability Performance Assessment

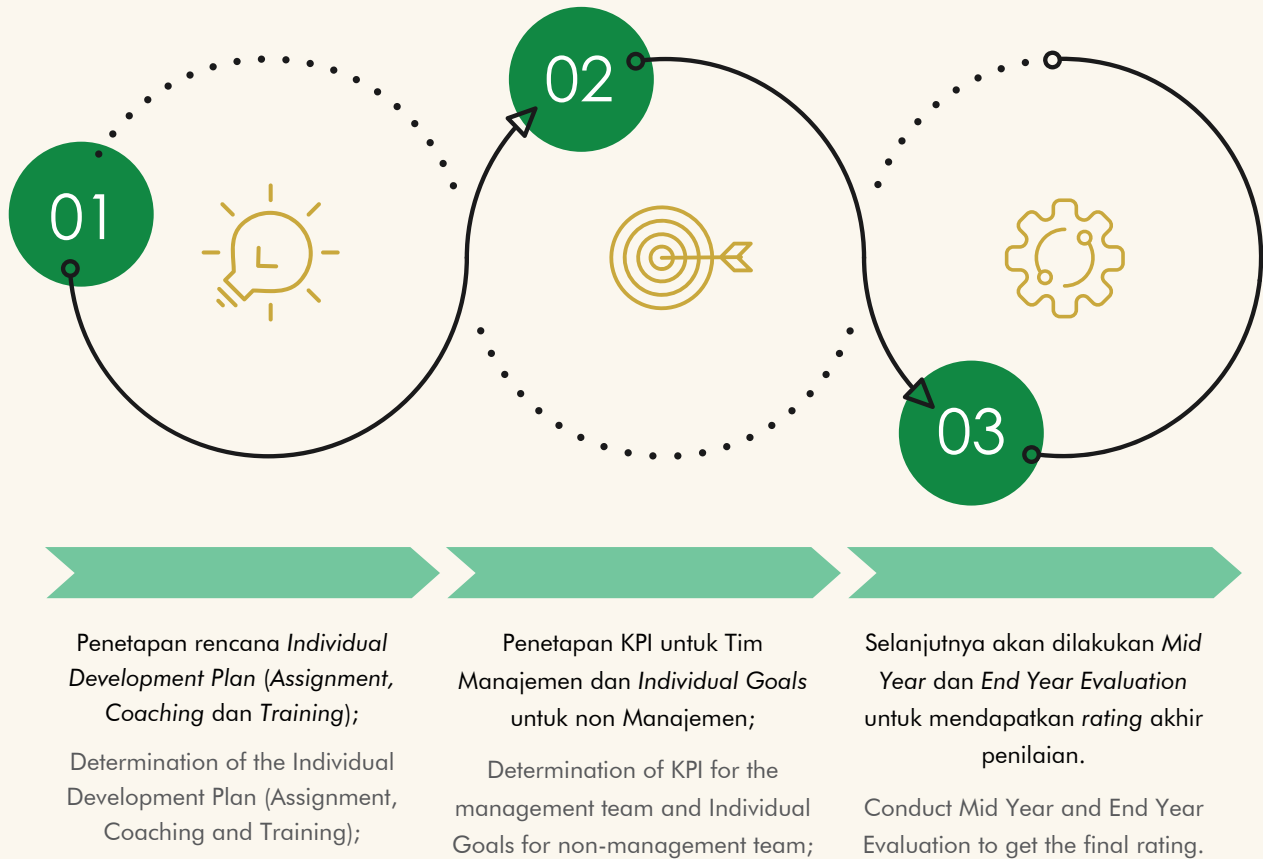
Selama tahun 2022 Perusahaan menyertakan Direktur dan pejabat lain PHE ONWJ pada kegiatan untuk meningkatkan kompetensi dan pemahaman pada tata kelola keberlanjutan, serta mendukung bisnis berkelanjutan. [E.2][2-17]

During 2022, the Company included the Director and other PHE ONWJ officers in competence development and understanding of sustainable governance, as well as support sustainable business. [E.2][2-17]



Sistem Penilaian Pekerja menggunakan Aplikasi People Review, dengan alur sebagai berikut:

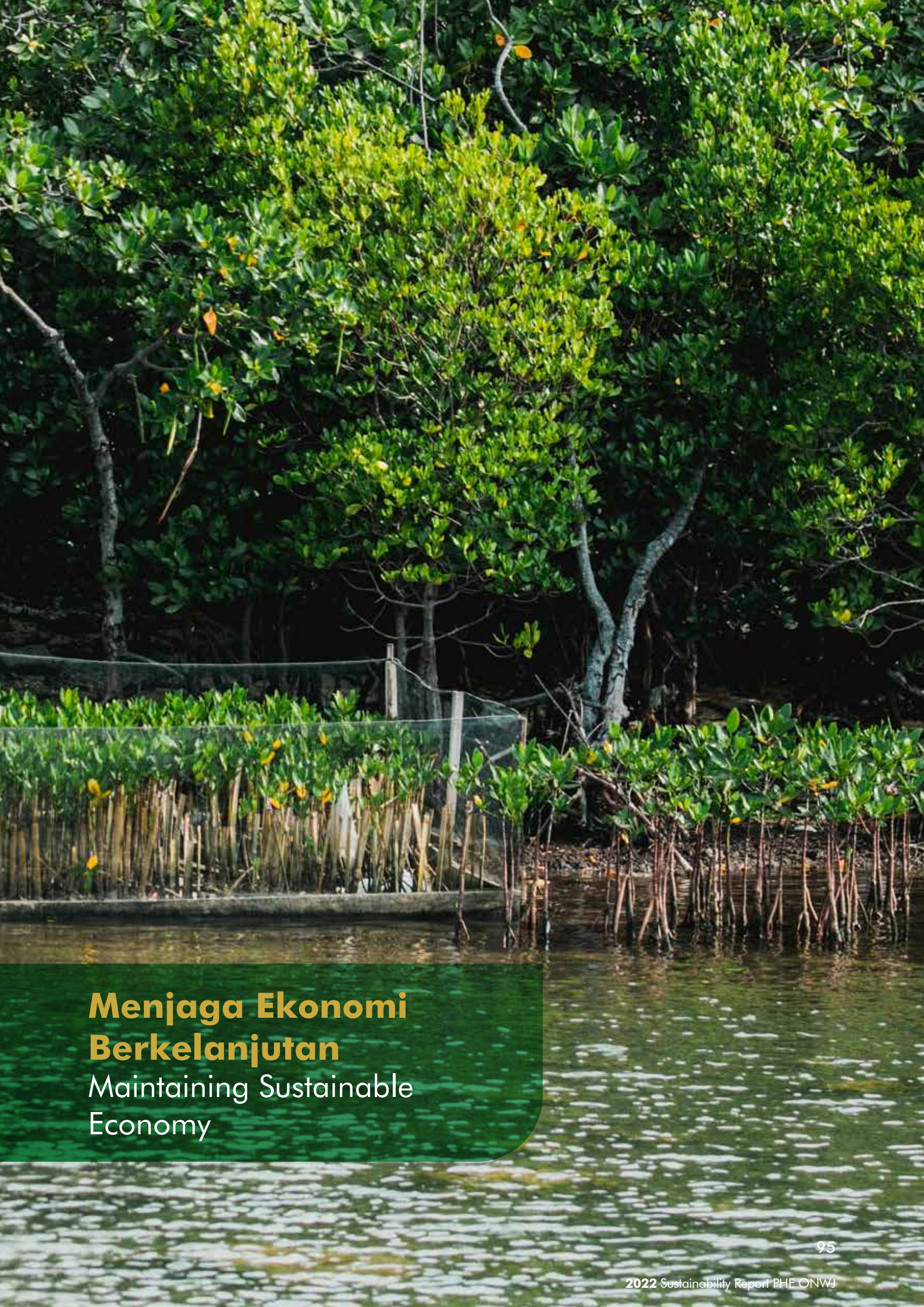
The Employee Assessment System uses the People Review Application, with the following flow:



Penilaian kinerja keberlanjutan Direktur, dan pejabat lain PHE ONWJ dilakukan berdasarkan pencapaian target indikator kinerja kunci (KPI) dan dievaluasi per triwulan secara internal. Dari penilaian kinerja selama periode pelaporan, diketahui masing-masing pejabat tata kelola mampu merealisasikan target-target KPI, termasuk dalam penerapan tata kelola perusahaan, serta pengelolaan dampak ekonomi, lingkungan dan sosial. Dari hasil penilaian tahun 2022 diketahui, pencapaian KPI telah memenuhi target yang ditetapkan. [2-18]

The sustainability performance of the Director's and other officers PHE ONWJ's is assessed based on the achievement of key performance indicator (KPI) targets and is evaluated quarterly internally. The performance assessment results during the reporting period showed that each governance officer managed to realize KPI targets, including in the implementation of corporate governance, as well as managing economic, environmental, and social impacts. The results of the 2022 assessment showed that the achievement of KPIs has met the targets. [2-18]





**Menjaga Ekonomi
Berkelanjutan**
Maintaining Sustainable
Economy

Target dan Realisasi Kinerja

Performance Targets and Realization

Kegiatan operasional di Lapangan KLD telah memberikan dampak positif kepada Perusahaan, sehingga dapat meningkatkan kontribusi produksi migas kepada PHE Subholding Upstream. Hal ini diwujudkan dengan realisasi produksi migas PHE ONWJ di tahun 2022 mencapai 41,31 MBOEPD, atau 4,05% dari total produksi migas PHE Subholding Upstream sebesar 1.018,68 MBOPED, dan turun 3,27% dari tahun 2021 yang mencapai 42,71 MBOEPD.

Hingga akhir periode pelaporan, Perusahaan juga mampu meningkatkan bahan baku produksi migas yaitu hidrokarbon. Perusahaan mampu meningkatkan cadangan hidrokarbon menjadi 163,8 MMB dan 426,9 BCF selama tahun 2022. Perusahaan akan terus melakukan kegiatan survei untuk mendapatkan cadangan hidrokarbon baru berupa cadangan 2P/2C. Hal ini dilakukan untuk menjaga kesinambungan produksi migas. Lebih lanjut, dalam kegiatan produksi Perusahaan tidak menggunakan kemasan produk dikarenakan langsung didistribusikan kepada konsumen melalui tanker. [301-1]

Pada dasarnya tidak terdapat material input daur ulang yang digunakan oleh Perusahaan untuk proses produksi. Namun demikian, PHE ONWJ menggunakan bahan kimia pembantu untuk pemisahan fluida menjadi minyak mentah dan gas bumi. Selama tahun 2022, jumlah bahan kimia pembantu yang digunakan mencapai 373.085 galon, turun 143.705 galon, atau 38,5% dari tahun 2021 sebesar 516.790 galon. Tidak terdapat pengungkapan informasi mengenai penarikan produk dan kemasannya, mengingat kekhususan produk migas dalam penyaluran kepada pelanggan. [301-2][301-3]

Selama tahun 2022, realisasi produksi minyak berhasil mencapai 27,59 MBOPD, atau 102% dari RKAP sebesar 27,00 MBOPD, dan mengalami kenaikan 1,69% dari tahun 2021 sebesar 27,14 MBOPD. Realisasi produksi gas tahun 2022 mencapai 79,49 MMSCFD, atau 103% dari RKAP sebesar 77,10 MMSCFD, dan mengalami penurunan 11,97% dari tahun 2021 sebesar 90,31 MMSCFD.

Operating activities in the KLD Field have had a positive impact on the Company, which can increase the contribution of oil and gas production to PHE Subholding Upstream. The realization oil and gas production of PHE ONWJ in 2022 reached 41.31 MBOEPD, or 4.05% of total oil and gas production of PHE Subholding Upstream of 1,018.68 MBOPED, which decreased by 3.27% from 42.71 MBOEPD in 2021.

Until the end of the reporting period, the Company managed to increase hydrocarbon reserves as the raw materials for oil and gas production. The Company was able to increase its hydrocarbon reserves to 163.8 MMB and 426.9 BCF during 2022. The Company will continue to conduct survey activities to acquire new hydrocarbon reserves in the form of 2P/2C reserves. It aims to maintain the continuity of oil and gas production. In production activities, the Company does not use product packaging because it is directly distributed to consumers by tankers. [301-1]

There are no recycled input materials used by the Company for the production process. However, PHE ONWJ uses auxiliary chemicals for the separation of fluids into crude oil and natural gas. During 2022, total auxiliary chemicals used reached 373,085 gallons, which decreased by 143,705 gallons, or 38.5% from 516,790 gallons in 2021. There is no disclosure of information regarding product recalls and packaging, given the specificity of oil and gas products in distribution to customers. [301-2][301-3]

During 2022, the realization of oil production managed to reach 27.59 MBOPD, or 102% of the WP&B of 27.00 MBOPD and increased by 1.69% from 27.14 MBOPD in 2021. Realization of gas production in 2022 reached 79.49 MMSCFD, or 103% of the WP&B of 77.10 MMSCFD and decreased by 11.97% from 90.31 MMSCFD in 2021.



Perbandingan Realisasi dan Target Produksi Tahun 2022 ^[F.2]

Comparison of Production Realization and Target in 2022

Produk Product	Satuan Unit	Realisasi Realization	Target RKAP Target RKAP	%
Minyak Oil	MBOPD	27,59	27,00	102
Gas Bumi Natural Gas	MMSCFD	79,49	77,10	103

Tingkat Produksi Migas PHE ONWJ

Oil and Gas Production Level of PHE ONWJ

Produk Product	Satuan Unit	2022	2021	2020	%
		1	2	3	1:2
Minyak Oil	MBOPD	27,59	27,14	28,82	102
Gas Bumi Natural Gas	MMSCFD	79,49	90,31	89,40	88

Perusahaan berhasil merealisasikan Anggaran Biaya Operasional (ABO) mencapai USD266,7 juta, atau 104% dari total anggaran ABO sebesar USD256,6 juta, dan naik 3,94% dari tahun 2021 sebesar USD214,2 juta. Adapun realisasi Anggaran Biaya Investasi (ABI) mencapai USD193,1 juta, atau 80% dari total anggaran ABI sebesar USD242,8 juta, dan turun 20,47% dari tahun 2021 sebesar USD104,2 juta.

The Company succeeded in realizing the Operating Cost Budget (ABO) of USD265.25 million, or 136% of the total ABO budget of USD195.08 million, and down for 8.93% from USD214.2 million in 2021. The realization of the Investment Cost Budget (ABI) reached USD195.15 million, or 116% of the total ABI budget of USD168.14 million, which was increase by 61.36% from USD104.2 million in 2021.

Perbandingan Realisasi dan Anggaran ABO dan ABI Tahun 2022 ^[F.2]

ABO and ABI Realization vs Budget 2022

Uraian Description	Realisasi Realization	Anggaran Budget	%
Anggaran Biaya Operasional (ABO) Operating Cost Budget (ABO)	265,25	195,08	136%
Anggaran Biaya Investasi (ABI) Investment Cost Budget (ABI)	195,15	168,14	116%

Keterangan: Dalam Juta USD

Note: in million USD

Anggaran Biaya Operasional dan Investasi PHE ONWJ ^[F.2]

PHE ONWJ Operating and Investment Cost Budget

Uraian Description	2022	2021	2020	%
	1	2	3	1:2
Anggaran Biaya Operasional (ABO) Operating Cost Budget (ABO)	195,07	225,6	285,8	-14%
Anggaran Biaya Investasi (ABI) Investment Cost Budget (ABI)	168,14	113,9	118,5	48%
Jumlah Total	363,22	339,5	404,3	7%

Keterangan: Dalam Juta USD

Note: in million USD



Pada dasarnya, seluruh realisasi ABO dan ABI dipengaruhi oleh beberapa kegiatan, di antaranya yaitu:

1. Dilakukan optimalisasi pada anggaran ABO, dengan melihat pembatasan aktivitas terkait pandemi COVID-19 serta dilakukan negosiasi harga kontrak yang lebih rendah dari rencana.
2. Melakukan *alignment* antar aktivitas, sehingga lebih efisien dan optimal.
3. Dilakukan optimalisasi penggunaan sewa gudang dan sewa gedung.
4. Aktivitas anggaran ABI yaitu 7 sumur infill completed, 4 sumur KUPL, 7 sumur ESP CO, KLD Field Development, EPCI YY OPL Fiel ReDev, PRRP E-Main Waterflood Repair, dan Pipeline Terminal FSO Arco Ardjuna Fase 1, serta fasilitas produksi lainnya yang mendukung peningkatan produksi.
5. Dilakukan optimalisasi *alignment* eksekusi aktivitas produksi.
6. Melakukan pemanfaatan material excess pada modifikasi sumur.
7. Aktivitas anggaran ABO merupakan kegiatan rutin yang mendukung produksi dan operasional di lapangan, penggunaan 2 *liftboat* dan 2 unit *wireline full year* yang menyelesaikan 212 pekerjaan *wellworks*, *employee benefit*, PBB, Insurance dan aktivitas pendukung lainnya.

Essentially, the entire realization of ABO and ABI is influenced by several activities, including:

1. Optimizing ABO, taking into account activity restrictions due to the COVID-19 pandemic, and negotiating for lower contract prices than planned.
2. Aligning activities to be more efficient and optimized.
3. Optimizing the use of warehouse and building leases.
4. ABI activities included 7 completed infill wells, 4 workover wells, 7 ESP CO wells, KLD Field Development, EPCI YY OPL Fiel ReDev, PRRP E-Main Waterflood Repair, and Pipeline Terminal FSO Arco Ardjuna Phase 1, as well as other production facilities which support increased production.
5. Optimizing the alignment of production activity execution.
6. Making use of excess material in well modifications.
7. ABO activities were routine activities that support production and operations in the field, the use of 2 liftboats and 2 units of wireline full year which completed 212 wellworks, employee benefits, PBB, insurance, and other supporting activities.

Untuk terus meningkatkan produksi migas, Perusahaan melakukan berbagai upaya inovasi berkelanjutan yang dilakukan selama tahun 2022, antara lain:

- Sistem PINTAR untuk membantu memonitor dan melakukan optimasi *gas lift* pada sumur-sumur produksi.
- *Scale Squeeze inhibitor*, sebagai teknologi untuk menanggulangi permasalahan *scale up* pada sumur-sumur produksi dan telah terbukti berhasil mengurangi pembentukan *scale* di dalam sumur pada area Foxtrot (sumur-sumur FFB).
- *Sand Consolidation by Polymer Injection*, sebagai teknologi untuk menanggulangi permasalahan *sand* (kepasiran) pada sumur-sumur produksi. Pada tahun 2022 diaplikasikan pada sumur FWB-3, EF-6, LLE-8, LLD-19, dan LD-3ST.
- *Hydraulic Fracturing*, sebagai upaya untuk meningkatkan laju alir produksi awal pada sumur-sumur pengembangan baru. Pada tahun 2022 diaplikasikan pada sumur EJ-12, BA-6ST, BA-9, BK-9, LLE-9, LLD-19, UA-10, dan ULA-3.

To continue increasing oil and gas production, the Company carried out various innovation efforts in 2022, including:

- PINTAR system to help monitor and optimize gas lift in production wells.
- Scale Squeeze inhibitor, as a technology to overcome the scale up problems in production wells, which has been proven successful in reducing scale formation in wells in the Foxtrot area (FFB wells).
- Sand Consolidation by Polymer Injection, as a technology to overcome sand problems in production wells. In 2022 it was applied to the FWB-3, EF-6, LLE-8, LLD-19, and LD-3ST wells.
- Hydraulic Fracturing, as an effort to increase the initial production flow rate in new development wells. In 2022, it was applied to the EJ-12, BA-6ST, BA-9, BK-9, LLE-9, LLD-19, UA-10, and ULA-3 wells.



Nilai Ekonomi yang Dihasilkan dan Didistribusikan

Economic Value Generated and Distributed

Tujuan utama PHE ONWJ dalam pengelolaan kinerja ekonomi agar dapat memberikan nilai tambah bagi seluruh pemangku kepentingan. Perusahaan meyakini adanya dampak ekonomi yang positif dapat berkontribusi pada tujuan pembangunan berkelanjutan Perusahaan. Maka dari itu, seluruh kegiatan produksi migas Perusahaan akan berpengaruh pada perolehan Nilai Ekonomi yang Dihasilkan dan Nilai Ekonomi yang Didistribusikan kepada pemangku kepentingan. Perusahaan terus berupaya untuk menjaga produksi migas dengan cara mengoptimalkan produksi pada lapangan matang, disertai pengembangan lapangan baru, serta efisiensi operasi. Kinerja produksi migas menjadi tanggung jawab seluruh Divisi, dan dievaluasi berdasarkan pencapaian KPI dan target produksi, serta laporan kepada SKK Migas maupun Kementerian ESDM. [3-3]

Hingga akhir periode pelaporan, Perusahaan berhasil mendapatkan Nilai Ekonomi Dihasilkan mencapai USD787 juta, atau 134% dari target RKAP sebesar USD586 juta, dan naik 16,15% dari tahun 2021 sebesar USD677 juta. Adanya kenaikan ini disebabkan oleh peningkatan harga rata-rata minyak sebesar USD98,05/barel, lebih tinggi dibandingkan tahun 2021 sebesar USD67,97/barel. [201-1][11.21.2]

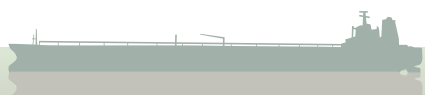
The main goal of PHE ONWJ in managing economic performance is to provide added value for all stakeholders. The Company believes that a positive economic impact can contribute to the Company's sustainable development goals. Therefore, all of the Company's oil and gas production activities will affect the Economic Value Generated and Distributed to stakeholders. The Company continuously endeavors to maintain oil and gas production by optimizing production in mature fields, the development of new fields, as well as operational efficiency. All divisions are responsible for oil and gas production performance, which are evaluated based on achievement of KPIs and production targets, as well as reports to SKK Migas and the Ministry of Energy and Mineral Resources. [3-3]

Until the end of the reporting period, the Company managed to record Economic Value Generated at USD 787 million, or 134% of the WP&B target of USD586 million, and up 16.15% from USD677 million in 2021. This increase was due to an increase in the average oil price of USD 98.05/barrel, an increase from USD 67.97/barrel in 2021. [201-1][11.21.2]

Nilai Ekonomi Dihasilkan dan Didistribusikan [201-1]

Economic Value Generated and Distributed

No	Uraian Description	2022	2021	2020
Nilai Ekonomi Dihasilkan Economic Value Generated				
1	Pendapatan usaha Operating revenues	787.158	677.678	484.247
	Pendapatan Komprehensif Lain Other Comprehensive revenues	(9)	44	13
	Jumlah Nilai Ekonomi Dihasilkan Total Economic Value Generated	787.149	677.722	484.260
Nilai Ekonomi Didistribusikan Economic Value Distributed				
2	Beban Pokok Penjualan Cost of Goods Sold			
	Beban Produksi Production Expenses	185.749	142.867	124.959
	Beban Penyusutan, Deposito dan Amortisasi Depreciation, Deposits, and Amortization Expenses	185.767	220.058	182.557
	Beban Eksplorasi Exploration Expenses	11.357	1.861	12.954
	Beban Pekerja Employee Expenses	31.741	36.474	38.403



No	Uraian Description	2022	2021	2020
3	Jumlah Pembayaran Kepada Penyandang Dana Total Payments to Provider of Funds			
	Pengeluaran Untuk Pemerintah (Pajak Penghasilan Badan dan Dividen) Expenditures for the Government (Corporate Income Tax and Dividends)	88.400	90.421	38.842
4	Pengeluaran Kepada Masyarakat (Realisasi Dana CSR) Expenditures to the Community (CSR Fund Realization)	293.618	266.702	363.319
5	Jumlah Nilai Ekonomi yang Didistribusikan Total Economic Value Distributed	796.632	758.383	761.034
Nilai Ekonomi yang Ditahan Economic Value Retained				
6	Jumlah Nilai Ekonomi yang Ditahan Total Economic Value Retained	(9.483)	(80.661)	(276.774)

Keterangan: Dalam Ribuan USD dan kurs 15.592/dollar
Note: In Thousands of USD and the exchange rate is 15,592/dollar

Produksi migas yang dihasilkan oleh Perusahaan dijual kepada pelanggan di dalam negeri melalui mekanisme perjanjian jual beli. Hingga akhir periode pelaporan, Perusahaan tidak menerima bantuan finansial dari Pemerintah dan belum melakukan kajian terkait pengaruh perubahan iklim terhadap kinerja finansial. Kedepan, Perusahaan akan melakukan observasi terkait risiko dan peluang akibat perubahan iklim. [201-2] [201-4] [11.21.3]

Oil and gas production produced by the Company is sold to domestic customers through a sale and purchase agreement mechanism. Until the end of the reporting period, the Company has not received financial assistance from the Government and has not conducted studies related to the effects of climate change on financial performance. Going forward, the Company will observe risks and opportunities due to climate change. [201-2] [201-4] [11.21.3]

Perusahaan juga memperhatikan pekerja dengan memberikan Jaminan Hari Tua dan Jaminan Pensiun. Seluruh pekerja PHE ONWJ berstatus sebagai pekerja PHE yang diperbantukan di PHE ONWJ (atau secondee PHE Subholding Upstream). Jaminan hari tua dan jaminan pensiun merupakan dana pensiun yang telah direncanakan sejak pekerja diterima bekerja. Seluruh pekerja tetap diikutsertakan dalam program Pensiun yang dikelola oleh BPJS Ketenagakerjaan. Kontribusi Perusahaan berupa iuran bulanan sebanyak 6% untuk jaminan hari tua dan sebesar 2% untuk jaminan pensiun dari jumlah remunerasi pekerja. Kewajiban pembayaran imbalan manfaat pesangon/manfaat penghargaan atas pengabdian, sepenuhnya dilakukan PHE Subholding Upstream. Program pensiun yang berlaku, liabilitas imbalan kerja atas pekerja dihitung berdasarkan persyaratan minimum UU No.13/2003. Liabilitas imbalan kerja karyawan pada 31 Desember 2022 yang diakui dalam laporan posisi keuangan ditentukan melalui perhitungan aktuarial independen. Pada tahun 2022 terdapat 11 pekerja yang pensiun karena telah berusia 56 tahun. [201-3][401-2]

The company also pays attention to employees by providing Old Age Security and Pension Security. All PHE ONWJ employees are PHE Subholding Upstream secondees. Old-age security and pension security are pension funds that have been planned since the employee is hired. All permanent employees are included in the pension plan managed by BPJS Ketenagakerjaan. The Company pays for monthly contributions of 6% for old age security and 2% for pension security from the total employee remuneration. The obligation to pay severance benefits/long service benefits for dedication is fully carried out by PHE Subholding Upstream. In the pension plan, the employee benefit liability is calculated based on the minimum requirements of Law No.13/2003. Employee benefit liabilities as of December 31, 2022, recognized in the statement of financial position are determined through independent actuarial calculations. In 2022 there were 11 employees who retired at the age of 56 years old. [201-3][401-2]



Manfaat Ekonomi Fiskal

Fiscal Economic Benefits

PHE ONWJ menjadi Kontraktor Kontrak Kerja Sama (KKKS) migas pertama di Indonesia yang menerapkan *production sharing contract* (PSC) dengan mekanisme *gross split*. Tanggung jawab terkait pemenuhan pembayaran kepada Pemerintah adalah General Manager yang dibantu Fungsi Tax SHU. Perusahaan melibatkan Fungsi Tax SHU dalam mengevaluasi kepatuhan dan memitigasi potensi risiko perpajakan, serta pengembangan sistem untuk memantau maupun mengantisipasi setiap risiko perpajakan di masa mendatang. Berdasarkan evaluasi yang dilakukan, PHE ONWJ memastikan Perusahaan dan pekerja telah mematuhi seluruh aspek perpajakan termasuk memenuhi kewajiban perpajakan. Hingga akhir periode pelaporan, Perusahaan telah memenuhi kewajiban pembayaran kepada Pemerintah sebesar USD88,40 juta. [207-1] [207-2] [207-4] [11.21.4] [11.21.5] [11.21.7]

Perusahaan berkomitmen untuk memenuhi pembayaran kepada Pemerintah dengan melibatkan beberapa pihak berwenang, di antaranya SKK Migas sebagai otoritas berwenang dalam penyelenggaraan pengelolaan kegiatan usaha hulu minyak dan gas bumi di Indonesia, Kementerian ESDM melalui Direktorat Jenderal Migas, dan Kementerian Keuangan melalui Direktur Jenderal Perpajakan. Pelibatan yang dilakukan oleh Perusahaan meliputi konsultasi dan partisipasi, termasuk pelaksanaan audit; serta penyampaian informasi/laporan secara berkala. [2-26][207-3] [11.21.6]

PHE ONWJ is the first oil and gas Cooperation Contract Contractor (KKKS) in Indonesia to use a production sharing contract (PSC) with a gross split scheme. The General Manager is responsible for making payments to the Government, assisted by the SHU Tax Function. The Company involves the SHU Tax Function in evaluating compliance and mitigating potential tax risks, as well as developing a system to monitor and anticipate any future tax risks. The evaluation results showed that PHE ONWJ and its employees have complied with all aspects of taxation, including fulfilling tax obligations. Until the end of the reporting period, the Company has fulfilled its payment obligations to the Government amounting to USD88.40 million. [207-1] [207-2] [207-4] [11.21.4] [11.21.5] [11.21.7]

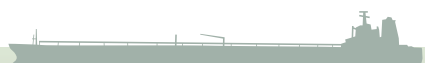
The Company is committed to fulfilling payments to the Government by involving several authorities, including SKK Migas as the authority in managing upstream oil and gas business activities in Indonesia, the Ministry of Energy and Mineral Resources through the Directorate General of Oil and Gas, and the Ministry of Finance through the Director General of Taxation. The Company involves the authorities for consultation and participation, including conducting audits; as well as submission of information/reports periodically. [2-26][207-3] [11.21.6]

Pemasok PHE ONWJ

PHE ONWJ Suppliers

Perusahaan terus berupaya untuk memaksimalkan proporsi pasokan produk dan jasa. Oleh karena itu, Perusahaan secara hati-hati mengembangkan sistem rantai pasok yang memungkinkan untuk menentukan dari mana produk dan jasa bersumber serta persyaratan pengirimannya. Perusahaan memberikan dukungannya kepada perekonomian Indonesia dengan membeli barang dan jasa dengan harga khusus di tingkat lokal dan nasional.

The Company continues to maximize the proportion of supply of products and services. Therefore, the Company carefully develops a supply chain system that makes it possible to determine where products and services are sourced as well as the terms of delivery. The Company supports the Indonesian economy by buying goods and services at special prices at the local and national levels.



Hingga akhir periode pelaporan, Perusahaan telah melibatkan 106 pemasok (penyedia barang dan jasa), dengan total nilai pengadaan mencapai USD405,50 juta. Sebanyak 96 pemasok, atau 90,57% merupakan pemasok lokal yakni badan usaha yang berlokasi di wilayah kerja Perusahaan, dengan total nilai pengadaan sebesar USD396,05 juta atau 97,67% dari total nilai pengadaan. [204-1]

Until the end of the reporting period, the Company has engaged 106 suppliers of goods and services, with a total procurement value of USD 405.50 million. A total of 96 suppliers, or 90.57%, were local suppliers, namely business entities located in the Company's working area, with a total procurement value of USD396.05 million or 97.67% of the total procurement value. [204-1]

Uraian Description	2022		2021		2020	
	Jumlah Pemasok Total Suppliers	Jumlah Pengadaan (USD Juta) Total Procurement (USD million)	Jumlah Pemasok Total Suppliers	Jumlah Pengadaan (USD Juta) Total Procurement (USD million)	Jumlah Pemasok Total Suppliers	Jumlah Pengadaan (USD Juta) Total Procurement (USD million)
Pemasok Lokal Local Supplier	96	396,05	204	193,70	122	135,60
Pemasok Nasional National Supplier	10	9,45	25	96,61	12	40,01
Jumlah Total	106	405,50	229	290,31	134	175,61

Perusahaan terus melakukan evaluasi terhadap kinerja pemasok terkait aspek sosial dan aspek lingkungan dengan penekanan pada keselamatan kerja serta keselamatan proses secara berkala. Evaluasi dilakukan dengan menerapkan *Contractor Safety Management System (CSMS)*. Selama periode pelaporan, kontraktor telah melaksanakan pekerjaan dengan baik sesuai kontrak kerja yang disepakati. Tidak ada dampak negatif yang ditimbulkan dari pekerjaan yang dilaksanakan oleh kontraktor, baik terhadap pekerja, masyarakat, maupun lingkungan. [308-1][308-2][414-1][414-2]

The Company regularly evaluates suppliers' performance on social and environmental aspects with an emphasis on occupational safety and process safety. Evaluation is carried out by implementing the Contractor Safety Management System (CSMS). During the reporting period, the contractors have carried out their work properly according to the agreed work contract. There were no negative impacts arising from the work carried out by the contractor, both on employees, the community and the environment. [308-1][308-2][414-1][414-2]

Hasil Evaluasi CSMS Terhadap Kinerja Pemasok/Vendor Tahun 2022

Results of CSMS Evaluation on Supplier/Vendor Performance in 2022

Uraian Description	Pemasok Vendor
Kontrak Risiko Tinggi High Risk Contracts	103
Kontrak Risiko Sedang Medium Risk Contract	1
Kontrak Risiko Rendah Low Risk Contracts	4
Kontrak Swakelola Self-managed Contract	6
Jumlah Total	114

Keterangan | Note:

Hasil kepatuhan terhadap siklus CSMS sebesar 100% (kontrak risiko tinggi).
CSMS cycle compliance result of 100% (high-risk contracts).



PELIBATAN PEMASOK DAN WARGA LOKAL [SOC-14.C1][SOC-15.C1] [11.14.6]

PHE ONWJ melibatkan kontraktor/pemasok lokal dalam rantai pasok, yakni perusahaan yang berkedudukan di Jakarta dan wilayah sekitar operasi. Pada tahun 2022 kontraktor/pemasok lokal berjumlah 96, atau 90,57% dari total kontraktor/pemasok. Adapun nilai kontrak pekerjaan/pengadaan mencapai USD245,85 juta, atau 60,63% dari total nilai kontrak pekerjaan/pengadaan.

Pelibatan kontraktor/pemasok lokal juga berdampak positif dengan membuka lebih banyak lapangan kerja untuk warga lokal. Hal ini sejalan dengan kebijakan PHE ONWJ untuk mendorong kontraktor/pemasok lokal untuk mengutamakan warga lokal sebagai pekerja mereka. Kebijakan ini menjadi alternatif solusi atas kendala keterbatasan kompetensi untuk bekerja di PHE ONWJ.

EVALUASI PEMASOK BARU SESUAI KRITERIA LINGKUNGAN [308-1]

Pada tahun 2022 ada 16 pemasok baru PHE ONWJ. Perusahaan melakukan evaluasi kepada pemasok baru dengan menerapkan kriteria lingkungan, yakni:

- Tidak terjadinya pencemaran di lingkungan kerja PHE ONWJ.
- Tidak terjadinya kecelakaan kerja yang berhubungan dengan operasi atau pemaparan zat berbahaya tertentu di lingkungan kerja PHE ONWJ.
- Mempunyai hasil penilaian risiko bahaya terhadap lingkungan seperti ceceran / tumpahan bahan kimia, emisi udara, pembuangan limbah yang berkaitan dengan ruang lingkup pekerjaan.

Tidak ada kegiatan rantai pasok selama tahun 2022 yang berdampak signifikan terhadap lingkungan. Seluruh kegiatan yang dijalankan rantai pasok harus tetap memperhatikan standar pengelolaan lingkungan yang diberlakukan PHE ONWJ. [308-2]

SUPPLIER AND LOCAL COMMUNITY ENGAGEMENT [SOC-14.C1][SOC-15.C1] [11.14.6]

PHE ONWJ involves local contractors/suppliers in the supply chain, which are defined as companies domiciled in Jakarta and the surrounding areas of operations. In 2022, there were 96 local contractors/suppliers, or 90.57% of the total contractors/suppliers. The value of the work/procurement contracts reached USD245.85 million, or 60.63% of the total value of the work/procurement contracts.

The involvement of local contractors/suppliers also has a positive impact by creating more jobs for local residents. It aligns with PHE ONWJ's policy to encourage local contractors/suppliers to prioritize local residents as their workers. This policy is an alternative solution to the competency limitations to work at PHE ONWJ.

EVALUATION OF NEW SUPPLIERS ACCORDING TO ENVIRONMENTAL CRITERIA [308-1]

In 2022 there were 16 new suppliers of PHE ONWJ. The Company evaluates new suppliers by applying environmental criteria, namely:

- No pollution in the work environment of PHE ONWJ.
- No work accidents related to operations or exposure to particular hazardous substances in the work environment of PHE ONWJ.
- Have the results of risk assessment of hazards to the environment such as chemical drips/ spills, air emissions, waste disposal related to the scope of work.

No supply chain activities during 2022 that had a significant impact on the environment. All activities carried out by the supply chain must still pay attention to the environmental management standards applied by PHE ONWJ. [308-2]





Lampiran

Appendix

Lampiran 1

Hasil Pemantauan Kualitas Air Laut Di Wilayah Kerja PHE ONWJ Berdasarkan Konsentrasi Minyak dan Lemak.

Perairan Wilayah Pantau Monitoring Area Waters	Baku Mutu Quality Standard (mg/L)*	2022		2021		2020	
		S1	S2	S1	S2	S1	S2
Central Pant F/S	1	<1	<1	<1	<1	0,55	<1
Arco Ardjuna F/S	1	<1	<1	<1	<1	0,60	<1
Mike-Mike F/S	1	<1	<1	<1	<1	N/A	0,50
Papa F/S	1	<1	<1	N/A	<1	0,70	N/A
Foxtrot F/S	1	<1	<1	N/A	<1	0,60	N/A
ZULU F/S	1	<1	<1	N/A	<1	0,55	<1
Tanjung Sedari – Karawang	1	<1	<1	N/A	<1	0,50	0,60
Eretan – Indramayu	1	<1	<1	N/A	<1	0,80	0,50
Blanakan – Subang	1	<1	<1	N/A	<1	0,80	0,50
OPF Balongan	1	<1	<1	<1	<1	0,60	0,55

Appendix 1

Results of Seawater Quality Monitoring in the PHE ONWJ Working Area Based on Oil and Fat Concentrations.

Lampiran 2

Daftar spesies satwaliar (avifauna) di wilayah program konservasi PHE ONWJ

Appendix 2

List of wildlife species (avifauna) in the PHE ONWJ conservation program area

No.	Nama Jenis Species Name	Nama Ilmiah Scientific Name	Status Konservasi Conservation Status				
			CITES	IUCN	PP 7 Th. 1999 Government Regulation of 1999	PerMen LHK P.92 Th. 2018 Minister of Environment and Forestry Regulation P.92 of 2018	PerMen LHK P.106 Th. 2018 Minister of Environment and Forestry Regulation P.106 of 2018
1	Bambangan Merah	<i>Ixobrychus cinnanomeus</i>		LC			
2	Bangau Bluwok	<i>Mycteria cinerea</i>	App.I	EN	Ya Yes	Ya Yes	Ya Yes
3	Belibis Batu	<i>Dendrocygna javanica</i>		LC			
4	Blekok Sawah	<i>Ardeola speciosa</i>		LC			
5	Bondol Haji	<i>Lonchura maja</i>		LC			
6	Bondol Jawa	<i>Lonchura leucogastroides</i>		LC			
7	Bondol Oto Hitam	<i>Lonchura ferruginosa</i>		LC			
8	Bondol Peking	<i>Lonchura punctulata</i>		LC			
9	Bondol Rawa	<i>Lonchura malacca</i>		LC			
10	Burung Gereja Erasia	<i>Passer montanus</i>		LC			
11	Burung Madu Kelapa	<i>Anthreptes malacensis</i>		LC	Ya Yes		



No.	Nama Jenis Species Name	Nama Ilmiah Scientific Name	Status Konservasi Conservation Status				
			CITES	IUCN	PP 7 Th. 1999 Government Regulation of 1999	PerMen LHK P.92 Th. 2018 Minister of Environment and Forestry Regulation P.92 of 2018	PerMen LHK P.106 Th. 2018 Minister of Environment and Forestry Regulation P.106 of 2018
12	Burung-Madu Sriganti	<i>Cinnyris jugularis</i>		LC	Ya Yes		
13	Cabai Jawa	<i>Dicaeum trochileum</i>		LC			
14	Cabak Kota	<i>Caprimulgus affinis</i>		LC			
15	Cabak Maling	<i>Caprimulgus macrurus</i>		LC			
16	Caladi Tilik	<i>Picoides moluccensis</i>		LC			
17	Caladi Ulam	<i>Dendrocopos macei</i>		LC			
18	Cangak Abu	<i>Ardea cinerea</i>		LC			
19	Cangak Merah	<i>Ardea purpurea</i>		LC			
20	Cekakak Sungai	<i>Todiramphus chloris</i>		LC	Ya Yes		
21	Cerek Jawa	<i>Charadrius javanicus</i>		NT		Ya Yes	Ya Yes
22	Cerek Kernyut	<i>Pluvialis fulva</i>		LC			
23	Cerek Pasir Besar	<i>Charadrius leschenaultii</i>		LC			
24	Cerek Pasir Siberia	<i>Charadrius mongolus</i>		LC			
25	Cici Padi	<i>Cisticola juncidis</i>		LC			
26	Cikalang Christmas	<i>Fregata andrewsi</i>	App.I	VU	Ya Yes	Ya Yes	Ya Yes
27	Cinene Kelabu	<i>Orthotomus ruficeps</i>		LC			
28	Cinene Pisang	<i>Orthotomus sutorius</i>		LC			
29	Cucak Kutilang	<i>Pycnonotus aurigaster</i>		LC			
30	Dara Laut Bengala	<i>Thalasseus bengalensis</i>		LC	Ya Yes	Ya Yes	Ya Yes
31	Dara Laut Biasa	<i>Sterna hirundo</i>		LC	Ya Yes	Ya Yes	Ya Yes
32	Dara Laut Jambul	<i>Thalasseus bergii</i>		LC	Ya Yes	Ya Yes	Ya Yes
33	Dara Laut Kecil	<i>Sternula albifrons</i>		LC	Ya Yes	Ya Yes	Ya Yes
34	Dara Laut Kumis	<i>Chlidonias hybrida</i>		LC	Ya Yes	Ya Yes	Ya Yes
35	Dederuk Jawa	<i>Streptopilia bitorquata</i>		LC			
36	Elang Laut Perut Putih	<i>Haliaeetus leucogaster</i>	App.II	LC	Ya Yes	Ya Yes	Ya Yes
37	Gagak Kampung	<i>Corvus macrorhynchos</i>		LC			Ya Yes
38	Gagang Bayam Timur	<i>Himantopus himantopus</i>		LC	Ya Yes		
39	Gajahan Pengala	<i>Numenius phaeopus</i>		LC	Ya Yes	Ya Yes	Ya Yes
40	Gemak Loreng	<i>Turnix suscitator</i>		LC			
41	Ibis Roko-Roko	<i>Plegadis falcinellus</i>		LC	Ya Yes	Ya Yes	Ya Yes
42	Kapasan Kemiri	<i>Lalage nigra</i>		LC			
43	Kareo Padi	<i>Amaurornis phoenicurus</i>		LC			
44	Kedidi Golgol	<i>Calidris ferruginea</i>		NT			
45	Kekep Babi	<i>Artamus leucoryn</i>		LC			



No.	Nama Jenis Species Name	Nama Ilmiah Scientific Name	Status Konservasi Conservation Status					
			CITES	IUCN	PP 7 Th. 1999 Government Regulation of 1999	PerMen LHK P.92 Th. 2018 Minister of Environment and Forestry Regulation P.92 of 2018	PerMen LHK P.106 Th. 2018 Minister of Environment and Forestry Regulation P.106 of 2018	
46	Kepudang Hitam	Kuduk	<i>Oriolus chinensis</i>		LC			
47	Kerak Basi Ramai		<i>Acrocephalus stentoreus</i>		LC			
48	Kerak Kerbau		<i>Acridotheres javanicus</i>		VU			
49	Kipasan Belang		<i>Rhipidura javanica</i>		LC	Ya Yes	Ya Yes	Ya Yes
50	Kokokan Laut		<i>Butorides striata</i>		LC			
51	Kowak Malam Kelabu		<i>Nycticorax nycticorax</i>		LC			
52	Kucica Kampung		<i>Copsychus saularis</i>		LC			
53	Kuntul Besar		<i>Egretta alba</i>		LC	Ya Yes		
54	Kuntul Karang		<i>Egretta sacra</i>		LC			
55	Kuntul Kecil		<i>Egretta garzetta</i>		LC	Ya Yes		
56	Kuntul Kerbau		<i>Bubulcus ibis</i>		LC	Ya Yes		
57	Layang-Layang Api		<i>Hirundo rustica</i>		LC	Ya Yes		
58	Layang-Layang Batu		<i>Hirundo tahitica</i>		LC			
59	Merbah Cerucuk		<i>Pycnonotus goiavier</i>		LC			
60	Pecuk Padi Hitam		<i>Phalacrocorax sulcirostris</i>		LC			
61	Pecuk-Ular Asia		<i>Anhinga melanogaster</i>		NT	Ya Yes	Ya Yes	Ya Yes
62	Perenjak Jawa		<i>Prinia familiaris</i>		NT			
63	Perenjak Padi		<i>Prinia inornata</i>		LC			
64	Pergam Laut		<i>Ducula bicolor</i>		LC			
65	Raja Udang Biru		<i>Alcedo coerulescens</i>		LC	Ya Yes		
66	Remetuk Laut		<i>Gerygone sulphurea</i>		LC			
67	Sesap Madu Australia		<i>Lichmera indistincta</i>		LC			
68	Srigunting Hitam		<i>Dicrurus macrocerus</i>		LC			
69	Tekukur Biasa		<i>Spilopelia chinensis</i>		LC			
70	Trinil Ekor Kelabu		<i>Tringa brevipes</i>		NT			
71	Trinil Kaki Hijau		<i>Tringa nebularia</i>		LC			
72	Trinil Kaki Merah		<i>Tringa totanus</i>		LC			
73	Trinil Pantai		<i>Actitis hypoleucos</i>		LC			
74	Walet Linci		<i>Collocalia linchi</i>		LC			
75	Wiwik Kelabu		<i>Cacomantis merulinus</i>		LC			
76	Wiwik Lurik		<i>Cacomantis sonneratii</i>		LC			



Lampiran 3

Pelaksanaan Pemulihan Tahun 2022

Appendix 3

Implementation of Recovery in 2022

RPFLH/Arahan KLHK RPFLH/KLHK Directive	Covered Area	Status Pemulihan Per 31 Desember 2022 Recovery Status as of December 31, 2022	Progress
RPFLH Lahan Karawang-1 RPFLH of Karawang -1 Land	Pantai Mutiara, Pantai Jalasena, Sungai Buntu, Pantai Samudera Baru, Pantai Pelangi, Galangan Kapal, Pemukiman Cemara 1 & Tambak Garam, Pemukiman Cemara 2, Pantai Cemara Mutiara Beach, Jalasena Beach, Buntu River, Samudera Baru Beach, Pelangi Beach, Shipyard, Cemara Housing 1 & Salt Pond, Cemara Housing 2, Cemara Beach	7436/MENLHK-PSLB3/PKTDLB3/ PLB.4/12/2020 & 655/MENLHK- PSLB3/PKTDLB3/PLB.4/2/2021	Selesai Completed
RPFLH Lahan Karawang-2 RPFLH of Karawang-2 Land	Pantai Dobolan, Pantai Sedari, Pantai Karangsari, Pantai Singkih Dobolan Beach, Sedari Beach, Karangsari Beach, Singkih Beach	7435/MENLHK-PSLB3/PKTDLB3/ PLB.4/12/2020 & 654/MENLHK- PSLB3/PKTDLB3/PLB.4/2/2021	Selesai Completed
RPFLH Lahan Karawang-3 RPFLH of Karawang-3 Land	Pantai Sarakan dan Pantai Bungin Sarakan Beach and Bungin Beach	SK. 653/MENLHK-PSLB3/PKTDLB3/ PLB.4/2/2021	Selesai Completed
RPFLH Substrat Mangrove Kepulauan Seribu RPFLH of Thousand Islands Mangrove Substrate	Pulau Lancang, Pulau Rambut, dan Pulau Untung Jawa Lancang Island, Rambut Island, and Untung Jawa Island	SK. 5487/MENLHK-PSLB3/PKTDLB3/ PLB.4/8/2021	Selesai Completed
RPFLH Substrat Mangrove Karawang dan Bekasi RPFLH of Karawang and Bekasi Mangrove Substrate	Segarjaya dan Pantai Bakti Segarjaya and Bakti Beach	SK. 5491/MENLHK-PSLB3/PKTDLB3/ PLB.4/8/2021	Selesai Completed
RPFLH Lahan Tanjungsari RPFLH of Tanjung Sari Land	Pantai Tanjung Sari Tanjung Sari beach	SK. 5489/MENLHK-PSLB3/PKTDLB3/ PLB.4/8/2021	Selesai Completed
RPFLH Lahan Kepulauan Seribu RPFLH of Thousand Islands Land	Pulau Untung Jawa dan Pulau Rambut Untung Jawa Island and Rambut Island	SK. 5488/MENLHK-PSLB3/PKTDLB3/ PLB.4/8/2021 & SK. 7784/MENLHK- PSLB3/PKTDLB3/PLB.4/12/2021	Selesai Completed
RPFLH Lahan Banten RPFLH of Banten Land	Desa Muara dan Pulau Panjang Muara Village and Panjang Island	SK. 7785/MENLHK-PSLB3/PKTDLB3/ PLB.4/12/2021	Selesai Completed
RPFLH Substrat Mangrove Banten RPFLH of Banten Mangrove Substrate	Desa Kronjo Kronjo Village	SK. 5490/MENLHK-PSLB3/PKTDLB3/ PLB.4/8/2021	Selesai Completed
RPFLH Lahan Kepulauan Seribu Tahap-2 RPFLH of Thousand Islands Land Phase-2	Pulau Burung, Pulau Tidung Kecil, Pulau Tidung Besar, Pulau Pari, dan Pulau Payung Burung Island, Tidung Kecil Island, Tidung Besar Island, Pari Island, and Payung Island	SK. 346/MENLHK-PSLB3/PKTDLB3/ PLB.4/1/2022	Selesai Completed



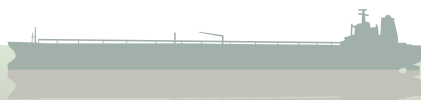
Lampiran 4

Pengelolaan Risiko K3 [403-2]

Appendix 4

OHS Risk Management [403-2]

Uraian Description		Realisasi 2022 Realization 2022	
Organization Influence			
AKHLAK	Living Core Value AKHLAK	Telah dilakukan sosialisasi AKHLAK 100% kepada seluruh pekerja PHE ONWJ dan PHE ONWJ telah memiliki <i>Agent of Change (AoC)</i> PHE ONWJ. AKHLAK dissemination has been carried out 100% to all PHE ONWJ employees and PHE ONWJ who has had PHE ONWJ Agents of Change (AoC).	Di tahun 2022, target skor LCV Zona 5 sebesar 300 dan tercapai 375 point. In 2022, the target LCV Zone 5 score was 300 with realization of 375 points.
3 Golden Rules PERTAMINA	Corporate Life Saving Rules (CLSR)	Telah dilakukan sosialisasi terkait 3 Gloden Rules ke seluruh pekerja PHE ONWJ. Socialization regarding the 3 Gloden Rules has been disseminated to all PHE ONWJ employees.	Kampanye Keselamatan Kerja secara periodik terkait CLSR Pertamina melalui berbagai media kampanye. Periodic Occupational Safety Campaign on Pertamina's CLSR through various media campaigns.
Life Saving Rules PEP	Contractor Safety Management System (CSMS)	Kampanye Keselamatan Kerja terkait <i>Life Saving Rules</i> yang telah disosialisasikan ke seluruh pekerja di PHE ONWJ. Occupational Safety Campaign on Life Saving Rules which has been disseminated to all employees at PHE ONWJ.	CSMS merupakan sistem yang digunakan untuk memastikan bahwa mitra kerja yang bermitra dengan PHE ONWJ telah memiliki sistem manajemen HSSE dan telah memenuhi persyaratan HSSE yang berlaku di PHE ONWJ serta mampu menerapkan persyaratan HSSE dalam pekerjaan kontrak yang dilaksanakan. CSMS is a system to ensure that PHE ONWJ's partners have an HSSE management system and have met the HSSE requirements that apply at PHE ONWJ and are able to apply HSSE requirements in the contract of work.
Project Readiness Review (PRR)	Management Walk Through (WMT)	PRR merupakan program untuk memastikan kesiapan dari suatu <i>project</i> sesuai dengan tahapan <i>project</i> . PRR dilakukan 100% setiap tahapan <i>project</i> . PRR is a program to ensure the readiness of a project according to the project stages. PRR is carried out 100% at each stage of the project.	<i>Program Safety Leadership</i> terkait kegiatan komunikasi 2 (dua) arah antara manajemen dan pekerja lapangan (<i>front line</i>) untuk mendemonstrasikan kepemimpinan dan komitmen HSSE. Sepanjang tahun 2022, telah dilaksanakan 13 kali MWT dari target 9 kali MWT/tahun. The Safety Leadership program is 2 (two) way communication activities between management and field workers (<i>front line</i>) to demonstrate HSSE leadership and commitment. In 2022, 13 MWTs have been held, exceeding the target of 9 MWTs/year.



Uraian Description		Realisasi 2022 Realization 2022	
<p>P2K3, Loss Prevention Committee (LPC), Forum Komunikasi HSSE Kontraktor</p> <p>P2K3, Loss Prevention Committee (LPC), HSSE Contractor Communication Forum</p>	<p>Action Tracking System (ACTRIS) merupakan system monitoring tindak lanjut online oleh SHU yang telah go-live sejak tahun 2022, agar tata cara dan "tools" yang digunakan untuk monitoring tindak lanjut terstandar di seluruh Regional dan Zona. Tindak lanjut yang dimonitor ke dalam ACTRIS meliputi rekomendasi audit, rekomendasi investigasi insiden, observasi intervensi, dll.</p> <p>The Action Tracking System (ACTRIS) is an online follow-up monitoring system by SHU that has gone live since 2022, thus the procedures and tools used for follow-up monitoring are standardized in all Regions and Zones. Monitored follow-up to ACTRIS includes audit recommendations, incident investigation recommendations, intervention observations, etc.</p>	<p>P2K3 dan LPC:</p> <p>Forum komunikasi, monitoring risiko dan pembahasan isu-isu aspek HSSE dan Operasional yang dihadiri Pimpinan Tertinggi Perusahaan dan Pekerja yang dilakukan setiap bulan.</p> <p>Forum Komunikasi HSSE Kontraktor:</p> <p>Forum komunikasi antara Pimpinan Perusahaan dengan Pimpinan Mitra Kerja / Kontraktor yang membahas aspek dan isu-isu HSSE. Pada tahun 2022, telah dilaksanakan 2 (dua) kali Forum Komunikasi HSSE Kontraktor.</p> <p>P2K3 and LPC:</p> <p>Communication forum, risk monitoring, and discussion of HSSE and Operational issues which are attended by the Company's top leaders and employees, which are held every month.</p> <p>Contractor HSSE Communication Forum:</p> <p>Communication forum between Company Leaders and Work Partner/ Contractor Leaders discussing HSSE aspects and issues. In 2022, 2 (two) Contractor HSSE Communication Forums have been held.</p>	
<p>Process Safety & Integrity Management (PSIM)</p>	<p>Periodically Safety Campaign</p>		<p>Program kampanye keselamatan kerja yang dilakukan secara periodik dengan tema-tema kampanye yang berdasarkan hasil observasi, insiden yang terjadi, <i>high risk activity</i>, dan lain-lain.</p> <p>Occupational safety campaign program conducted periodically with campaign themes based on observations, incidents that have occurred, high-risk activity, and others.</p>
<p>Risk Management Monitoring & Intervention</p>	<p>Sistem Management Integrasi:</p> <p>Suatu sistem terintegrasi yang digunakan di PHE ONWJ yang berkaitan dengan Kesehatan, Keselamatan Kerja, Keamanan, Lingkungan dan Energi. Tujuannya adalah untuk mempermudah impementasi dan audit beberapa system. Adapun ruang lingkup SMI ini adalah sebagai berikut: ISO 45001:2018, SMK3 PP 50/2012, SML ISO 14001:2015, SME ISO 50001:2018, dan PERPOL 07/2019.</p> <p>Integrated Management System (SMI):</p> <p>An integrated system on Health, Safety, Security, Environment, and Energy at PHE ONWJ. The goal is to simplify the implementation and audit of multiple systems. The SMI scope include: ISO 45001:2018, SMK3 PP 50/2012, SML ISO 14001:2015, SME ISO 50001:2018, and PERPOL 07/2019.</p>	<p>PHE ONWJ telah mendapatkan sertifikasi PAS99 sebagai basis pelaksanaan audit integrasi pada tahun 2021 lalu.</p> <p>PHE ONWJ has received PAS99 certification as a basis for implementing an integration audit in 2021.</p>	



Uraian Description		Realisasi 2022 Realization 2022	
Supervision Factor			
Daily Morning Meeting	Weekly PTW Audit	<p><i>Daily Morning Meeting</i> diadakan setiap pagi sebelum memulai aktivitas di tempat kerja. Pertemuan melibatkan seluruh pekerja yang sedang <i>on-duty</i>. Tujuan dari <i>Daily Morning Meeting</i> adalah untuk melakukan sinkronisasi dan memberikan informasi kepada seluruh pekerja terkait aspek HSSE dan Operasi serta hal-hal penting yang terkait dengan pekerjaan dan koordinasi untuk aktivitas pada hari tersebut.</p> <p>Daily Morning Meeting is held every morning before starting activities at work. The meeting involves all on-duty employees. The purpose of the Daily Morning Meeting is to synchronize and provide information on HSSE and Operations aspects as well as important matters related to work and coordination for activities on that day to all employees.</p>	<p>Weekly PTW Audit dilakukan untuk memastikan Sistem Izin Kerja Aman (SIKA) diterapkan secara konsisten dari minggu ke minggu. Selain itu, audit juga dilakukan untuk memastikan kompetensi dari pekerja terkait SIKA, menangkap pembelajaran dan menghasilkan rekomendasi untuk perbaikan berkelanjutan, dan mengidentifikasi <i>best practices</i> baru.</p> <p>Weekly PTW Audits are conducted to ensure the Safe Work Permit System (SIKA) is implemented consistently from week to week. Audits are also carried out to ensure the employees' competence related to SIKA, comprehension of lessons learned, and produce recommendations for continuous improvement, and identify new best practices.</p>
Site Meeting, Pre-Job Safety Meeting, Supervisor Meeting, Operational Meeting	Isolasi Energi Energy Isolation	<p><i>Pre Job-Safety Meeting</i> dilakukan sebelum pekerjaan dimulai dengan tujuan untuk membahas aspek-aspek keselamatan yang terkait dengan pekerjaan yang akan dilakukan. Pertemuan ini merupakan langkah kunci dalam memastikan bahwa semua anggota tim atau karyawan memahami risiko dan tindakan pencegahan yang harus diambil sebelum memulai pekerjaan.</p> <p>Pre Job-Safety Meetings are held before work begins to discuss safety aspects related to the work to be performed. This meeting is a key step in ensuring that all team members or employees understand the risks and precautions to be taken before starting work.</p>	<p>Isolasi energi adalah prosedur keselamatan di lingkungan industri atau tempat kerja lainnya yang bertujuan untuk memutus pasokan atau sumber energi dari peralatan atau sistem yang akan dikerjakan atau diperbaiki. Proses isolasi ini dilakukan untuk melindungi pekerja dari bahaya potensial yang terkait dengan energi berbahaya yang dapat menyebabkan kecelakaan atau cedera serius. Isolasi energi perlu diterapkan untuk mengamankan pekerjaan dari bahaya sumber energi proses, listrik, dan mekanikal.</p> <p>Energy isolation is a safety procedure in an industrial environment or other workplace to cut off the energy supply or source of the equipment or system to be worked on or repaired. This isolation process is to protect employees from potential hazards associated with hazardous energy that can cause accidents or serious injuries. Energy isolation needs to be applied to secure work from the hazards of process, electrical, and mechanical energy sources.</p>
Periodically General Safety Meeting (GSM)	PSIM Roll Out	<p>Pertemuan atau sesi diskusi yang diadak secara rutin tiap bulan di lapangan untuk membahas terkait program ataupun <i>campaign</i> HSSE untuk meningkatkan awareness pekerja terkait HSSE.</p> <p>Meetings or discussion sessions held regularly every month in the field to discuss HSSE programs or campaigns to increase employee awareness regarding HSSE.</p>	



Uraian Description		Realisasi 2022 Realization 2022	
Precondition			
Lifting Assessment	SIMOPS Meeting	<p>Pelaksanaan <i>assessment</i> dan memberikan otorisasi sebagai <i>crane operator</i>, <i>signalman</i>, dan <i>rigger</i> untuk bertugas di lapangan jika sudah memenuhi syarat.</p> <p>Selain itu, LMS juga memberikan <i>coaching</i> dan melakukan Audit Implementasi <i>Lifting Management System</i> di lapangan.</p> <p>Pada tahun 2022 sudah dilakukan <i>assessment</i> dan memberikan otorisasi sebanyak:</p> <ul style="list-style-type: none"> - <i>Crane Operator</i>: 117 orang - <i>Signalman</i>: 408 orang - <i>Rigger</i>: 622 orang - <i>Forklift Operator</i>: 12 orang <p><i>Coaching</i> dan Audit sudah dilakukan di semua <i>site</i> (11 <i>station</i>, 1 Marunda <i>Shorebase</i>, dan 3 <i>Drilling Rig</i>).</p> <p>Assess and authorize crane operators, signalmen, and riggers to serve in the field if they meet the requirements.</p> <p>In addition, LMS also provides coaching and conducts Lifting Management System Implementation Audits in the field.</p> <p>In 2022 an assessment has been carried out and given authorization for:</p> <ul style="list-style-type: none"> - 117 Crane Operators - 408 Signalmen - 622 Riggers - 12 Forklift Operators <p>Coaching and audits have been carried out at all sites (11 stations, 1 Marunda Shorebase, and 3 Drilling Rigs).</p>	<p>Merupakan diskusi antar bagian yang terlibat dan saling terpengaruh dari suatu aktivitas berisiko yang akan dijalankan. <i>Meeting</i> ini dilakukan sebelum dieksekusi pekerjaan sehingga jika ada pekerjaan yang tidak bisa dikerjakan bersamaan karena dapat menimbulkan insiden maka bisa diintervensi dari awal baik secara jadwal, lokasi, atau cara eksekusi pekerjaan.</p> <p>100% telah dilakukan <i>SIMOPS meeting</i> sebelum eksekusi pemboran dengan pihak lain terkait dibuktikan dengan Notulen Rapat dan dokumen SIMOPS</p> <p>It is a discussion between the parties involved and mutually affected by a risky activity that will be carried out. This meeting is held before executing the work, to identify work that cannot be done simultaneously because it can result in an incident, by intervening in the work from the start, either in terms of schedule, location, or method of execution of the work.</p> <p>SIMOPS meeting has been conducted 100% prior to the execution of drilling with other related parties as evidenced by the Minutes of Meeting and SIMOPS documents</p>
L2RA (Level 2 Risk Assessment)	Toolbox Talk	<p><i>Level 2 Risk Assessment (L2RA)</i> dirancang untuk mengkaji risiko tugas secara lebih terstruktur dan mendalam. L2RA juga mengevaluasi risiko untuk memastikan bahwa pekerjaan berisiko tinggi telah dikelola dengan baik (ALARP).</p> <p><i>Level 2 Risk Assessment (L2RA)</i> is designed to assess task risk in a more structured and in-depth manner. L2RA also evaluates risks to ensure that high risk jobs are properly managed (ALARP).</p>	<p>Program <i>Toolbox Talk</i> merupakan sesi penyampaian informasi kepada tim kerja atas tanggung jawab pekerja, peralatan, material, metode, identifikasi bahaya dan tindakan pengendaliannya terkait pekerjaan yang akan dilakukan. Kegiatan ini dilakukan pada saat sebelum pekerjaan dilapangan dimulai.</p> <p>The <i>Toolbox Talk</i> program is a session for conveying information to the work team on the responsibilities of workers, equipment, materials, methods, hazard identification and control measures related to the work to be carried out. This activity is carried out at the time before field work begins.</p>



Uraian Description		Realisasi 2022 Realization 2022	
Hand & Finger Injury Free	Safety Campaign	<p>Program terkait kampanye keselamatan tangan dan jari yang dilakukan secara <i>periodic</i> untuk mencegah terjadinya insiden yang berkaitan dengan tangan dan jari.</p> <p>Kampanye dilakukan menggunakan berbagai media seperti <i>meeting offline</i>, poster, stiker, <i>broadcast email</i> dan lain-lain.</p> <p>Hand and finger safety campaign program is carried out periodically to prevent incidents related to hands and fingers.</p> <p>Campaigns are carried out using various media such as offline meetings, posters, stickers, email broadcasts, etc.</p>	<p>Program kampanye keselamatan kerja yang dilakukan secara periodik dengan tema-tema kampanye yang berdasarkan hasil observasi, insiden yang terjadi, <i>high risk activity</i>, dan lain-lain.</p> <p>Occupational safety campaign program conducted periodically raising themes based on observations, incidents that have occurred, high risk activity, etc.</p>
Substandard Act/Condition			
Safety Behavior Technical Competency (SBTC)	Time Out for Safety (TOFSI)	<p>Program <i>assessment</i> pekerja untuk memastikan pekerja sebelum ke area kerja memiliki perilaku dan kompetensi yang baik.</p> <p>Employee assessment program to ensure employees have good behavior and competence before going to the work area.</p>	<p>Program observasi dan intervensi terkait Stop Work Authority (SWA) dimana pekerja memiliki wewenang untuk menghentikan pekerjaan apabila terdapat perubahan metode dari yang telah disepakati, ragu-ragu, dan apabila terdapat perilaku dan/atau kondisi yang tidak aman.</p> <p>The observation and intervention program is related to Stop Work Authority (SWA), in which the employees have the authority to stop work if there is a change in the method from what has been agreed upon, doubts, and if there is unsafe behavior and/or conditions.</p>
PEKA (Pengamatan Keselamatan Kerja) PEKA (Occupational Safety Observation)	SPT & SBT	<p>Program observasi dan intervensi antar pekerja untuk mencegah terjadinya insiden. PEKA dilakukan monitoring setiap bulan dan disampaikan kepada seluruh pekerja melalui P2K3 dan LPC.</p> <p>Observation and intervention programs among employees to prevent incidents from occurring. PEKA is monitored every month and communicated to all employees through P2K3 and LPC.</p>	<p>Site Physical Tour (SPT) dan Site Barrier Tour (SBT) merupakan kegiatan pemeriksaan yang dilakukan oleh Auditor untuk memastikan pengelolaan <i>housekeeping</i> dan <i>safety barrier process</i> telah dilaksanakan dengan baik oleh organisasi.</p> <p>Site Physical Tour (SPT) and Site Barrier Tour (SBT) are inspection activities carried out by auditor to ensure that the management of housekeeping and safety barrier processes has been carried out properly by the organization.</p>



Uraian Description		Realisasi 2022 Realization 2022
Post Incident		
Emergency Response Plan	Oil Spill Contingency Plan	<ul style="list-style-type: none"> - Sebagai bagian dari penguatan organisasi dan perbaikan berkelanjutan dari Emergency Response & Crisis Management dan Incident Management System di Zona 5, telah dilakukan Incident Command System (ICS) Training. Pesertanya adalah On Scene Commander & Site Emergency Response Team. - Telah dilakukan Emergency Response Drill rutin setiap bulan minimal 2 kali pada masing-masing lokasi/ site. - As part of organizational strengthening and continuous improvement of Emergency Response & Crisis Management and Incident Management System in Zone 5, Incident Command System (ICS) Training has been conducted. The participants were the On Scene Commander & Site Emergency Response Team. - Routine Emergency Response Drills have been carried out every month at least 2 times at each location/ site.
Incident Management Plan	Oil Spill Contingency Plan	<ul style="list-style-type: none"> - Sebagai bagian dari penguatan organisasi dan perbaikan berkelanjutan dari Emergency Response & Crisis Management dan Incident Management System di Zona 5, telah dilakukan Incident Command System (ICS) Training yang melibatkan Incident Management Team Member. - Dilakukan Duty Roster/ Handover Incident Management Team setiap hari Kamis (1 minggu sekali). - Telah dilakukan kegiatan Table Top Drill yang melibatkan IMT dan BST (Perwakilan Manajemen Regional 2). - As part of organizational strengthening and continuous improvement of Emergency Response & Crisis Management and Incident Management System in Zone 5, Incident Command System (ICS) training has been conducted involving Incident Management Team members. - Conducted Duty Roster/Handover Incident Management Team every Thursday (once a week). - Table Top Drill activities have been carried out involving IMT and BST (Region 2 Management Representative).



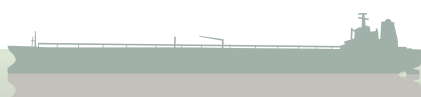
Lampiran 5

Bahaya Kesehatan, Jenis Gangguan Kesehatan, dan Upaya Pencegahan

Appendix 5

Health Hazards, Types of Health Problems, and Prevention Efforts

Bahaya Kesehatan Health Hazard	Jenis Gangguan Kesehatan Type of Health Problem	Upaya Pencegahan Prevention Effort
Kebisingan Noise	<i>Noise Induced Hearing Loss</i>	<ul style="list-style-type: none"> - <i>Monitoring</i> tingkat kebisingan di area kerja - Pemasangan <i>enclosure</i> pada mesin/peralatan yang menjadi sumber bising - Prosedur Pelaksanaan Program Konservasi Pendengaran - Perawatan rutin pada mesin yang bising - Pembatasan akses serta pengaturan waktu kerja di lokasi kerja yang memiliki tingkat bising yang tinggi - Pemberian <i>awareness</i> bahaya bising saat pengajuan Sistem Ijin Kerja Aman - Pemberian edukasi terkait perlindungan pendengaran kepada pekerja yang terpajan bising - Pemasangan rambu (<i>signage</i>) bahaya kebisingan di area kerja yang bising - Pemakaian alat pelindung pendengaran
Getaran Vibration	Gangguan pada otot, tendon, tulang, sendi, pembuluh darah tepi/saraf tepi Disorders of the muscles, tendons, bones, joints, peripheral blood vessels /peripheral nerves	<ul style="list-style-type: none"> - <i>Monitoring</i> tingkat getaran pada peralatan (<i>tools and equipment</i>) dengan getaran yang tinggi - Pembatasan waktu kerja untuk pengoperasian peralatan (<i>tools and equipment</i>) dengan getaran yang tinggi - Pemberian <i>awareness</i> bahaya getaran saat pengajuan Sistem Izin Kerja Aman - Pemberian edukasi terkait bahaya getaran kepada pekerja yang terpajan getaran - Perawatan rutin pada peralatan (<i>tools and equipment</i>) - Pemasangan rambu (<i>signage</i>) bahaya getaran - Pemakaian alat pelindung diri seperti sarung tangan
Temperatur ekstrim Extreme temperature	<i>Heat Exhaustion, Anhidrotic, Heat Cramp, Heat Syncope</i>	<ul style="list-style-type: none"> - <i>Monitoring</i> heat stress di area kerja - Pemasangan <i>blower</i>/HVAC - Pemberian <i>awareness</i> bahaya panas saat pengajuan Sistem Ijin Kerja Aman - Penyediaan air minum - Pengaturan waktu kerja - Pemberian edukasi terkait bahaya tekanan panas kepada pekerja yang terpajan panas.



Bahaya Kesehatan Health Hazard	Jenis Gangguan Kesehatan Type of Health Problem	Upaya Pencegahan Prevention Effort	
Ergonomi Ergonomics	<i>Musculoskeletal Disorder (MSDs) seperti muscle spasm, meniscus lesions, low back pain, hernia nucleus pulposus, dll</i> <i>Musculoskeletal Disorders (MSDs) such as muscle spasms, meniscus lesions, low back pain, herniated nucleus pulposus, etc</i>	<ul style="list-style-type: none"> - Ergonomic Assessment - Pengaturan waktu kerja -istirahat (<i>break time</i>) - Prosedur Penilaian Ergonomi - Pemberian edukasi terkait ergonomi - Penyediaan alat bantu angkat seperti troli - Pemasangan poster dan banner terkait bahaya ergonomi 	<ul style="list-style-type: none"> - Ergonomic Assessment - Work time - rest (<i>break time</i>) arrangement - Ergonomic Assessment Procedure - Provision of education on ergonomics - Provision of lifting aids such as trolleys - Installation of posters and banners on ergonomic hazards
Pencahayaannya Lighting	<i>Eye strain, Asthenopia</i>	<ul style="list-style-type: none"> - <i>Monitoring</i> tingkat pencahayaan - Perawatan dan/ atau penggantian lampu 	<ul style="list-style-type: none"> - Monitoring of lighting levels - Lamp maintenance and/or replacement
Indoor Air Quality	<i>Sick building syndrome, occupational exposure to other air contaminants</i>	<ul style="list-style-type: none"> - <i>Monitoring</i> kualitas udara dalam ruang - Pemasangan sistem HVAC - Perawatan sistem HVAC - Pelaksanaan program <i>housekeeping</i> 	<ul style="list-style-type: none"> - Monitoring indoor air quality - Installation of HVAC systems - HVAC system maintenance - Implementation of housekeeping programs
Benzene, Toluene, Ethyl Benzene, dan Xylene Benzene, Toluene, Ethyl Benzene, and Xylene	<i>Irritant Contact Dermatitis, photokeratitis, aplastic anemia, leukaemia</i>	<ul style="list-style-type: none"> - <i>Monitoring</i> pajanan BTEX - Pelaksanaan <i>venting</i> sebelum kegiatan <i>pigging</i> dilakukan - Pemberian edukasi terkait bahaya benzene kepada pekerja yang rutin terpajan - Pemakaian alat pelindung diri seperti <i>coverall, respirator dengan cartridge organic vapor, chemical gloves, safety glasses, safety shoes</i> - Penyediaan peralatan emergency seperti <i>eye wash dan emergency shower</i> 	<ul style="list-style-type: none"> - Monitoring BTEX exposure - Implementation of venting before pigging activities are carried out - Provision of education regarding benzene hazards to employees who are regularly exposed. - Use of personal protective equipment such as coveralls, respirators with organic vapor cartridges, chemical gloves, safety glasses, and safety shoes. - Provision of emergency equipment such as eye wash and emergency shower
Biological Vector & Animal, Coronavirus	COVID-19	<ul style="list-style-type: none"> - Pelaksanaan karantina sebelum <i>crew change</i> dan <i>screening</i> COVID-19 sebelum bekerja - Pemantauan kesehatan pekerja dengan pengisian form kewaspadaan (suhu, tanda, & gejala) 14 hari sebelum karantina - <i>Assessment safehouse</i> untuk karantina - Pelaksanaan disinfeksi di area kerja secara regular - Penerapan protokol Kesehatan - Penyediaan fasilitas cuci tangan & <i>hand sanitizer</i> - Pemberian materi edukasi terkait pencegahan COVID-19 kepada pekerja (<i>broadcast, health talk</i>) - Melakukan <i>close monitoring</i> untuk pekerja dengan komorbid di lapangan, dan memberlakukan larangan <i>shift</i> malam bagi pekerja kormobid riwayat tertentu - Kewajiban untuk melakukan vaksinasi dosis 1 & 2 serta booster - Penyediaan alat pelindung diri untuk Tim Tanggap Darurat (<i>Gown/ Tyvek, Face Shield/Goggles, Hand Gloves, Shoe Cover</i>) 	<ul style="list-style-type: none"> - Quarantine before crew change and COVID-19 screening before work - Monitoring the health of employees by filling out the alert form (temperature, signs, & symptoms) 14 days before quarantine - Safehouse assessment for quarantine - Implementation of disinfection in the work area regularly - Implementation of health protocols - Provision of hand washing facilities & hand sanitizers - Provision of educational material on the prevention of COVID-19 to employees (<i>broadcast, health talk</i>) - Close monitoring for employees with comorbidities in the field, and imposing a ban on night shifts for employees with a certain history of comorbidity - Obligation to carry out vaccination doses 1 & 2 as well as boosters - Provision of personal protective equipment for the Emergency Response Team (<i>Gown/Tyvek, Face Shield/ Goggles, Hand Gloves, Shoe Covers</i>)



Bahaya Kesehatan Health Hazard	Jenis Gangguan Kesehatan Type of Health Problem	Upaya Pencegahan Prevention Effort	
Biological Vector & Animal Ular Snake	Toxic effect of snake venom	- Pemberian edukasi terkait bahaya ular di lokasi kerja - Penyediaan serum anti bisa ular di lokasi kerja	- Provision of education on the snake hazards at the work site - Provision of anti-snake venom serum at the work site
Biological Vector & Animal Paederus fuscipes	Allergic contact dermatitis	- Pelaksanaan <i>pest control</i> secara berkala - Pemberian edukasi terkait bahaya <i>paederus fuscipus</i> - Penyediaan obat/salep bila pekerja terkena sengatan <i>paederus</i> - Pemakaian alat pelindung diri seperti <i>coverall</i> , sarung tangan, <i>safety shoes</i> , dll	- Periodic pest control - Provision of education on the hazards of <i>Paederus fuscipus</i> - Provision of medicine/ointment if employees are stung by <i>paederus</i> - Use of personal protective equipment such as coveralls, gloves, safety shoes, etc
Biological Vector & Animal Lalat, kecoa, kutu busuk, dll Flies, cockroaches, bedbugs, etc	Intestinal infection disease	- Pelaksanaan <i>pest control</i> secara berkala - Pemasangan <i>insect killer</i> - Prosedur pengelolaan pangan dan tata apik kerumah tanggaan - Inspeksi <i>hygiene catering</i> dan <i>housekeeping</i> - Pemberian edukasi terkait PHBS dan keamanan pangan	- Periodic pest control implementation - Installation of insect killers - Procedures for food management and housekeeping - Inspection of hygiene catering and housekeeping - Provision of education on Clean and Healthy Behavior (PHBS) and food safety

Lampiran 6

Pelatihan K3 bagi Pekerja PHE ONWJ [403-5]

Appendix 6

OHS Training for PHE ONWJ Workforces [403-5]

Judul Pelatihan Training Title	2022		2021		2020	
	Jumlah Orang Total (People)	Jumlah Jam Total (Hours)	Jumlah Orang Total (People)	Jumlah Jam Total (Hours)	Jumlah Orang Total (People)	Jumlah Jam Total (Hours)
CSMS	96	203	28	159	115	2.415
Incident Management Team (IMT)	43	774	92	1.932	39	546
Risk Register	22	528	1	16	29	406
SIKA PA Level 1	220	1.760	187	3.456	135	2.336
SIKA PA Level 2	750	6.000	392	7.240	244	4.872
SIKA AA Level 1	21	168	34	704	40	688
SIKA AA Level 2	279	2.232	57	952	30	1.048
SIKA Fasilitator SIKA Facilitator	17	14.572	*	*	29	2.088
Ahli K3 Umum General OHS Expert	**	**	**	**	14	1.344
Awareness SMK3 PP 50/2012 OSMS PP 50/2012 Awareness	***	***	59	944	***	***
Awareness ISO 45001:2018 ISO 45001:2018 Awareness	****	****	151	2.416	52	640

Judul Pelatihan Training Title	2022		2021		2020	
	Jumlah Orang Total (People)	Jumlah Jam Total (Hours)	Jumlah Orang Total (People)	Jumlah Jam Total (Hours)	Jumlah Orang Total (People)	Jumlah Jam Total (Hours)
Petugas P3K First Aid Officer	76	1.824	*****	*****	*****	*****
Fire Fighting	113	2.373	*****	*****	*****	*****
Total	1.637	30.434	1.001	17.819	727	16.383

Keterangan:

- Terdapat pernyataan kembali (*restatement*) dari Laporan Keberlanjutan 2021.
- * Training SIKA Fasilitator dan Ahli K3 Umum belum dijadwalkan pada tahun 2021 karena kompetensi pekerja sudah terpenuhi di tahun 2020.
- ** Training Ahli K3 Umum belum dijadwalkan di tahun 2021 & 2022.
- *** Awareness SMK3 PP 50/2012 belum dijadwalkan di tahun 2020 & 2022.
- **** Awareness ISO 45001:2018 belum dijadwalkan di tahun 2022.
- ***** Training Petugas P3K belum dijadwalkan di tahun 2020 & 2021.
- ***** Training Fire Fighting belum dijadwalkan di tahun 2020 & 2021.

Note:

- Restatements from the 2021 Sustainability Report.
- * SIKA Facilitator and General OHS Expert Training had not yet been scheduled in 2021 because the employee competency had been fulfilled for 2020.
- ** General OHS Expert Training had not yet been scheduled for 2021 & 2022.
- *** OHSMS PP 50/2012 Awareness had not yet been scheduled for 2020 & 2022.
- **** ISO 45001:2018 Awareness had not yet been scheduled for 2022.
- ***** Training for First Aid Officers had not yet been scheduled for 2020 & 2021.
- ***** Fire Fighting Training had not yet been scheduled for 2020 & 2021.

Lampiran 7

Realisasi Program Pemberdayaan bagi Masyarakat Tahun 2022 [203-1]

Appendix 7

Realization of Community Empowerment Program in 2022 [203-1]

Program	Jumlah Penerima Manfaat Total Beneficiaries	Pencapaian Tahun 2022 Achievement in 2022
Program pendidikan berbasis lingkungan Environmental education program	1.517	- Terlaksananya Kegiatan Revitalisasi Kawasan Eco Edu Tourism di Wilayah Cilamaya Girang - Terlaksananya Kegiatan Pelatihan & Sertifikasi Selam, serta Peningkatan Pemahaman Masyarakat Wilayah Pulau Seribu Terkait dengan Pentingnya Menjaga Ekosistem Laut - Implementation of Eco Edu Tourism Area Revitalization in Cilamaya Girang area - Implementation of diving training and certification activities, as well as increasing Thousand Islands community awareness of the importance of protecting marine ecosystems
Program kejar paket B & C School equivalency program for B and C packages	25	Terlaksananya Kegiatan Pendidikan Kesetaraan Bagi Keluarga Nelayan di Wilayah Kabupaten Indramayu Implementation of equivalency education program for fishermen's families in Indramayu Regency Area
Program peningkatan sarana pendidikan dan lifeskill Education facilities and life skills improvement program	265	Terlaksananya Kegiatan Revitalisasi Sarana Pendidikan di Kabupaten Indramayu dan Kabupaten Karawang Implementation of education facility revitalization activities in Indramayu and Karawang regencies



Program	Jumlah Penerima Manfaat Total Beneficiaries	Pencapaian Tahun 2022 Achievement in 2022
<p>Sosialisasi kesehatan kepada masyarakat Health dissemination to the community</p>	850	<ul style="list-style-type: none"> - Terlaksananya Kegiatan Sosialisasi Kesehatan Terkait Pencegahan COVID-19, Pencegahan Penyebaran HIV/AIDS, Pencegahan Penyakit Hepatitis, Pencegahan Anemia pada Remaja, dan Pencegahan Stunting di tiga Wilayah Kabupaten (Karawang, Subang, dan Indramayu) - Peserta Kegiatan Sosialisasi terdiri dari Siswa Sekolah Menengah, Masyarakat, Pemerintah Desa, dan Kader Posyandu <ul style="list-style-type: none"> - Implementation of health dissemination activities on COVID-19 prevention, prevention of the spread of HIV/AIDS, prevention of hepatitis, prevention of Anemia in Adolescents, and Prevention of Stunting in three regencies (Karawang, Subang, and Indramayu) - Participants in the dissemination activities consisted of high school students, the community, Village Government, and Posyandu cadres
<p>Pemenuhan kebutuhan dasar air bersih Fulfilling the basic needs of clean water</p>	590	<ul style="list-style-type: none"> - Terlaksananya kegiatan Pengelolaan Air Tanah Menjadi air siap minum menggunakan teknologi Reverse Osmosis (RO) di Desa Muara Baru, Kecamatan Cilamaya Wetan, Kabupaten Karawang - Terlaksananya kegiatan Pembuatan Sumur Bor Air Bersih yang dapat dimanfaatkan oleh masyarakat nelayan di Desa Tambaksari, Kecamatan Tirtajaya, Kabupaten Karawang - Terlaksananya kegiatan Revitalisasi Sumur Bor di perkampungan nelayan yang ada di Desa Karangreja, Kecamatan Suranenggala, Kabupaten Karawang <ul style="list-style-type: none"> - The implementation of groundwater management into ready-to-drink water using Reverse Osmosis (RO) technology in Muara Baru Village, Cilamaya Wetan District, Karawang Regency - Implementation of clean water drilling wells that can be used by fishing community in Tambaksari Village, Tirtajaya District, Karawang Regency - Implementation of bore well revitalization activities in a fishing village in Karangreja Village, Suranenggala District, Karawang Regency
<p>Peningkatan sarana produksi perikanan tangkap Improvement of capture fishery production facilities</p>	1.112	<ul style="list-style-type: none"> - Terlaksananya kegiatan Pengadaan Sarana Produksi Perikanan berupa Coolbox bagi nelayan di pesisir Desa Juntinyuat, Kecamatan Juntinyuat, Kabupaten Indramayu - Terlaksananya program Kredit Mesin Bergulir bagi nelayan di Desa Rawameneng, Kecamatan Blanakan, Kabupaten Subang - Terlaksananya kegiatan Pemberian bantuan kebutuhan pokok bagi masyarakat pesisir di Wilayah Kelurahan Kamal Muara, Jakarta Utara <ul style="list-style-type: none"> - Implementation of procurement of fishery production facilities in the form of Coolboxes for fishermen on the coast of Juntinyuat Village, Juntinyuat District, Indramayu Regency - Implementation of the revolving machine loan program for fishermen in Rawameneng Village, Blanakan District, Subang Regency - Implementation of basic needs assistance distribution for coastal communities in Kamal Muara Village, North Jakarta
<p>Pemberdayaan usaha kecil dan menengah Masyarakat Empowerment of community small and medium enterprises</p>	588	<ul style="list-style-type: none"> - Terlaksana kegiatan Pemberdayaan Kelompok Budidaya Rumput Laut dan Keramba Jaring Apung di Wilayah Pulau Panggang, Kepulauan Seribu - Terlaksananya kegiatan Pemberdayaan UMKM Kelompok Disabilitas melalui daur ulang sampah kertas di Wilayah Desa Cileunyi Wetan, Kabupaten Bandung - Terlaksananya program Pemberdayaan UKM Pengolah Hasil Perikanan Berbasis GMP oleh istri nelayan di Wilayah Dusun Pasir Putih, Desa Sukajaya, Karawang - Terlaksananya kegiatan Pembuatan Screenhouse TOGA di Wilayah Jakarta Utara - Terlaksananya kegiatan Pemberdayaan UKM istri nelayan di sekitar wilayah ring 1 OPF Balongan di Desa Sukaurip, Indramayu - Pemberdayaan UMKM Istri Nelayan Pengolah Terasi dan Remis Di Desa Rawagempol, Karawang <ul style="list-style-type: none"> - Implementation of Seaweed Cultivation Group and Floating Net Cages Empowerment activities in Panggang Island, Thousand Islands - Implementation of MSME Empowerment activities for the Disabled Group through paper waste recycling in Cileunyi Wetan Village, Bandung Regency - Implementation of the GMP-based Fishery Product Processing Empowerment program by fishermen's wives in Pasir Putih Hamlet, Sukajaya Village, Karawang - Implementation of Medicinal Plants (TOGA) Screenhouse building activities in North Jakarta City - Implementation of Empowerment activities for fishermen's wives around the Balongan OPF ring 1 area in Sukaurip Village, Indramayu - MSME Empowerment of Fishermen's Wives for Processing Shrimp Paste and barnacles in Rawagempol Village, Karawang



Program	Jumlah Penerima Manfaat Total Beneficiaries	Pencapaian Tahun 2022 Achievement in 2022
Peningkatan sanitasi lingkungan Environmental sanitation improvement	3.457	<ul style="list-style-type: none"> - Terlaksananya kegiatan Pembuatan TPT di Wilayah Desa Pantai Bahagia, Kecamatan Muara Gembong, Kabupaten Bekasi. - Terlaksananya kegiatan Pengerukan Muara Sungai Gebang Sawit di Desa Majakerta, Kecamatan Balongan, Kabupaten Indramayu
Peningkatan fasilitas umum kampung nelayan Improvement of fishing village public facilities	3.478	<ul style="list-style-type: none"> - Terlaksananya program Perbaikan Jalan di Desa Pengarengan dan Desa Patimban, Kabupaten Subang - Terlaksananya program pemasangan lampu tenaga surya sebanyak enam titik yang ada di Desa Sukakerta dan Desa Tambaksari, Kabupaten Karawang - Terlaksananya program Pembuatan Gazebo Wisata Sedari - Terlaksananya program Rutilahu Indramayu - Terlaksananya program Kampung Bersih Sungai Buntu - Terlaksananya program pembuatan TPT & Turab di Desa Mayangan, Kabupaten Subang dan Desa Sukajaya, Kabupaten Karawang - Terlaksananya program Pengembangan Ekowisata Pasir Putih
Mitigasi dan adaptasi perubahan iklim Climate change mitigation and adaptation	2.351	<ul style="list-style-type: none"> - Terlaksananya kegiatan mitigasi dan adaptasi perubahan iklim melalui pembuatan penahan abrasi dari ban bekas dan penanaman mangrove di beberapa desa di wilayah Kabupaten Karawang, Subang, dan Indramayu
Pengadaan dan distribusi bantuan bencana Procurement and distribution of disaster relief	956	<ul style="list-style-type: none"> - Terlaksananya kegiatan pengadaan dan distribusi bantuan bencana di beberapa wilayah: <ul style="list-style-type: none"> - Bantuan untuk Gempa Bumi Cianjur - Bantuan untuk Banjir di wilayah Kabupaten Karawang, Subang, dan Indramayu - Bantuan untuk korban ledakan kilang Pertamina Plumpang



Lampiran 8

Program Unggulan Bidang CSR, Pencapaian, dan Dukungan pada TPB Tahun 2022 [413-1]

Appendix 8




Flagship CSR Program, Achievements, and Support for SDGs in 2022 [413-1]

Penanggung Jawab Responsible Function Fungsi Communication, Relations & CID Communication, Relations & CID Function	
Bidang dan Program Sector and Program	Program
 <p>Bidang Sector Pemberdayaan Masyarakat Community Development</p>	<p>Program pengelolaan wisata pesisir berbasis lingkungan. Coastal eco-tourism management program.</p>
<ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Peningkatan pendapatan kelompok dari kegiatan ekowisata sebesar Rp64,3 juta. - Peningkatan PAD Desa dari kegiatan ekowisata sebesar Rp27,5 juta. - Terbentuknya 13 kelompok UMKM Istri Nelayan. - Penanaman 10.000 mangrove yang dapat menghasilkan serapan karbon sebesar 293 Ton CO₂Eq. 	<ul style="list-style-type: none"> • Evaluation: Review, FGDs, and monitoring evaluation. • Outcomes and achievements: <ul style="list-style-type: none"> - Increase in group income from ecotourism activities by Rp64.3 million. - Increase in Village-generated Revenue (PAD) from ecotourism activities of Rp27.5 million. - Formation of 13 MSME groups of Fishermen's Wives. - Planting 10,000 mangroves which can produce carbon absorption of 293 tons of CO₂Eq.
 <p>Bidang Sector Pendidikan Education</p>	<ol style="list-style-type: none"> 1. Program Pendidikan Berbasis Kingkungan. 2. Program kejar paket B dan C. 3. Program peningkatan sarana pendidikan dan lifeskill. <ol style="list-style-type: none"> 1. Environmental Education Program. 2. School equivalency program for B and C packages. 3. Education facilities and life skills improvement program.
<ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Terlaksananya kegiatan pelatihan dan sertifikasi selam bagi 17 pemuda di wilayah Kepulauan Seribu. - Peningkatan kapasitas 65 pemulung di wilayah Jakarta Utara. - Terlaksananya kegiatan revitalisasi dan peningkatan sarana pendidikan masyarakat di pesisir Kabupaten Karawang. - Memberikan akses pendidikan kesetaraan bagi 25 warga pesisir Kabupaten Indramayu. 	<ul style="list-style-type: none"> • Evaluation: Review, FGD, and evaluation monitoring. • Outcomes and achievements: <ul style="list-style-type: none"> - Implementation of diving training and certification activities for 17 youths in the Thousand Islands area. - Building the capacity of 65 scavengers in the North Jakarta area. - Implementation of revitalization and improvement of community education facilities in the coastal area of Karawang. - Providing equal access to education for 25 coastal residents of Indramayu Regency.
 <p>Bidang Sector Kesehatan Health</p>	<ol style="list-style-type: none"> 1. Sosialisasi kesehatan kepada masyarakat. 2. Peningkatan sarana kesehatan desa. 3. Pemenuhan kebutuhan dasar air bersih. <ol style="list-style-type: none"> 1. Health dissemination to the community. 2. Improvement of village health facilities. 3. Fulfilling the basic needs of clean water.
<ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Terlaksananya kegiatan sosialisasi kesehatan terkait pencegahan stunting, pencegahan anemia pada remaja, pencegahan HIV/AIDS, dan pencegahan penyakit menular lainnya kepada masyarakat di wilayah Kabupaten Indramayu, Subang, dan Karawang. - Pembuatan sarana air bersih (sumur bor & RO) di wilayah Kabupaten Karawang dan Cirebon. 	<ul style="list-style-type: none"> • Evaluation: Review, FGD, and evaluation monitoring. • Outcomes and achievements: <ul style="list-style-type: none"> - Implementation of health dissemination on stunting prevention, anemia prevention in adolescents, HIV/AIDS prevention, and prevention of other infectious diseases to the community in the Indramayu, Subang and Karawang Regencies. - Construction of clean water facilities (drilled wells & RO) in Karawang and Cirebon Regencies.



Bidang dan Program Sector and Program	Program
 <p>Bidang Sector Ekonomi Economic</p> <ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Terberdayakannya 5 kelompok pembudidaya rumput laut dan 9 kelompok pembudidaya keramba jarring apung di wilayah Pulau Panggang, Kepulauan Seribu. - Terlaksananya kegiatan pemberian bantuan kebutuhan pokok bagi 950 warga terdampak COVID-19 di wilayah Kamal Muara, Jakarta Utara. - Terberdayakannya 11 orang penyandang disabilitas. - Terbentuknya 4 UKMK istri nelayan di wilayah Kabupaten Karawang & 13 UMKM di Kabupaten Indramayu. - Terlaksananya program kredit mesin bergulir bagi nelayan di wilayah Kabupaten Subang dan pengadaan coolbox bagi nelayan di wilayah Kabupaten Cirebon dan Karawang. 	<ol style="list-style-type: none"> 1. Peningkatan kapasitas keterampilan nelayan. 2. Peningkatan Sarana Alat Tangkap Nelayan. 3. Sosialisasi Alat Tangkap Ramah Lingkungan. 4. Pemberdayaan usaha kecil dan menengah masyarakat. <ol style="list-style-type: none"> 1. Capacity building for fishermen's skills. 2. Improvement of Fishermen's Capture Equipment. 3. Dissemination of Environmentally Friendly Fishing Gear. 4. Empowerment of community small and medium enterprises. <ul style="list-style-type: none"> • Evaluation: Review, FGD, and evaluation monitoring. • Outcomes and achievements: <ul style="list-style-type: none"> - Empowerment of 5 groups of seaweed cultivators and 9 groups of floating net cage cultivators in Panggang Island, Thousand Islands. - Implementation of activities to distribute food packages to 950 residents affected by COVID-19 in Kamal Muara area, North Jakarta. - Empowerment of 11 people with disabilities. - Formation of 4 MSMEs of fishermen's wives in Karawang Regency & 13 MSMEs in Indramayu Regency. - Implementation of a revolving machine loan program for fishermen in the Subang Regency area and procurement of coolboxes for fishermen in the Cirebon and Karawang Regencies.
 <p>Bidang Sector Pengembangan Infrastruktur Infrastructure Development</p> <ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Terlaksananya kegiatan pengerukan muara sungai di wilayah Kabupaten Indramayu dan Cirebon. - Terlaksananya kegiatan pembuatan jalan desa sepanjang 1 km di wilayah pesisir Kabupaten Subang. - Pembuatan penahan abrasi dari ban bekas sepanjang 100 meter di wilayah Kabupaten Subang. - Pengadaan lampu tenaga surya sebanyak 6 unit di wilayah Kabupaten Karawang. - Pembuatan tembok penahan tanah sepanjang masing-masing 150 meter di wilayah Kabupaten Bekasi dan Subang. 	<p>Peningkatan fasilitas umum kampung nelayan. Improvement of the public facilities of fishing villages.</p> <ul style="list-style-type: none"> • Evaluation: Review, FGD, and evaluation monitoring. • Outcomes and achievements: <ul style="list-style-type: none"> - Implementation of dredging at river estuaries in the Indramayu and Cirebon Regencies. - The construction of a 1 km village road in the coastal area of Subang Regency. - Installation of 100-meter abrasion barriers from used tires in Subang Regency area. - Procurement of 6 units of solar-powered lights in Karawang regency. - Construction of a retaining wall of 150 meters each in Bekasi and Subang Regencies.
 <p>Bidang Sector Bantuan Bencana Alam Natural Disaster Relief</p> <ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Pengadaan dan distribusi bantuan sembako, tenda darurat, toren air, dan kayu palet bagi korban bencana gempa bumi Cianjur. - Pembuatan 4 unit sarana MCK bagi korban gempa Cianjur. 	<p>Pengadaan dan distribusi bantuan bencana Procurement and distribution of disaster relief</p> <ul style="list-style-type: none"> • Evaluation: Review, FGDs, and monitoring evaluation. • Outcomes and achievements: <ul style="list-style-type: none"> - Procurement and distribution of food packages, emergency tents, water towers, and pallet wood for victims of the Cianjur earthquake. - Construction of 4 units of toilet facilities for Cianjur earthquake victims.



Bidang dan Program Sector and Program	Program
 <p>Bidang Sector Bantuan Pelestarian Lingkungan Environmental Preservation Assistance</p>	<p>Mitigasi dan adaptasi perubahan iklim (<i>green belt</i>) Climate change mitigation and adaptation (<i>green belt</i>)</p>
<ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Pembuatan penahan abrasi dari ban bekas sepanjang masing-masing 100 meter di wilayah Kabupaten Bekasi dan Kabupaten Cirebon, sepanjang 300 meter di wilayah Kabupaten Karawang. - Penanaman mangrove di pesisir pantai utara Jawa sebanyak > 17.000 batang. - Terlaksananya program pengelolaan sampah terpadu di wilayah Kabupaten Indramayu. 	<ul style="list-style-type: none"> • Evaluation: Review, FGDs, and monitoring evaluation. • Outcomes and achievements: <ul style="list-style-type: none"> - Installation of abrasion barriers from used tires 100 meters long each in Bekasi and Cirebon Regencies, 300 meters long in Karawang Regency. - Planting of >17,000 mangroves on the north coast of Java. - Implementation of an integrated waste management program in Indramayu Regency.
 <p>Bidang Sector Kesetaraan Gender Gender Equality</p>	<p>Program Pendidikan Berbasis Lingkungan (Hutan Kapal Kehati Greenthink) Environmental Education program (Greenthink Biodiversity Boat Forest)</p>
<ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Hingga tahun 2022 terdapat 7 orang istri nelayan terberdayakan melalui program pengembangan UMKM pengolahan hasil perikanan. 	<ul style="list-style-type: none"> • Evaluation: Review, FGDs, and monitoring evaluation. • Outcomes and achievements: <ul style="list-style-type: none"> - Until 2022 there have been 7 fishermen's wives who have been empowered through the MSME development program for processing fishery products.
 <p>Bidang Sector Air Bersih dan Sanitasi Layak Clean Water and Sanitation</p>	<p>Program Pembuatan Sarana Air Bersih Clean Water Facilities Development Program</p>
<ul style="list-style-type: none"> • Evaluasi: Kajian, FGD, dan monitoring evaluasi. • Hasil dan pencapaian: <ul style="list-style-type: none"> - Hingga tahun 2022 terdapat 28 rumah tangga mendapatkan air bersih melalui pembangunan sarana air bersih (SAB) 	<ul style="list-style-type: none"> • Evaluation: Review, FGDs, and monitoring evaluation. • Outcomes and achievements: <ul style="list-style-type: none"> - Until 2022 there have been 28 households getting clean water through the construction of clean water facilities (SAB)



Mitigasi | Mitigation

Risiko Utama/Key Risk: Drilling Well Intervention (DWI)

1. Tersedianya peralatan dan unit pendukung (*Gas tester (fixed & Personal Gas Detector) weather monitoring display, Rig Stability Monitoring, Standby vessel (fifi boat & Oil Spill Response Equipment) & Fast Rescue Craft (FRC)*).
 2. Tersedia peralatan keselamatan, penanggulangan emergency, dan evakuasi (*Emergency Safety Device, Blow Out Prevention, CO₂ System, double thruster boat fall arrestor, welding, habitat, peralatan venting hose, dan check valve*), *Life Saving Appliance (Lifeboat, Liferaft, Life ring/buoy)*).
 3. Terdapat jalur evakuasi dan area berkumpul yang telah ditetapkan.
 4. Barikade dan *safety sign*.
 5. Instalasi Pengolahan Air Limbah (IPAL) dan izin lingkungan.
 6. Program komunikasi dan konsultasi (sosialisasi community development dan *Pre-Job Safety Meeting, Toolbox Meeting, General HSSE Meeting*).
 7. Komunikasi bahaya dan risiko (*toolbox talk, public announce, rapat sebelum pelaksanaan pekerjaan, dan sharing pembelajaran (SSD & LLD)*).
 8. Penyediaan *Execution Plan* termasuk aspek HSSE.
 9. Peralatan yang tersertifikasi.
 10. Program inspeksi peralatan berkala dan sebelum bekerja (*pre-use inspection*).
 11. Informasi pendukung (*weather forecast, anchor pattern, MSTKP, dan Material Safety Data Sheet*).
 12. Personil yang berkompeten, tersertifikasi, dan dipastikan dengan mekanisme *Safety Behavior and Technical Competency (SBTC)*.
 13. Program *Observation and Intervention: Pengamatan Keselamatan Kerja (PEKA), Safety Marshall, Observasi & Intervensi Tempat dan Posisi Kerja Selamat (SI-TEPAT)*.
 14. Prosedur pelaksanaan pekerjaan.
 15. Prosedur pendukung pelaksanaan pekerjaan (*Sistem Izin Kerja Aman (SIKA), Simultant Operations (SIMOPs) guideline, working at height, manual handling procedure, rig towing, prosedur chemical handling, MSDS, prosedur lingkungan, OH IH Guideline, Security & Panduan Handling Bahan Peledak*).
 16. Kontrak kerja sama dengan penyedia peralatan dan jasa penanggulangan kondisi darurat.
 17. Implementasi Sistem Ijin Kerja Aman (SIKA), termasuk pelatihan personel, identifikasi bahaya, penilaian risiko, penetapan dan pelaksanaan pengendalian.
 18. Pelaksanaan *Contractor Safety Management System (CSMS)* dan HSE Plan.
 19. *Emergency Response Plan (ERP), Oil Spill Response Team (OSRT), Well Control Barge/Rig Emergency Response Team (BERT / RERT), Oil Spill Response Equipment (OSRE)*, dan rencana Tanggap darurat Evakuasi COVID-19.
 20. Sarana pengelolaan limbah serbuk dan lumpur bor bekas pemboran.
 21. Pemeriksaan kondisi lingkungan kerja (*gas test, pencahayaan, kebisingan, dan udara ambient*).
 22. *Housekeeping*.
 23. *Health surveillance*, petugas medis, dan obat-obatan terlarang, tes alkohol, tes HIV, tes dan antigen.
1. Availability of equipment and supporting units (*Gas tester (fixed & Personal Gas Detector) weather monitoring display, Rig Stability Monitoring, Standby vessel (fifi boat & Oil Spill Response Equipment) & Fast Rescue Craft (FRC)*).
 2. Available of safety equipment, emergency response, and evacuation (*Emergency Safety Device, Blow Out Prevention, CO₂ System, double thruster boat fall arrestor, welding, habitat, venting hose equipment, and check valve*), *Life Saving Appliance (Lifeboat, Liferaft, Life ring/buoy)*.
 3. There is a predetermined evacuation route and Muster Point.
 4. Barricades and safety signs.
 5. Wastewater Treatment Plant (WWTP) and environmental permit.
 6. Communication and consultation program (dissemination of community development and *Pre-Job Safety Meeting, Toolbox Meeting, General HSSE Meeting*).
 7. Hazard and risk communication (*toolbox talk, public announcement, pre-job meeting, and sharing lesson learn (SSD & LLD)*).
 8. Provision of *Execution Plan* including HSSE aspects.
 9. Certified equipment.
 10. Periodic and pre-use inspection program for equipment.
 11. Supporting information (*weather forecast, anchor pattern, MSTKP, and Material Safety Data Sheet*).
 12. Personnel who are competent, certified, and assured by the mechanism of *Safety Behavior and Technical Competency (SBTC)*.
 13. *Observation and Intervention Program: Safe Working Observation (PEKA), Safety Marshall, Observation & Intervention Place & Position Safe (SI-TEPAT)*.
 14. Work execution procedures.
 15. Supporting procedures for the implementation of work (*Safe Work Permit System (SIKA), Simultaneous Operations (SIMOPs) guidelines, working at height, manual handling procedures, rig towing, chemical handling procedures, MSDS, Environmental procedures, OH IH Guideline, Security & Explosive Handling*).
 16. Cooperation contracts with providers of emergency response services & equipment.
 17. SIKA Implementation, including personel training, hazard identification, risk assessment, establishment and implementation of controls.
 18. Implementation of *Contractor Safety Management System (CSMS)* and HSE Plan.
 19. *Emergency Response Plan (ERP), Oil Spill Response Team (OSRT), Well Control Barge/Rig Emergency Response Team (BERT / RERT), Oil Spill Response Equipment (OSRE)*, and COVID-19 Evacuation Emergency Response Plan.
 20. Drilling Used mud & cutting management facility.
 21. Inspection of working environment conditions. (*gas test, lux, noise, and ambient*).
 22. *Housekeeping*.
 23. *Health surveillance*, medical staff, and dan drug, alcohol test, HIV test, and antigen test.



24. Alat Pelindung Diri (APD) standar (*coverall, safety helmet, safety shoes, safety glass, dan safety glove*).
25. APD khusus (*heavy duty hand glove, work vest, apron, full body harness & lanyard, masker, face shield, life jacket, full body chemical suit, special chemical/ dust mask, dan rubber glove*).
26. APD khusus penanganan penyakit menular (*Tyvex, Masker N95, sarung tangan karet, masker medis, dan goggles*).

24. Standard Personal Protective Equipment (PPE) (*coverall, safety helmet, safety shoes, safety glass, and safety gloves*).
25. Special PPE (*heavy duty hand gloves, work vest, apron, full body harness & lanyard, mask, face shield, life jacket, full body chemical suit, special chemical/dust mask, and rubber gloves*).
26. Special PPE for handling infectious diseases (*Tyvex, N95 masks, rubber gloves, medical masks, and goggles*).

Mitigasi | Mitigation

Risiko Utama/Key Risk: Proyek | Project

1. Tersedia peralatan keselamatan dan penanggulangan emergency *Life Saving Appliance (Life ring/ buoy)*.
2. *Personal Gas Detector, Welding Habitat, Fire Extinguisher, dan Fire Blanket*.
3. Prosedur pelaksanaan pekerjaan (SIKA, *Lifting procedure, Lifting Plan, welding cutting grinding procedure, hot work & habitat procedure*).
4. *Job Safety Analysis (JSA), Permit to Work (PTW), dan tool box talk*.
5. Sosialisasi comdev dan *hand & finger campaign*.
6. *Health surveillance, petugas medis, dan PCR Test*.
7. *Emergency Response Plan (ERP), tim IMT, OSRE Equipment, ESRT PHE ONWJ, OSRT, weather forecast*, prosedur penanganan tumpahan, rencana tanggap darurat evakuasi COVID-19.
8. Personil yang berkompeten, tersertifikasi, dan dipastikan dengan mekanisme *Safety Behavior and Technical Competency (SBTC)*, dan *rotation work shift time*.
9. Pelaksanaan CSMS dan *HSE Plan*.
10. *Barricade, safety sign, dan poster*.
11. *Pre-job meeting & pre-use inspection*
12. APD Standar.
13. APD Khusus (*heavy duty hand glove, sarung tangan electric, fume mask, apron, face shield, welding glove, diving, dan work vest*).
14. APD Khusus penanganan suspect COVID-19 (*tyvex, masker N95, sarung tangan karet, masker medis, dan goggles*).

1. Available safety equipment and emergency response *Life Saving Appliance (Life ring/buoy)*.
2. *Personal Gas Detector, Welding Habitat, Fire Extinguisher, and Fire Blanket*.
3. Work implementation procedures (SIKA, *Lifting rocedure, Lifting Plan, welding cutting grinding procedure, hot work & habitat procedure*).
4. *Job Safety Analysis (JSA), Permit to Work (PTW), and toolbox talk*.
5. Comdev dissemination and *hand & finger campaign*.
6. *Health surveillance, medical staff, and PCR Test*.
7. *Emergency Response Plan (ERP), IMT team, OSRE Equipment, ESRT PHE ONWJ, OSRT, weather forecast, spill handling procedures, COVID-19 evacuation emergency response plan*.
8. Personnel who are competent, certified, and ensured by the mechanism of *Safety Behavior and Technical Competency (SBTC)*, and *rotation work shift time*.
9. Implementation of CSMS and *HSE Plan*.
10. *Barricades, safety signs, and posters*.
11. *Pre-job meeting & pre-use inspection*.
12. Standard PPE.
13. Special PPE (*heavy duty hand gloves, electric gloves, fume mask, apron, face shield, welding gloves, diving, and work vest*).
14. Special PPE for handling COVID-19 suspects (*tyvex, N95 masks, rubber gloves, medical masks, and goggles*).





Pernyataan Assurance Independen

Independent Assurance Statement



Independent Assurance Statement

The 2022 Sustainability Report of PT Pertamina Hulu Energi Offshore North West Java

Number	: 20/000-174/VIII/2023/SR-Asia/Indonesia
Assurance Type	: Type 1 and Type 2 on the specific topic of Emission Control and Energy Efficiency
Assurance Level	: Moderate
Reporting Standards	: GRI Universal Standard 2021 Consolidated, GRI 11 OGSS, and IPIECA
Reporting Regulation	: Sustainable Finance Regulation POJK No. 51/POJK.03/2017 (Indonesia)

Dear stakeholders,

PT Pertamina Hulu Energi Offshore North West Java (“the Company”) has engaged **PT Sejahtera Rambah Asia** or what is known as **Social Responsibility Asia Indonesia** (“SR Asia Indonesia”) which is a network of **SR Asia India** to assess its **2022 Sustainability Report** (“the Report”) for the Reporting period of **January 1st to December 31st, 2022**. The Reporting Organization is headquartered in Jakarta and operates in Indonesia. The Reporting Organization is a subsidiary of PT Pertamina Hulu Energi and into oil and gas sourcing business in the North-side offshore area of the West Java Province in Indonesia. This Independent Assurance Statement (“the Statement”) represents the outcomes of the assurance work carried out using agreed-upon methods and approaches as agreed by the “Management.”

Intended User and Purpose

The purpose of the Statement is to present our opinion including the findings and recommendations based on the results of assurance work to the Company’s stakeholders. The assesor team in accordance with specific procedures and a specific scope of work carried out the assessment. Except for the areas covered in the scope of the assurance, we encourage all NOT to solely interpret the Statement as the basis to conclude the Company’s overall sustainability performance.

Responsibilities

Our responsibilities to the Management are to evaluate the Report content, come up with findings and recommendations, and issue the Statement. We are also responsible for coming up with conclusions and recommendations based on the agreed standards, methods, and approaches. Hence, SR Asia is only evaluated for the latest received editorial and data on the final draft as of August 30th, 2023. SR Asia is only responsible to deliver assurance work, NOT an audit, by following the Non-Disclosure Agreement, the Assurance Engagement Agreement, Representation Letter, and Subsequent Event Testing. The Management has its sole responsibility for the presentation of data, information, and disclosures in the Report content. Therefore, any parties who depend on the Report and this Statement shall bear and manage their risks.

Independence, Impartiality, and Competency

SR Asia confirms NO relationships between the assesor team and the clients that can influence their independence and impartiality to conduct the assessment and generate the Statements. The assesor team is mandated to follow a particular assurance protocol and professional ethical code of conduct to ensure their objectivity and integrity. We carried out a pre-engagement assessment before the assurance work was taken to verify the risks of engagement as well as the independence and impartiality of the team. The assesor team members have knowledge of ISO 26000, AA1000

SR Asia Independent Assurance Statement, version 2023, page 1 of 4

AccountAbility standards and principles, and also have experience in sustainability and sustainability report assessment based on various reporting regulations, standards and principles such as POJK No. 51/POJK.03/2017 (POJK 51) regulation, Circular Letter of OJK (SEOJK No.16/SEOJK.03/2021), GRI Standard 2021 Consolidated, GRI 11 Oil and Gas Supplement Sector (OGSS) and the IPIECA Sustainability Reporting Guidance for the Oil and Gas Industry 4th edition 2020.

Type and Level of Assurance Service

1. **Type 1 assurance** on the Report content.
2. **Type 2 assurance** on Emission Control and Energy Efficiency.
3. **A moderate level of assurance** to the procedure on the Report content and evidence, where the risks of information and conclusions of the Report being error is reduced, but not to very low, but not zero.

Scope and Limitation of Assurance Service

1. Data and information in the Report for the period of **January 1st to December 31st, 2022**.
2. Material topics presented in the Report: **Environmental Compliance, Emission Control, Energy Efficiency, Biodiversity, Occupational Health and Safety, Involvement of Local Community, Anti-Corruption, and Economic Performance**.
3. Evaluation of publicly disclosed information, system, and process of the Company to ensure adherence of the Report content to the Reporting principles.
4. SR Asia does NOT include financial data, information, and figures in the Report content. We assumed that the Company, independent parties, or other parties associated with the Company have verified and/or audited financial statements, data, and information.
5. Adherence to the following reporting principles, standards, and regulations:
 - a) Consolidated set of GRI Sustainability Reporting Standards 2021 (GRI Universal Standards) and GRI 11 Oil and Gas Sector Supplement Sector (OGSS) issued by the Global Reporting Initiative.
 - b) Regulation of Otoritas Jasa Keuangan (OJK) No.51/POJK.03/2017 regarding the Implementation of Sustainable Finance for Financial Service Institution, Listed, and Public Companies (POJK 51) with reference to OJK Circular Letter (SEOJK) 2022 No.16/SEOJK.04/2021.
 - c) IPIECA Sustainability Reporting Guidance for the Oil and Gas Industry 4th edition 2020 (IPIECA).

Exclusion

1. The expression of opinion, belief, expectation, advertisement, and also forward-looking statements, including future planning of the Company as specified in the Report content.
2. Analysis or assessment against regulations, principles, standards, guidelines, and indicators other than those indicated in the Statement.
3. Topics, data, and information outside the Reporting period, or in the public domain not covered in the Reporting period.
4. Financial performance data and information as presented in the Company's financial statements and documents, other than those mentioned in the Report.

Methodology and Source Disclosure

1. Form an assessor team whose members are capable in sustainability and sustainability report development and assurance.
2. Perform the pre-engagement phase to ensure the independence and impartiality of the assessor team.
3. Hold a kick-off meeting and initial analysis of the Report draft based on the SR Asia Protocol on Assurance Analysis refers to the standards, principles, and indicators of AA1000AS v3, AA1000APS (2018), and standards/regulations used in the Report.

SR Asia Independent Assurance Statement, version 2023, page 2 of 4



4. Discuss online the results of the analysis with the Management and data contributors.
5. Verify evidence and trace data and information as covered in the Report.
6. The Company incorporated our recommendations in the draft Report and release the final Report content.
7. Prepare the Statement and send it to SR Asia International Director for review to get approval before submitting it to the Company.
8. Prepare a Management Letter detailing all aspects seen, recorded, and observed during the assurance work to the Management of the Company for further improvement of sustainability processes.

Adherence to AA1000AP (2018) and GRI Universal Standards

Inclusivity – The Report presents comprehensive information about the Company's core stakeholder groups. The substance of the report indicates the Company's commitment to integrate the stakeholder engagement process across all organizational functions. Moreover, the stakeholder engagement activities have included a variety of approaches and strategies.

Materiality – Eight of the Material topics in the Report have fairly explained the sustainability context of the Company. We appreciate the Company has conducted internal discussions to identify material topics. However, in order to ensure the accuracy and reliability of the materiality of the Report content, the Company is expected to perform materiality testing to evaluate material topics systematically based on specific criteria or thresholds. Materiality assessment shall also be linked to risk management, regulation reviews, and analysis of the internal policies and procedures of the Company.

Responsiveness – The Company has sufficiently created and regularly responded to stakeholders' concerns, as described in the contents of the Report. We also appreciate the Company already has a mechanism for the submission of critical matters by Stakeholders which can be accessed by internal and external parties.

Impact – According to the Report, we conclude that the Company has given sufficient quantitative and qualitative information about how its activities and business decisions affect the economic, environmental, and social aspects. The Company achieved better economic value than last year due to increasing average oil prices. From an economic perspective, revenue and profit for the year rose in 2022. In the other hand, despite applying ISO 50001:2011 and other relevant standards and laws for energy use, the consumption of energy and emission generated increased from the previous year. The rise was due to several new projects that commenced in 2022. The Company has also conducted a social mapping in order to update the development of current CID programs. There was an increase in terms of number beneficiaries as well as impact on socio-economic and environmental from CID programs. Through a Focus Group Discussion (FGD) process, the Company periodically assesses the effectiveness of the implemented programs/activities in collaboration with the community and program implementers.

Statement of Use: "In Accordance with the GRI Standards" – We evaluated the Report content against the GRI Universal Standards principles, disclosures, and requirements for reporting. Therefore, we concluded the Company has complied with nine requirements: apply the Reporting principles, report the disclosures in GRI 2: General Disclosures 2021, determine material topics, report the disclosures in GRI 3: Material Topics 2021, report disclosures from the GRI Topic Standards for each material topic, provide reasons for omission for disclosures and requirements that the organization cannot comply with, publish a GRI content index, provide a statement of use, and notify GRI.



GRI Standards Principles – As the assurance work was taken, the Report content indicates its adherence to the Reporting principles (accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness, and verifiability). The Management provided sufficient support during the assurance work by submitting evidence/documents as requested.

Type 2 Assurance – Based on our assessment and analysis, the management and business units related to emissions and energy management already have well-implemented work standards, where targets to be achieved in the short, medium, and long terms have been made by the company and communicated well at the management level. The Board of Directors has also carried out its functions and responsibilities well in its involvement in monitoring emissions and energy management by periodically reviewing reports made at the general manager level. However, we have records and challenges for management to start calculating emission scope 3 and to carry out emission reduction programs at the scope 3 level, which indirectly involves the company's suppliers in emission reduction programs, which currently have not been implemented in programs and policies by the management team.

Recommendation

1. To develop an information management system that is reliable, strong, and integrated across functions, that covers data and information on sustainability performance. It should be developed using digital information technologies in accordance with the standards, procedures, and approaches for reporting on sustainability.
2. To conduct ISO 37001:2016 in order to strengthen the system for preventing, detecting, and managing bribery.
3. To implement a materiality testing method which is designed using specific criteria and thresholds for measuring results at several levels and identifying material topic in a sustainability report.

The assurance provider,

Jakarta, August 30th 2023



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Referensi POJK 51, Indeks Isi Standar GRI (2021), GRI Spesifik Indikator: Oil and Gas Sector (2021), dan IPIECA Sustainable Guidance

Reference POJK 51, GRI Standard Content Index (2021), GRI Specific Indicator: Oil and Gas Sector (2021), and IPIECA Sustainable Guidance

Referensi POJK No.51/POJK.03/2017

Reference POJK No.51/POJK.03/2017

No Indeks No Index	Nama Indeks Index Name	Halaman Page
Strategi Keberlanjutan Sustainability Strategy		
A.1	Penjelasan Strategi Keberlanjutan Elaboration on Sustainability Strategy	25
Ikhtisar Kinerja Aspek Keberlanjutan Summary of Sustainability Aspect Performance		
B.1	Aspek Ekonomi Economic Aspects	2
B.2	Aspek Lingkungan Hidup Environmental Aspects	3
B.3	Aspek Sosial Social Aspects	4
Profil Perusahaan Company Profile		
C.1	Visi, Misi, dan Nilai Keberlanjutan Vision, Mission, and Values of Sustainability	12
C.2	Alamat Perusahaan Company's Address	13
C.3	Skala Usaha Enterprise Scale	13,14
C.4	Produk, Layanan, dan Kegiatan Usaha yang Dijalankan Products, Services, and Business Activities	16
C.5	Keanggotaan pada Asosiasi Membership in Association	16
C.6	Perubahan Emiten dan Perusahaan Publik yang Bersifat Signifikan Significant Changes in Issuers and Public Companies	13
Penjelasan Direksi The Board of Directors' Explanation		
D.1	Penjelasan Direksi The Board of Directors' Explanation	6-10
Tata Kelola Keberlanjutan Sustainability Governance		
E.1	Penanggung Jawab Penerapan Keuangan Berkelanjutan Responsible for Implementing Sustainable Finance	89
E.2	Pengembangan Kompetensi Terkait Keuangan Berkelanjutan Competency Development Related to Sustainable Finance	93
E.3	Penilaian Risiko atas Penerapan Keuangan Berkelanjutan Risk Assessment of the Implementation of Sustainable Finance	89-90
E.4	Hubungan dengan Pemangku Kepentingan Relations with Stakeholders	23-24
E.5	Permasalahan terhadap Penerapan Keuangan Berkelanjutan Problems with the Implementation of Sustainable Finance	9-10
Kinerja Keberlanjutan Sustainability Performance		
F.1	Kegiatan Membangun Budaya Keberlanjutan Sustainable Culture Development Activities	25
Kinerja Ekonomi Economic Performance		
F.2	Perbandingan Target dan Kinerja Produksi, Portofolio, Target Pembiayaan, atau Investasi, Pendapatan dan Laba Rugi Comparison of targets to performance of production, portfolio, financing targets, or investments, revenue as well as profit and loss	97
F.3	Perbandingan Target dan Kinerja Portofolio, Target Pembiayaan, atau Investasi pada Instrumen Keuangan atau Proyek yang Sejalan dengan Keuangan Berkelanjutan Comparison of target to performance of portfolio, financing target, or investments in financial instruments or projects in line with the implementation of Sustainable Finance	85
Kinerja Lingkungan Hidup Environmental Performance		
Aspek Umum General Aspect		
F.4	Biaya Lingkungan Hidup Environmental Costs That Incur	45-46
Aspek Material Material Aspect		
F.5	Penggunaan Material yang Ramah Lingkungan Use of Environmentally Friendly Materials	46
Aspek Energi Energy Aspect		
F.6	Jumlah dan Intensitas Energi yang Digunakan Amount and Intensity of Energy Used	33,34



No Indeks No Index	Nama Indeks Index Name	Halaman Page
F.7	Upaya dan Pencapaian Efisiensi Energi dan Penggunaan Energi Terbarukan Efforts and Achievements of Energy Efficiency and Use of Renewable Energy	35-38
Aspek Air Water Aspect		
F.8	Penggunaan Air Water usage	47-50
Aspek Keanekaragaman Hayati Aspects of Biodiversity		
F.9	Dampak dari Wilayah Operasional yang Dekat atau Berada di Daerah Konservasi atau Memiliki Keanekaragaman Hayati Impacts from Operational Areas that are Near or Located in Conservation Areas or Have Biodiversity	39-40
F.10	Usaha Konservasi Keanekaragaman Hayati Biodiversity Conservation Efforts	40-45
Aspek Emisi Emission Aspect		
F.11	Jumlah dan Intensitas Emisi yang Dihasilkan Berdasarkan Jenisnya Total and Intensity of Emissions Generated by Type	28,29
F.12	Upaya dan Pencapaian Pengurangan Emisi yang Dilakukan Efforts and Achievements of Emission Reduction Made	30
Aspek Limbah dan Efluen Waste and Effluent Aspects		
F.13	Jumlah Limbah dan Efluen yang Dihasilkan Berdasarkan Jenis Amount of Waste and Effluent Generated by Type	53,54
F.14	Mekanisme Pengelolaan Limbah dan Efluen Waste and Effluent Management Mechanism	50-52,53-57
F.15	Tumpahan yang Terjadi (jika ada) Occurring Spills (if any)	57
Aspek Pengaduan Terkait Lingkungan Hidup Complaint Aspects Related to the Environment		
F.16	Jumlah dan Materi Pengaduan Lingkungan Hidup yang Diterima dan Diselesaikan Number and Material of Environmental Complaints Received and Resolved	57,58
Kinerja Sosial Social Performance		
F.17	Komitmen untuk Memberikan Layanan atas Produk dan/atau Jasa yang Setara kepada Konsumen Commitment to Provide Services on Equal Products and/or Services to Consumers	82-83
Aspek Ketenagakerjaan Employment Aspect		
F.18	Kesetaraan Kesempatan Bekerja Equal Employment Opportunity	75
F.19	Tenaga Kerja Anak dan Tenaga Kerja Paksa Child Labor and Forced Labor	75
F.20	Upah Minimum Regional Regional Minimum Wage	80
F.21	Lingkungan Bekerja yang Layak dan Aman Decent and Safe Work Environment	61
F.22	Pelatihan dan Pengembangan Kemampuan Pegawai Employee Capability Training and Development	81-82
Aspek Masyarakat Community Aspect		
F.23	Dampak Operasi terhadap Masyarakat Sekitar Impact of Operations on Surrounding Communities	71-72
F.24	Pengaduan Masyarakat Community Complaints	71-72
F.25	Kegiatan Tanggung Jawab Sosial Lingkungan (TJSL) Corporate Social Responsibility (CSR)	73-74
Tanggung Jawab Pengembangan Produk/Jasa Berkelanjutan Responsibility for Sustainable Product/Service Development		
F.26	Inovasi dan Pengembangan Produk/Jasa Keuangan Berkelanjutan Innovation and Development of Sustainable Financial Products/Services	70
F.27	Produk/Jasa yang Sudah Dievaluasi Keamanannya bagi Pelanggan Products/Services That Have Been Evaluated for Safety for Customers	70,82
F.28	Dampak Produk/Jasa Product/Service Impact	70
F.29	Jumlah Produk yang Ditarik Kembali Number of Product Recalls	70
F.30	Survei Kepuasan Pelanggan terhadap Produk dan/atau Jasa Keuangan Berkelanjutan Customer Satisfaction Survey on Sustainable Financial Products and/or Services	82-83
Lain-lain Others		
G.1	Verifikasi Tertulis dari Pihak Independen (jika ada) Written Verification from Independent Party (if any)	20
G.2	Lembar Umpan Balik Feedback Sheet	20
G.3	Tanggapan terhadap Umpan Balik Laporan Keberlanjutan Tahun Sebelumnya Responses to Feedback on the Previous Year's Sustainability Report	20



Indeks Isi Standar GRI (2021)

GRI Standards Content Index (2021)

Pernyataan Penggunaan Statement of Use	PHE ONWJ telah melaporkan sesuai dengan Standar GRI untuk periode 1 Januari hingga 31 Desember 2022. PHE ONWJ has reported in accordance with the GRI Standards for the period 1 January to 31 December 2022.
GRI 1 yang digunakan GRI 1 used	GRI 1: Landasan 2021 GRI 1: Foundation 2021
Standar Sektor GRI yang Berlaku Applicable GRI Sector Standard	GRI 11: Sektor Minyak dan Gas 2021 GRI 11: Oil and Gas Sector 2021

GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 2: Pengungkapan Umum 2021 General Disclosures 2021	2-1 Detail organisasi Organization details	13,14				
	2-2 Entitas yang termasuk dalam pelaporan keberlanjutan Entities included in the organization's sustainability reporting	19				
	2-3 Periode pelaporan, frekuensi, dan kontak Reporting period, frequency and contact point	19				
	2-4 Pernyataan ulang informasi Restatements of information	3,4,19,55,56, 66,67,68				
	2-5 Jaminan eksternal External assurance	20				
	2-6 Aktivitas, rantai nilai, dan hubungan bisnis lainnya Activities, value chain and other business relationships	16				
	2-7 Karyawan Employees	14				
	2-8 Pekerja yang bukan karyawan Workers who are not employees	14				
	2-9 Struktur dan komposisi tata kelola Governance structure and composition	89				
	2-10 Nominasi dan pemilihan badan tata kelola tertinggi Nomination and selection of the highest governance body	89				
	2-11 Ketua badan tata kelola tertinggi Chair of the highest governance body	89				
	2-12 Peran badan tata Kelola tertinggi dalam mengawasi pengelolaan dampak Role of the highest governance body in overseeing the management of impacts	90				
	2-13 Pendelegasian tanggung jawab untuk mengelola dampak Delegation of responsibility for managing impacts	89				
	2-14 Peran badan tata kelola tertinggi dalam pelaporan keberlanjutan Role of the highest governance body in sustainability reporting	20				
	2-15 Konflik kepentingan Conflicts of interest	91				
	2-16 Komunikasi hal-hal penting Communication of critical concerns	91,92				



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 2: Pengungkapan Umum 2021 General Disclosures 2021	2-17 Pengetahuan kolektif dari badan tata kelola tertinggi Collective knowledge of the highest governance body	93				
	2-18 Evaluasi kinerja badan tata kelola tertinggi Evaluation of the performance of the highest governance body	94				
	2-19 Kebijakan remunerasi Remuneration policy	93				
	2-20 Proses untuk menentukan remunerasi Process to determine remuneration	93				
	2-21 Rasio kompensasi total tahunan Annual total compensation ratio	93				
	2-22 Pernyataan tentang strategi pembangunan berkelanjutan Statement on sustainable development strategy	25				
	2-23 Komitmen kebijakan Policy commitments	12,25,84-85				
	2-24 Menanamkan komitmen kebijakan Embedding policy commitments	25				
	2-25 Proses untuk memulihkan dampak negatif Processes to remediate negative impacts	27,89				
	2-26 Mekanisme pemberian umpan balik/saran dan kekhawatiran Mechanisms for seeking advice and raising concerns	101				
	2-27 Kepatuhan terhadap hukum dan peraturan Compliance with laws and regulations	45-46,91,93				
	2-28 Asosiasi keanggotaan Membership associations	16				
	2-29 Pendekatan keterlibatan pemangku kepentingan Approach to stakeholder engagement	23				
2-30 Perjanjian kerja bersama Collective bargaining agreements	75					
GRI 3: Topik Material Material Topics	3-1 Proses penentuan topik material Process to Determine material topics	21				
	3-2 Daftar topik material List of material topics	21				
	3-3 Manajemen topik material Management of material topics	21				11.1.1 11.3.1 11.4.1 11.9.1 11.15.1 11.20.1
GRI 20 Kinerja Ekonomi 2016 Economic Performance 2016	201-1 Nilai ekonomi langsung yang dihasilkan dan didistribusikan Direct economic value generated and distributed	99-100				11.14.2 11.21.2
	201-2 Implikasi finansial serta risiko dan peluang lain akibat dari perubahan iklim Financial implications due to climate change	100				



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 20 Kinerja Ekonomi 2016 Economic Performance 2016	201-3 Kewajiban program pensiun manfaat pasti dan program pensiun lainnya Defined benefit plan obligations and other retirement plans	100				
	201-4 Bantuan finansial yang diterima dari pemerintah Financial assistance received from government	100				11.21.3
GRI 202 Keberadaan Pasar 2016 Market Presence 2016	202-1 Rasio standar upah karyawan entry-level berdasarkan jenis kelamin terhadap upah minimum regional Ratios of standard entry level wage by gender compared to local minimum wage	80				
	202-2 Proporsi manajemen senior yang berasal dari masyarakat lokal Proportion of senior management hired from the local community	78				11.11.2 11.14.3
GRI 203 Dampak Ekonomi Tidak Langsung 2016 Indirect Economic Impacts 2016	203-1 Investasi infrastruktur dan dukungan layanan Infrastructure investments and services supported	73, 118-120				
	203-2 Dampak ekonomi tidak langsung yang signifikan Significant indirect economic impacts	73				11.14.5
GRI 204 Praktik Pengadaan 2016 Procurement Practices 2016	204-1 Proporsi pengeluaran untuk pemasok lokal Proportion of spending on local suppliers	102				11.14.6
GRI 205 Antikorupsi 2016 Anti-corruption 2016	205-1 Operasi-operasi yang dinilai memiliki risiko terkait korupsi Operations assessed for risks related to corruption	92				11.20.2
	205-2 Komunikasi dan pelatihan tentang kebijakan dan prosedur anti-korupsi Communication and training about anti-corruption policies and procedures	92,93				11.20.3
	205-3 Insiden korupsi yang terbukti dan tindakan yang diambil Confirmed incidents of corruption and actions taken	93				11.20.4
GRI 206 Perilaku Anti- persaingan 2016 Anti-competitive Behavior 2016	206-1 Langkah-langkah hukum untuk perilaku anti-persaingan, praktik anti-trust dan monopoli Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	93				11.19.2
GRI 207 Pajak 2019 Tax 2019	207-1 Pendekatan terhadap pajak Approach to tax	101				11.21.4
	207-2 Tata kelola, pengendalian, dan manajemen risiko pajak Tax governance, control, and risk management --	101				11.21.5
	207-3 Keterlibatan pemangku kepentingan dan pengelolaan perhatian yang berkaitan dengan pajak Stakeholder engagement and management of concerns related to tax	101				11.21.6
	207-4 Laporan per negara Country-by-country reporting	101				11.21.7



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 301 Material 2016 Materials 2016	301-1 Material yang digunakan berdasarkan berat atau volume Materials used by weight or volume	96				
	301-2 Material input dari daur ulang yang digunakan Recycled input materials used	96				
	301-3 Produk reclaimed dan material kemasannya Reclaimed products and their packaging materials	96				
GRI 302 Energi 2016 Energy 2016	302-1 Konsumsi energi dalam organisasi Energy consumption within the organization	33,34				11.1.2
	302-2 Konsumsi energi di luar organisasi Energy consumption outside of the organization	33				11.1.3
	302-3 Intensitas energi Energy intensity	34				11.1.4
	302-4 Pengurangan konsumsi energi Reduction of energy consumption	35				
	302-5 Pengurangan pada energi yang dibutuhkan untuk produk dan jasa Reductions in energy requirements of products and services	36				
GRI 303 Air dan Efluen 2018 Water and Effluents 2018	303-1 Interaksi dengan air sebagai sumber daya bersama Interactions with water as a shared resource	47				11.6.2
	303-2 Manajemen dampak yang berkaitan dengan pembuangan air Management of water discharge-related impacts	47,48-49,50,51,52				11.6.3
	303-3 Pengambilan air Water withdrawal	48				11.6.4
	303-4 Pembuangan air Water discharge	48,49,50-57				11.6.5
	303-5 Konsumsi air Water consumption	48,52				11.6.6
GRI 304 Keanekaragaman hayati 2016 Biodiversity	304-1 Lokasi operasional yang dimiliki, disewa, dikelola, atau berdekatan dengan Kawasan lindung dan Kawasan dengan nilai keanekaragaman hayati tinggi di luar kawasan lindung Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	39				11.4.2
	304-2 Dampak signifikan dari kegiatan, produk, dan jasa pada keanekaragaman hayati Significant impacts of activities, products, and services on biodiversity	40				11.4.3
	304-3 Habitat yang dilindungi atau direstorasi Habitats protected or restored	40				11.4.4
	304-4 Spesies Daftar Merah IUCN dan spesies daftar konservasi nasional dengan habitat dalam wilayah yang terkena efek operasi IUCN Red List species and national conservation list species with habitats in areas affected by operations	44				11.4.5
GRI 305 Emisi 2016 Emission 2016	305-1 Emisi GRK (Cakupan 1) langsung Direct (Scope 1) GHG emissions	29				11.1.5
	305-2 Emisi energi GRK (cakupan 2) tidak langsung	29				11.1.6
	305-3 Emisi GRK (Cakupan 3) tidak langsung lainnya Other indirect (Scope 3) GHG emissions	29				11.1.7



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 305 Emisi 2016 Emission 2016	305-4 Intensitas emisi GRK GHG emissions intensity	29				11.1.8
	305-5 Pengurangan emisi GRK Reduction of GHG emissions	30				
	305-6 Emisi zat perusak ozon (ODS) Emissions of ozone-depleting substances (ODS)	31				
	305-7 Nitrogen oksida (NOx), sulfur oksida (Sox), dan emisi udara signifikan lainnya Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	31,32				11.3.2
GRI 306 Limbah Waste 2020	306-1 Timbulan limbah dan dampak yang signifikan terkait limbah Waste generation and significant waste-related impacts	53,54				11.5.2
	306-2 Pengelolaan dampak yang signifikan terkait limbah Management of significant waste-related impacts	53,54				11.5.3
	306-3 Timbulan limbah Waste generated	49,53,54,55				11.5.4
	306-4 Limbah yang dialihkankan dari pembuangan akhir Waste diverted from disposal	49,53,54,55				11.5.5
	306-5 Limbah yang dikirimkan ke pembuangan akhir Waste directed to disposal	49,53,54,55				11.5.6
GRI 401 Kepegawaian 2016 Employment 2016	401-1 Perekrutan karyawan baru dan pergantian karyawan New employee hires and employee turnover	75-77				11.10.2
	401-2 Tunjangan yang diberikan kepada karyawan purnawaktu yang tidak diberikan kepada karyawan sementara atau paruh waktu Benefits provided to full-time employees that are not provided to temporary or part-time employees	80,100				11.10.3
	401-3 Cuti melahirkan Parental leave	80				11.10.4 11.11.3
GRI 402 Hubungan Tenaga Kerja/ Manajemen 2016 Labor/ Management Relations	402-1 Periode pemberitahuan minimum terkait perubahan operasional Minimum notice periods regarding operational changes	88				11.7.2 11.10.5
GRI 403 Kesehatan dan Keselamatan Kerja 2018 Occupational Health & Safety 2018	403-1 Sistem manajemen keselamatan dan kesehatan kerja Occupational health and safety management system	61,76				11.9.2
	403-2 Identifikasi bahaya, penilaian risiko, dan investigasi insiden Hazard identification, risk assessment and incident investigation	62,64,108-113,125-126				11.9.3
	403-3 Layanan kesehatan kerja Occupational health services	63,64				11.9.4



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 403 Kesehatan dan Keselamatan Kerja 2018 Occupational Health & Safety 2018	403-4 Partisipasi, konsultasi, dan komunikasi pekerja tentang keselamatan dan kesehatan kerja Worker participation, consultation, and communication on occupational health and safety	64				11.9.5
	403-5 Pelatihan bagi pekerja mengenai keselamatan dan kesehatan kerja Worker training on occupational health and safety	65,117				11.9.6
	403-6 Peningkatan kualitas kesehatan pekerja Promotion on worker health	64				11.9.7
	403-7 Pencegahan dan mitigasi dampak dari keselamatan dan kesehatan kerja yang secara langsung terkait hubungan bisnis Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	64,65-66				11.9.8
	403-8 Pekerja yang tercakup dalam sistem manajemen keselamatan dan kesehatan kerja Workers covered by an occupational health and safety management system	61,62				11.9.9
	403-9 Kecelakaan kerja Work-related injuries	66-67				11.9.10
	403-10 Penyakit akibat kerja Work-related ill health	63-64,66				11.9.11
GRI 404 Pelatihan dan Pendidikan 2016 Training and Education 2016	404-1 Rata-rata jam pelatihan per tahun per karyawan Average hours of training per year per employee	81				11.10.6 11.11.7
	404-2 Program untuk meningkatkan keterampilan karyawan dan program bantuan peralihan Programs for upgrading employee skills and transition assistance programs	81,82				11.7.3 11.10.7
	404-3 Persentase karyawan menerima evaluasi kinerja dan pengembangan karir Percentage of employees receiving regular performance and career development reviews	78				
GRI 405 Keanekaragaman dan Kesempatan Setara Diversity and Equal Opportunity 2016	405-1 Keanekaragaman badan tata kelola dan karyawan Diversity of governance bodies and employees	78				11.11.4
	405-2 Rasio gaji pokok dan remunerasi perempuan dibandingkan laki-laki Ratio of basic salary and remuneration of women to men	78,80				11.11.5
GRI 406 Non-diskriminasi Non-discrimination 2016	406-1 Insiden diskriminasi dan tindakan perbaikan yang dilakukan Incidents of discrimination and corrective actions taken	83				11.11.6
GRI 407 Kebebasan Berserikat dan Perundingan Kolektif 2016 Freedom of Association and Collective Bargaining 2016	407-1 Operasi dan pemasok di mana hak atas kebebasan berserikat dan perundingan kolektif mungkin berisiko Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	75				11.13.2



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 408 Pekerja Anak 2016 Child Labor 2016	408-1 Operasi dan pemasok yang berisiko signifikan terhadap insiden pekerja anak Operations and suppliers at significant risk for incidents of child	75				
GRI 409 Kerja Paksa atau Wajib Kerja 2016 Forced or Compulsory Labor 2016	409-1 Operasi dan pemasok yang berisiko signifikan terhadap insiden kerja paksa atau wajib kerja Operations and suppliers at significant risk for incidents of forced or compulsory labor	75				11.12.2
GRI 410 Praktik Keamanan Security Practices	410-1 Petugas keamanan yang dilatih mengenai kebijakan atau prosedur hak asasi manusia Security personnel trained in human rights policies or procedures	84				11.18.2
GRI 411 Hak-Hak Masyarakat Adat 2016 Rights Of Indigenous Peoples	411-1 Insiden pelanggaran yang melibatkan hak-hak masyarakat adat Incidents of violations involving rights of indigenous peoples	72,85				11.17.2
GRI 412 Penilaian Hak Asasi Manusia 2016 Human Rights Assessment	412-1 Operasi-operasi yang telah melewati tinjauan hak asasi manusia atau penilaian dampak Operations that have been subject to human rights reviews or impact assessments	84-85				
	412-2 Pelatihan karyawan mengenai kebijakan atau prosedur hak asasi manusia Employee training on human rights policies or procedures	84				
	412-3 Perjanjian dan kontrak investasi signifikan yang memasukkan klausul-klausul hak asasi manusia atau yang telah melalui penyaringan hak asasi manusia Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	85				
GRI 413 Masyarakat Lokal 2016 Local Communities	413-1 Operasi dengan keterlibatan masyarakat lokal, penilaian dampak, dan program pengembangan Operations with local community engagement, impact assessments, and development programs	71-74,121-124				11.15.2
	413-2 Operasi yang secara aktual dan yang berpotensi memiliki dampak negatif signifikan terhadap masyarakat lokal Operations with significant actual and potential negative impacts on local communities	72				11.15.3
GRI 414 Penilaian Sosial Pemasok 2016 Supplier Social Assesment 2016	414-1 Seleksi pemasok baru dengan menggunakan kriteria sosial New suppliers that were screened using social criteria	86,102				11.10.8 11.12.3
	414-2 Dampak sosial negatif dalam rantai pasokan dan tindakan yang telah diambil Negative social impacts in the supply chain and actions taken	86,102				11.10.9



GRI Indeks Index GRI	Pengungkapan Disclosure	Lokasi Location	Yang Tidak Dicantumkan Omission			No. Rujukan Standar SektorGRI GRI Sector Standard Ref. No.
			Persyaratan yang tidak dicantumkan Requirement(s) omitted	Alasan Reason	Penjelasan Explanation	
GRI 415 Kebijakan Publik 2016 Public Policy	415-1 Kontribusi politik Political contributions	86				11.22.2
GRI 416 Kesehatan dan Keselamatan Pelanggan 2016 Customer Health and Safety 2016	416-1 Penilaian dampak kesehatan dan keselamatan dari berbagai kategori produk dan jasa Assessment of the health and safety impacts of product and service categories	83				11.3.3
	416-2 Insiden ketidakpatuhan sehubungan dengan dampak kesehatan dan keselamatan dari produk dan jasa Incidents of non-compliance concerning the health and safety impacts of products and services	83				
GRI 417 Pemasaran dan Pelabelan 2016 Marketing and Labeling 2016	417-1 Persyaratan untuk pelabelan dan informasi produk dan jasa Requirements for product and service information and labeling	83				
	417-2 Insiden ketidakpatuhan terkait pelabelan dan informasi produk dan jasa Incidents of non-compliance concerning product and service information and labeling	83				
	417-3 Insiden ketidakpatuhan terkait komunikasi pemasaran Incidents of non-compliance concerning marketing communications	83				
GRI 418 Privasi Pelanggan 2016 Customer Privacy 2016	418-1 Pengaduan yang berdasar mengenai pelanggaran terhadap privasi pelanggan dan hilangnya data pelanggan Substantiated complaints concerning breaches of customer privacy and losses of customer data	83				



Referensi International Petroleum Industry Environmental Conservation Association (IPIECA)

Reference of International Petroleum Industry Environmental Conservation Association (IPIECA)

Topik Topic	Indikator Indicator	Pengungkapan Disclosure	Halaman Page (s)
Perubahan Iklim dan Energi Climate Change and Energy	CCE-1	Tata kelola dan strategi iklim Climate governance and strategy	27,28
	CCE-2	Risiko dan peluang iklim Climate risk and opportunities	28-29
	CCE-3	Teknologi rendah karbon Lower-carbon technology	37,38
	CCE-4	Emisi gas rumah kaca (GRK) Greenhouse gas (GHG) emissions	28
	CCE-5	Emisi metana Methane emissions	31
	CCE-6	Penggunaan energi Energy use	33,35
	CCE-7	Gas suar Flared gas	38
Lingkungan Environment	ENV-1	Air tawar Freshwater	48,52
	ENV-2	Debit air Discharges to water	48
	ENV-3	Kebijakan dan Strategi Keanekaragaman Hayati Biodiversity Policy and Strategy	40-45
	ENV-6	Tumpahan ke lingkungan Spills to the environment	57
	ENV-7	Manajemen Material Materials management	46
	ENV-8	Penonaktifan Decommissioning	59
Keselamatan, Kesehatan, dan Keamanan Safety, Health, and Security	SHS-1	Keterlibatan keselamatan, kesehatan, dan keamanan Safety, health and security engagement	61-64,67-68
	SHS-2	Tenaga kerja dan kesehatan masyarakat Workforce and community health	63,65
	SHS-3	Kecelakaan kerja dan insiden penyakit Occupational injury and illness incidents	66-67,69
	SHS-4	Keamanan transportasi Transport safety	69,70
	SHS-5	Penatalayanan produk Product stewardship	70
	SHS-6	Keamanan proses Process safety	67-68
	SHS-7	Manajemen risiko keamanan Security risk management	70,71
Sosial Social	SOC-1	Uji tuntas hak asasi manusia Human rights due diligence	84,85
	SOC-2	Pemasok dan hak asasi manusia Suppliers and human rights	86
	SOC-3	Keamanan dan hak asasi manusia Security and human rights	75,78,84,85
	SOC-4	Praktik ketenagakerjaan berbasis lokasi dan akomodasi pekerja Site-based labour practices and worker accommodation	85-86
	SOC-5	Keberagaman dan inklusi tenaga kerja Workforce diversity and inclusion	75,78,80,83
	SOC-6	Keterlibatan tenaga kerja Workforce engagement	80,84
	SOC-7	Pelatihan dan pengembangan tenaga kerja Workforce training and development	81-82
	SOC-8	Non-pembalasan tenaga kerja dan mekanisme pengaduan Workforce non-retaliation and grievance mechanisms	83
	SOC-9	Dampak dan keterlibatan komunitas Community impacts and engagement	57,71,73
	SOC-10	Keterlibatan dengan masyarakat adat Engagement with indigenous peoples	85
	SOC-11	Pembebasan lahan dan tidak sukarela pemukiman kembali Land acquisition and involuntary resettlement	85
	SOC-12	Mekanisme pengaduan masyarakat Community grievance mechanisms	72
	SOC-13	Investasi sosial Social investment	73-74
	SOC-14	Pengadaan dan pengembangan pemasok lokal Local procurement and supplier development	103
	SOC-15	Praktik perekrutan tenaga kerja lokal Local hiring practices	103



Lembar Umpan Balik

Feedback Form

Laporan Keberlanjutan 2022 PHE ONWJ ini merupakan gambaran kinerja keuangan dan keberlanjutan dalam periode 1 Januari hingga 31 Desember 2022. Kami mengharapkan masukan, kritik maupun saran dari Bapak/Ibu/Saudara setelah membaca Laporan Keberlanjutan

This 2022 Sustainability Report of PHE ONWJ is an overview of financial and sustainability performance for the period 1 January to 31 December, 2022. We are looking forward to your feedback, criticism and suggestions after reading this Sustainability Report.

PROFIL ANDA YOUR PROFILE

Nama (bila berkenan) | Name (optional):
.....
Institusi/Perusahaan | Institution/Company:
.....
Surel | Email:
.....
Telp/Hp | Phone/Mobile:
.....

GOLONGAN PEMANGKU KEPENTINGAN STAKEHOLDER GROUP

o Pemegang saham | Shareholders
o Karyawan | Employees
o Mitra Bisnis | Business Partner
o Masyarakat | Society
o Pelanggan | Customers
o Pemerintah | Government
o Media
o Lain-lain, mohon sebutkan: Others, please state:
.....

	Setuju Agree	Netral Neutral	Tidak Setuju Disagree
1. Laporan ini mudah dimengerti This report is easy to understand.	()	()	()
2. Laporan ini bermanfaat bagi Anda This report is useful for you	()	()	()
3. Laporan ini sudah menggambarkan kinerja Perusahaan dalam pembangunan berkelanjutan This report has described the Company's performance in sustainable development.	()	()	()

Topik material yang dinilai penting menurut anda bagi keberlanjutan PHE ONWJ (nilai 1 =paling tidak penting s/d 8=paling penting)
Material topics that are important to you for the sustainability of pt PHE ONWJ (score 1 =least important to 8=most important).

- o Kepatuhan Lingkungan | Environmental Compliance ()
- o Pengendalian Emisi | Emissions Control ()
- o Efisiensi Energi | Energy Efficiency ()
- o Keanekaragaman Hayati | Biodiversity ()
- o Keselamatan dan Kesehatan Kerja | Occupational Health and Safety ()
- o Pelibatan masyarakat lokal | Involvement of local communities ()
- o Antikorupsi | Anti-corruption ()
- o Kinerja Ekonomi | Economic Performance ()

Terima kasih atas masukan anda. Mohon lembar umpan balik dapat dikirim melalui:
Thank you for your feedback. Please kindly send this feedback form directly send to:

Menara Standard Chartered | Standard Chartered Tower
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Laporan Keberlanjutan **2022** Sustainability Report

Menara Standard Chartered | Standard Chartered Tower

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