



# 2nd Half 2021 Sustainability Disclosure

# Table of Contents

Four Lenses of Sustainability



## Introduction

Letter from Chief Sustainability Officer	1
Performance Overview 2021	3
Performance Data	7

## Positive Social Impact

Supporting National COVID-19 Immunisation	8
Providing a Lifeline for Flood Victims	10
Lighting Up People's Lives	12

## Safeguard the Environment

Delivering Carbon Neutral LNG	14
Turning to the Sun for Cleaner Energy	15
Creating Momentum for Methane Management in ASEAN	17

## Continued Value Creation

Partnering for New Lower Carbon Value Chains	19
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## Responsible Governance

Promoting Transparency on Climate-Related Actions	21
Declaring A Clear Stance Against Corruption	23



## Letter from Chief Sustainability Officer (1/2)

2022 may have not started out as planned as the world was preparing for economic growth and progress after COVID-19. Instead, the pandemic still lives on in many places, affecting everyday life, and everyone is feeling the effects of the global energy supply squeeze and rapid inflation. The situation at hand is relevant also for PETRONAS as we are balancing the need for energy security, affordability and sustainability. All three areas are equally relevant from a sustainability perspective and continue to inform our path forward.

**In this 2<sup>nd</sup> Half 2021 Sustainability Disclosure, we present our performance and our progress against our 2024 sustainability targets as well as other notable aspects of our sustainability activities.**

We continue to make good progress on reducing our carbon emissions and in generating positive social impact, whereas we have suffered a setback in some of our safety and environmental performance. Several internal efforts are underway to change the mindset and practices around health, safety and environment. At no point, may we lose our focus on minimising or eliminating our negative impact and ensure that we are a strong positive force in society. Overall, our commitments stand firm across all areas of sustainability, as per our definition of: continued value creation, positive social impact, safeguarding the environment and responsible governance.

In 2022, we will focus on defining our pathway for our net zero carbon emissions by 2050 aspiration. As part of this effort, and in response to emerging disclosure frameworks, we will continue to strengthen our sustainability reporting and public disclosures.



Charlotte Wolff-Bye  
Vice President and  
Chief Sustainability Officer,  
PETRONAS.

## Letter from Chief Sustainability Officer (2/2)

### Partnering for Success

Despite the progress we are making, we must scale up and accelerate our actions further. Addressing the complex web of sustainability challenges can only be achieved by working together. Collaborative efforts with our stakeholders including government, suppliers, partners, customers, and communities are pertinent for the success of our sustainability journey.

I am excited to go through this journey with you. Do follow us at [www.petronas.com](http://www.petronas.com) as we embrace the opportunities ahead.

Enjoy this Second Half 2021 edition and have a look at the progress we have made so far.



## Performance Overview 2021

Upholding our tagline of Passionate about Progress, PETRONAS continues to drive short-, medium- and long-term business value creation through responsible investments. We aim to positively impact the organisation, environment, as well as society at large. Through a steadfast execution of our strategy and innovative collaborations, we have continued to create value over the period in review. You can find details of the Q4 FY2021 Financial Report [here](#).

### Safety Is Our Top Priority



Our operations are often in high-risk environments, and despite our best efforts, we are deeply saddened by the passing of three of our colleagues in the second half of 2021. We held the Safety Stand Down in locations across PETRONAS, dedicating a sombre time to pay our last respects, to honour their lives, and to reflect on the incidents and root causes. The focus is on strengthening the culture and environment that saves lives and increases overall worker welfare.

In relation to land transport incidents, we have enhanced our safety management by implementing a Fatigue Remedy & Sleep Hygiene initiative and rolled it out to our Downstream entities. We have also observed additional five Tier-1 Process Safety Events (PSE)<sup>1</sup> in the second half of the year.

There is an increase in the Lost Time Injury Frequency (LTIF) (per 1 million manhours) from 0.10 in 2020 to 0.14 in 2021, as well as an increase in Total Recordable Case Frequency (TRCF) (per 1 million manhours) from 0.29 in 2020 to 0.42 in 2021. Efforts have been intensified in strengthening compliance to standards and operating discipline. On the health management front, we sustained a similar result as recorded in the previous year for Total Recordable Occupational Illness Frequency (TROIF) (per 1 million manhours) of 0.17, main causes were food poisoning and noise induced hearing loss incidents.

In efforts to enhance Health, Safety and Environment (HSE) performance, we will continue to be vigilant in managing our risks by strengthening HSE culture, enhancing governance and leveraging digital technologies.

<sup>1</sup> A Tier-1 PSE is a Loss of Primary Containment (LOPC) with the greatest consequence as defined by API 754, Process Safety Performance Indicators for the Refining and Petrochemical Industries. It is an unplanned or uncontrolled release of any material, including non-toxic and non-flammable materials, from a process that results in one or more of the consequences as listed in the API 754.



## Mobilising Resources in Support of National Resilience

When the world rolled out its largest vaccination drive, PETRONAS was quick to respond by forming the PETRONAS Immunisation Programme (PIP) Taskforce and setting up vaccination centres to support the Malaysian National Immunisation Programme. Although the risk of new emerging variants continues to threaten economic recovery, we will continue to monitor the development of the COVID-19 pandemic and its impact on Malaysia and our activities around the world.

In Malaysia, the end of 2021 was tragically marked by the worst flooding seen since 1970. Nevertheless, through the challenges, we saw people from all walks of life band together to give one another help in times of need. We also witnessed our own staff committing themselves selflessly and living up to PETRONAS' purpose of "*enriching lives*". A network of PETRONAS petrol stations quickly established food banks for those needing help with daily provisions. Volunteer networks sprang up almost immediately post-disaster to deliver aid, food, and other supplies to flood victims.

## A Strong Momentum in Net Zero Ambitions

The recent United Nations (UN) climate summit, better known as COP26, focused on collective, actionable, and even drastic steps that must be taken to reduce carbon emissions globally. Leading up to COP26, the proportion of global Gross Domestic Production (GDP) covered by a national net zero target had increased to 90% from 23%. Moreover, the summit concluded the rulebook for the Paris Agreement from 2015 and delivered several key pledges including reducing global methane emissions by 30% compared with 2020 levels by 2030, retaining 50% of forest cover and halting deforestation by 2030.

Malaysia has made several climate-related commitments under the 12th Malaysia Plan including additional pledges announced around COP26. Among those which are more relevant to PETRONAS are the revised Nationally Determined Contribution (NDC) to reduce the intensity (against GDP) of greenhouse gas (GHG) emissions by 45% compared to 2005 levels, as well as the pledge to reduce methane emissions. Malaysia also announced the intention to develop a Voluntary Carbon Market (VCM), Domestic Emissions Trading Scheme (DETS), a carbon tax and a Long-Term Low Emissions Development Strategy (LT-LEDS).

To bring momentum to methane emissions reduction in the oil and gas value chain, PETRONAS started a series of ASEAN Methane roundtables to discuss ways to increase collaboration on regional methane emissions management. Furthermore, PETRONAS endorsed the World Bank's Zero Routine Flaring (ZRF) Initiative, pledging to end routine flaring at production sites by 2030.

## PETRONAS Greenhouse Gas Emissions on a Downward Trajectory

In managing our GHG emissions, we have recorded a total of 45.2 million tonnes of carbon dioxide equivalent (MtCO<sub>2</sub>e) emissions across our global operations for 2021, a reduction of 6.4% from 2020. For our Malaysia operations, 43.8 MtCO<sub>2</sub>e was recorded, which is 5.4% lower than in 2020 (46.3 MtCO<sub>2</sub>e). The decrease in emissions is mainly due to venting and flaring reduction projects in upstream operations, totaling up to 3.8 MtCO<sub>2</sub>e. Combined with an increase in production, the upstream intensity figure has improved by 27% to 47.9 tCO<sub>2</sub>e/kboe.

This is at the back of our target to cap GHG emissions to 49.5 MtCO<sub>2</sub>e for our Malaysia operations by 2024. In our mission to increase renewable energy capacity to 3,000 megawatts (MW) by 2024, we installed a cumulative 851 MW renewable energy capacity in 2021.

## Environmental Management Requiring a Continued Effort

On other aspects of environmental management, we recorded two hydrocarbon spills to the environment that is over one barrel (equivalent to 159 litres), compared to five hydrocarbon spills in the previous year. Our sulphur oxide emissions in 2021 have decreased by 43%, mainly due to the decommissioning of Engen refinery in Durban, South Africa and operational improvements in PETRONAS Floating LNG Ltd.

On water management, we recorded an increase of 19% in freshwater withdrawal volume, totalling up to 71.19 million cubic meters. This is due to the inclusion of freshwater withdrawal from PRPC Utilities and Facilities Sdn. Bhd. in Pengerang, Malaysia. Despite regular water use tracking and increased efficiency of water system operations, there is still a nominal increase in water extraction from water stressed areas.

On waste management, we recorded 59,228 metric tonnes of hazardous waste disposed in 2021, an increase of 25,879 metric tonnes from the previous year due to tank cleaning activities at one of the local oil terminals, as well as waste resulting from drill cuttings at PETRONAS Energy Canada Ltd.



## Journey to Systemising our Sustainability Activities

Since declaring our sustainability aspirations, PETRONAS is developing our pathway to achieve net zero carbon emissions by 2050. As part of our push toward greater transparency on our actions to address climate change, we have expressed our support to the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the Stakeholder Capitalism Metrics by the World Economic Forum. Both frameworks will inform our disclosure practices going forward.

PETRONAS also joined the World Economic Forum's Partnering Against Corruption Initiative (PACI) as a signatory. PACI is the leading business voice on anti-corruption and transparency, and by becoming a signatory, we commit to engage in collective global initiatives to initiate transparent practices that will improve the ease of doing business.



## Performance Data

Armed with the aspiration of achieving net zero carbon emissions by 2050 (NZCE 2050), this edition remains guided by our four lenses of sustainability, in alignment with United Nations Sustainable Development Goals (UN SDGs).



You can find details of the FY2021 Performance Data [here](#).

The performance data are also mapped to key international sustainability reporting standards.

### Sustainability Performance Indicators

1. Ipieca<sup>1</sup>/ American Petroleum Institute (API)/ International Association of Oil & Gas Producers (IOGP) Sustainability reporting guidance for the oil and gas industry
2. Global Reporting Initiative (GRI) Standards
3. World Economic Forum's International Business Council Stakeholder Capitalism Metrics

