



Positioning the OGSE Sector in Driving Energy Transition and Economic Sustainability

# NATIONAL OGSE SUSTAINABILITY ROADMAP (NOS-R)





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## MESSAGE FROM PRESIDENT/CEO OF MPRC

The Oil and Gas Services and Equipment (OGSE) sector is an important contributor to the Malaysian economy, supporting the sustainable growth of the oil and gas and energy industries. As the world pushes forward to meet climate targets, we are now faced with a new challenge—minimising environmental impacts to ensure the sustainability of our planet.

The growing emphasis on sustainability has driven the oil and gas and energy industries to pivot to the energy transition to lower emissions. Furthermore, new regulations, standards and frameworks on sustainability demonstrate heightened expectations from stakeholders for more transparent and accurate sustainability data to make informed decisions.

The National OGSE Industry Blueprint (OGSE Blueprint) 2021-2030 had already identified sustainability as one of four strategic pillars to develop robust, resilient and globally competitive Malaysian OGSE sector that will contribute to sustainable development of national priorities. In line with this, several sustainability-linked targets were identified.

Subsequently, in 2022, Malaysia Petroleum Resources Corporation (MPRC), as custodian and one of the leads to implement the initiatives of the OGSE Blueprint, embarked on the national OGSE sustainability programme consisting of a trilogy of documents to guide OGSE companies towards incorporating and reporting on sustainability practices. This began with the National OGSE Sustainability Plans (NOS-P) which proposed 11 recommendations to support OGSE companies in their journey into sustainability. This National OGSE Sustainability Roadmap (NOS-R) comprehensively identifies the specific projects needed to spur the OGSE sector's sustainable transition and support OGSE companies in adopting sustainable practices. Moving forward, the National OGSE Sustainability Framework Guide (NOS-F Guide) will provide guidance catered specifically for the OGSE sector to implement and report on sustainability.

The NOS-R builds on the groundwork of the NOS-P and validates the various drivers and challenges faced by OGSE companies in adopting sustainable practices. The Roadmap proposes a total of 12 Projects under four Strategic Initiatives that will accelerate the transition to low-carbon operations, support OGSE companies in managing climate risks, strengthen sustainability practices and foster sustainability talents and communication. I am pleased to share that a key feature of the NOS-R is the simplified sustainability reporting process that was rigorously developed with key OGSE ecosystem stakeholders, providing OGSE companies with guidance on implementing and reporting on sustainability which we believe is the first of its kind catered for the OGSE sector.

We hope that the successful and timely implementation of the NOS-R will support the OGSE sector in accelerating its sustainability journey as the oil, gas and energy industries transition to a more sustainable future, while opening doors to more export and investment opportunities for OGSE companies. I urge all OGSE companies to leverage this Roadmap to chart your organisation's sustainability journey to ensure your business continues to flourish and attains long-term value creation.

### **Mohd Yazid Ja'afar**

*President/Chief Executive Officer  
Malaysia Petroleum Resources  
Corporation (MPRC)*



## FOREWORD FROM THE SECRETARY GENERAL, MINISTRY OF ECONOMY

As a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement, Malaysia submitted its Intended Nationally Determined Contribution (NDC) to UNFCCC on 27 November 2015 pledging intent to reduce 45% of our economy-wide carbon intensity against GDP compared to 2005 level aimed at achieving the goals of the Paris Agreement. Further to this, Malaysia is also a signatory to the United Nation's 2030 Agenda for Sustainable Development as measured by the 17 Sustainable Development Goals (SDGs) indicators focusing on peace and prosperity for the people and the planet.

The Twelfth Malaysia Plan 2021-2025 (12MP) articulates Malaysia's commitment to achieve net-zero GHG emissions as early as 2050. 12MP further underscored Malaysia's approach to manage energy transition through a balancing of the energy trilemma of energy security, affordability and sustainability in tandem with SDG7: Ensure access to affordable, reliable, sustainable and modern energy for all. The Mid-Term Review of 12MP has identified High Growth High Value (HGHV) industry based on energy transition as one of the big bolds to restructure Malaysia's economy while strengthening the nation's environmental sustainability as well as ensuring energy security.

The National Energy Policy 2022-2040 (DTN) lays the foundation for an equitable energy transition that is fair and inclusive for everyone. DTN defines energy transition as a structural shift of energy systems towards cleaner sources. The transition is expected to occur at an accelerated pace driven by rapid technological progress and strong climate change policies.

The National Energy Transition Roadmap (NETR) was launched in 2023 to steer Malaysia's shift from traditional fossil fuels-based economy to a high-value green economy. NETR outlines six energy transition levers namely energy efficiency (EE), renewable energy (RE), hydrogen, bioenergy, green mobility, and carbon capture, utilisation and storage (CCUS).

These policies further amplify Malaysia's commitments to transition to a low-carbon economy through the restructuring of the economy and fiscal consolidation in complementarity with other policies namely the National Climate Change Policy 2.0, New Industrial Master Plan 2030 (NIMP 2030) and the Hydrogen Economy and Technology Roadmap. In the realm of sustainability, the Government has also launched the National Sustainability Reporting Framework (NSRF) and the National ESG Industry Framework (i-ESG Framework) which help guide our business entities to align their sustainability reporting with globally recognised standards. Given that SMEs form approximately 97% of business establishments in Malaysia, the Government is mindful of the need to provide clear policy direction and conducive ecosystem to manage our transition to low-carbon economy primarily in addressing the needs for resources, capital and standards.

Further diving into the core growth sector, Malaysia's OGSE industry has been playing a significant role in Malaysia's oil and gas industry since the 1980s. OGSE represents between 5% to 8% of the Gross Domestic Product (GDP), RM65.1 billion in revenue and 59,000 core talents hired by approximately 4,000 vendors in the market. Malaysia's OGSE value chain comprises upstream, midstream and downstream. The Ministry of Economy through the Malaysia Petroleum Resources Corporation (MPRC) is currently developing the Mid-Term Review of the National OGSE Industry Blueprint 2021-2030 (OGSE Blueprint) in alignment with national sustainability and energy transition agenda as Malaysia accelerates its low-carbon aspirations to achieve net zero GHG emissions by 2050.

Further to this, the National OGSE Sustainability Roadmap (NOS-R) has been developed by MPRC to guide OGSE companies in incorporating and reporting their sustainability practices. This will help the Ministry's continuous efforts to strengthen the oil and gas ecosystem related to OGSE as we strive to meet the changing nature and increasing demands of the industry.

On behalf of the Ministry of Economy, I extend my gratitude to all Ministries, agencies and organisations that have worked with MPRC and contributed to the development of the NOS-R.

I fervently hope that this document will serve as a valuable resource for the OGSE sector to accelerate its sustainability journey in the era of energy transition.

### **Dato' Nor Azmie Diron**

*Secretary General,  
Ministry of Economy*



## EXECUTIVE SUMMARY

The National OGSE Industry Blueprint (OGSE Blueprint) 2021-2030 was launched in April 2021 with a vision to develop a robust, resilient and globally competitive Malaysian Oil and Gas Services and Equipment (OGSE) sector that will contribute to the sustainable development of national priorities. The OGSE Blueprint is made up of four strategic thrusts: competitiveness, resilience, development, sustainability; and five enablers: human capital, mindset and ways of working; technology, innovation and infrastructure; market regulation and Bumiputera participation; domestic and international market access; and funding and investments. These were further articulated into 31 initiatives to address the OGSE sector's structural challenges.

As an agency of the Ministry of Economy primarily tasked with OGSE sector development, Malaysia Petroleum Resources Corporation (MPRC) serves as custodian of the OGSE Blueprint as well as an implementation lead of its initiatives.

Thus, as part of the OGSE Blueprint's sustainability strategic thrust, in 2022 MPRC embarked on the national OGSE sustainability programme, marked by the development of a trilogy of documents to drive adoption and reporting of sustainability by OGSE companies. The National OGSE Sustainability Plans (NOS-P) was released in November 2022, proposing 11 recommendations for sustainability best practices amongst OGSE companies. These recommendations served as the basis for the National OGSE Sustainability Roadmap (NOS-R), which aims to provide OGSE companies with targeted pathways to adopt sustainable practices and embark on their reporting journey.

The NOS-R proposes a total of 12 Projects under four Strategic Initiatives that will support the OGSE sector's transition to a more sustainable future. The NOS-R also identified 13 topics and 58 indicators deemed material to the OGSE sector. Public-listed companies (PLCs) are expected to report on 53 indicators, whereas non-PLCs/small and medium-sized enterprises (SMEs) are expected to report on 43 indicators. These indicators are further categorised into three different pathways namely Basic, Intermediate and Advanced, to guide OGSE companies in their sustainability reporting based on their organisation's maturity and ambition levels.

Moving forward, the National OGSE Sustainability Framework Guide (NOS-F Guide) will provide guidance on how to implement and embed sustainability practices and enhance the OGSE companies' sustainability performance.





# 01

CHAPTER

# INTRODUCTION

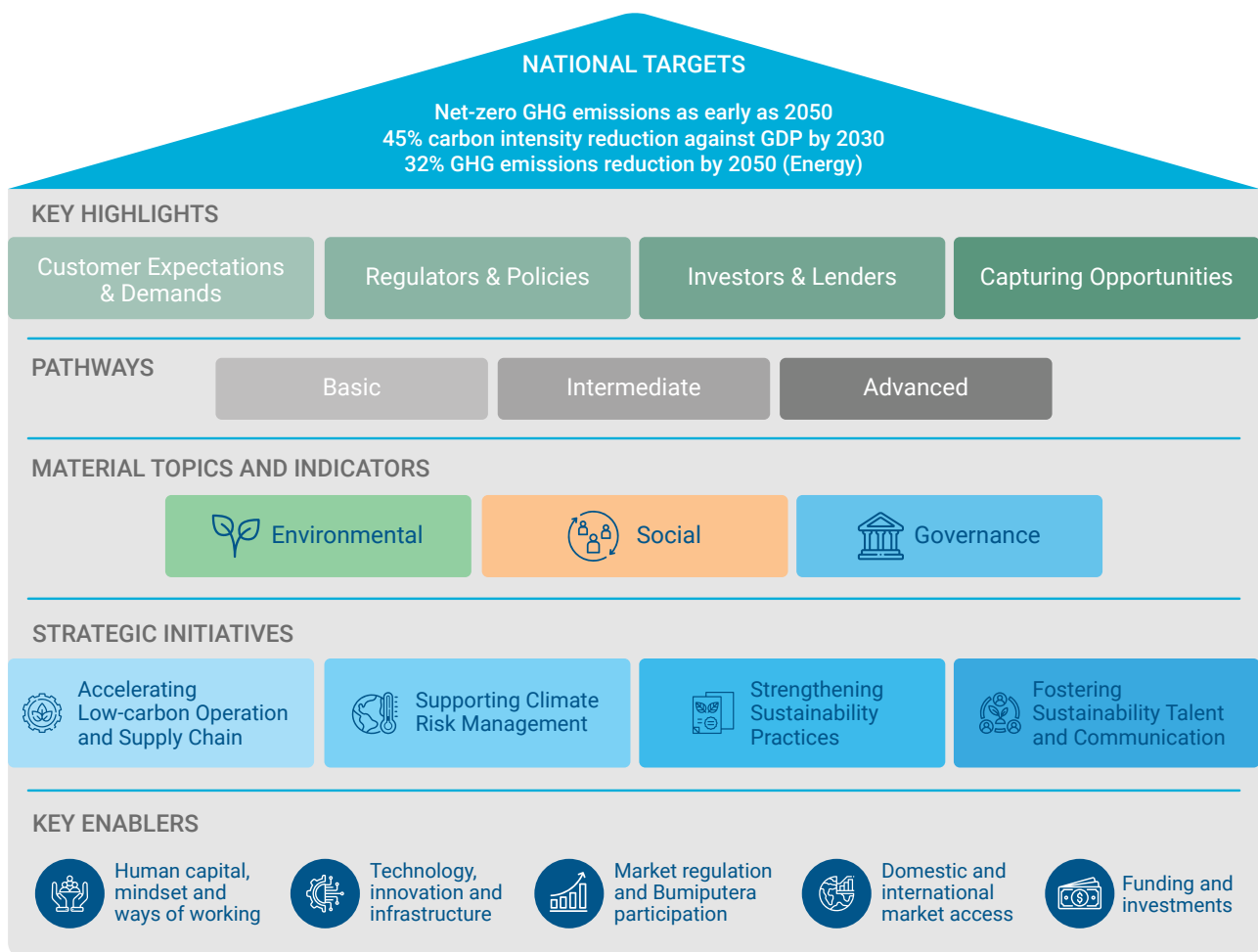
The concept of sustainability, from just being “good for business”, has rapidly become a “license to operate” scenario. This emphasis on sustainability, driven by the growing urgency to address climate change and coupled with greater demand for businesses to look beyond profits as a measure of value creation, impacts all industries, including oil & gas and its Oil and Gas Services and Equipment (OGSE) value chain.

Notwithstanding the increasing inevitability for businesses to incorporate sustainability practices in their operations, the current assessment shows that Malaysian OGSE companies are still in the early stages of their sustainability journey. Greening and futureproofing of the sector would allow OGSE companies to tap into opportunities to export and diversify their business towards greener products and services. Therefore, support from various stakeholders is needed to ensure a just transition in the OGSE sector that would benefit the oil and gas and energy industries as well as the nation as a whole.

The National OGSE Sustainability Roadmap (NOS-R) is a critical initiative aimed at advancing sustainability practices within the sector. It builds upon previous initiatives, such as the National OGSE Industry Blueprint (OGSE Blueprint) 2021-2030, with a vision to develop a robust, resilient, and globally competitive Malaysian OGSE sector that contributes to the sustainable development of national priorities.

The recommendations for sustainability best practices from the National OGSE Sustainability Plans (NOS-P), released in 2022, serve as the basis for NOS-R, which will subsequently be followed by the National OGSE Sustainability Framework Guide (NOS-F Guide). NOS-F Guide will provide a detailed guide for OGSE companies to implement and report sustainability requirements based on the findings from the NOS-R.

Figure 1: The OGSE Sustainability Ecosystem





The NOS-R was developed to support the national targets and aspirations outlined in Figure 1. Through the engagements conducted in developing the NOS-R, four key drivers were identified for sustainable practices and reporting within the OGSE sector. These drivers comprise customer expectations and demand; regulators and policies; investors and lenders; and capturing opportunities. The material topics and indicators were further categorised into three pathways, namely Basic, Intermediate and Advanced, which will guide OGSE companies in their sustainability reporting journey.

Further to this, the NOS-R has outlined 12 Projects under the four Strategic Initiatives. These Projects are supported by the six Key Enablers that will facilitate the rollout of the Projects.

Figure 2: National OGSE Sustainability Trilogy Timeline



With the proposed Strategic Initiatives, projects and key performance indicators (KPIs), the NOS-R lays the foundation for a pragmatic and impactful approach to sustainability within the OGSE sector, especially for non-PLCs, including SMEs and MTCs, aligning with national objectives and global best practices.



# 02

CHAPTER

# THE GLOBAL SUSTAINABILITY LANDSCAPE



## 2.1 BENCHMARKING

Benchmarking against leading and comparable countries’ decarbonisation roadmaps and plans was essential in guiding the development of the NOS-R. The benchmarking exercise was conducted based on criteria, with reference to multiple roadmaps and plans relevant to the OGSE sector.















The benchmarking criteria were adapted from the following:

- WBCSD and Ipieca’s roadmap development process in **Accelerating action: An SDG Roadmap for the oil and gas sector**
- **NOS-P** recommendations

Figure 3: Benchmarking Criteria

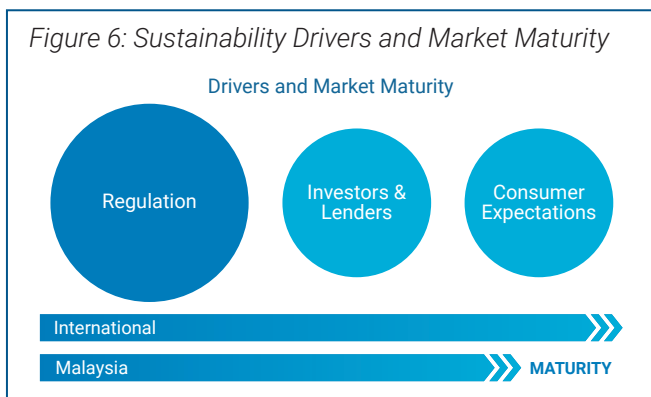
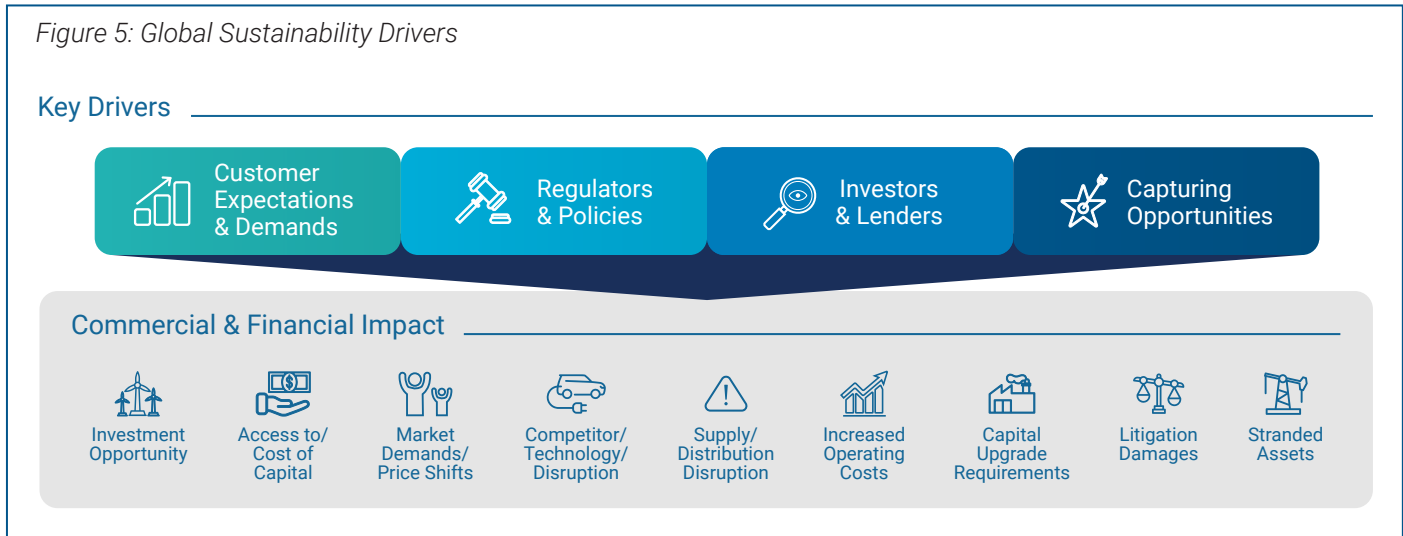


Figure 4: The Sustainability Landscape in Studied Regions

	 Indonesia	 South Korea	 Japan	 Singapore	 Thailand	 European Union	 United Kingdom	 United States	 Norway	 Australia
<b>Summary</b>	Mandatory sustainability reporting for PLCs. It has also developed some policies and initiatives.	Some good initiatives to decarbonise. However, their sustainability reporting guidelines are not as strong as those of other countries.	Strong policies to decarbonise. Corporate reporting has been voluntary and has only recently gained traction.	Strong policies to keep large corporations accountable for their emissions, sustainable practices and disclosure.	Companies have best practices in sustainability reporting. It is currently in preparing for carbon tax policies.	Implementation and policy initiatives are backed by sound corporate reporting requirements.	Strong policies surrounding climate and nature. In corporate reporting, climate change seems to be of focus.	Strong frameworks for emission reduction and energy transition. Climate-related/sustainability reporting is voluntary.	Strong policies on emission reduction and EV cars, corporate reporting requirements backed by the Accounting Act.	Sustainability reporting has been voluntary, with a recent push towards mandatory reporting. However, there are some strong policies to decarbonise.
<b>Main regulations or policy on sustainability-related reporting</b>	Rule number 51/POJK.03/2017 Environmental Reporting Guidance in Sustainability Reports	Sustainability Information Disclosure based on Financial Materiality Standards	Corporate Governance Code Japanese sustainability disclosure standards (no official name as of yet)	Singapore Exchange (SGX) Listing Rules: Sustainability Reporting Guide National Environment Agency: Mandatory Carbon Tax	Sustainability Reporting Guide Corporate Governance Code (CG Code) 2017 FORM 56-1 One Report	Corporate Sustainability Reporting Directive (CSRD) Sustainability Finance Disclosure Regulation (SFDR) EU Taxonomy	Streamlined Energy and Carbon Reporting (SECR) Policy UK FCA TCFD Reporting Requirements Department for Energy Security and Net-Zero Streamlined TCFD Reporting	The Enhancement and Standardisation of Climate-Related Disclosures for investors (Proposed) The Federal Acquisition Regulation (FAR) Rule on Climate Risk Disclosure (Proposed)	Financial Supervisory Authority of Norway: Norwegian Accounting Act (Regnskapsloven) Oslo Stock Exchange: ESG Reporting Guide	Corporate Governance Principles and Recommendations National Greenhouse and Energy Reporting Scheme
<b>Key initiatives</b>	 Financial investment in energy transition and decarbonisation related initiatives	 Carbon pricing mechanisms to encourage emission reduction	 Mandating companies to disclose non-financial statement which includes climate-related disclosures	 Supporting small and medium businesses to start implementing sustainable practices						

## 2.2 GLOBAL SUSTAINABILITY DRIVERS

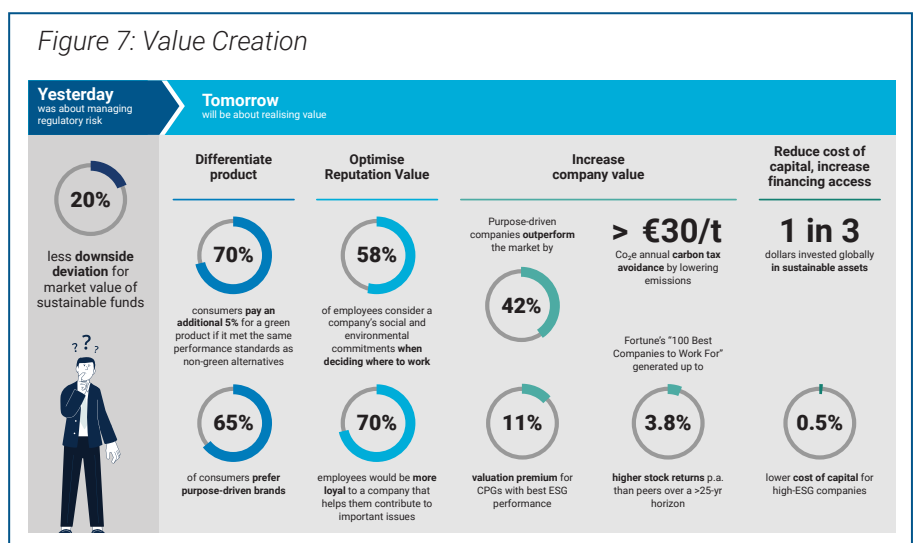
Global sustainability is currently steered by four major drivers:



The baseline assessment supported the findings that these sustainability drivers were similar for local OGSE companies, with a higher level of customer demand, reporting requirements and biased investment or rate provision for PLCs (compared to non-PLCs). While the Malaysian OGSE sector largely aligns with both local and global drivers, OGSE companies have not prioritised risk mitigation or business resilience as top drivers for sustainability, likely attributed to the prevalent focus on short-term profitability and operational efficiency within the sector.

### 2.2.1 Moving Towards Value Creation

Research has repeatedly shown that sustainable companies are reaping the benefits of retaining their customer base and the ability to charge a premium for more sustainable products. Thus, adopting sustainable practices not only contributes to risk mitigation but also amplifies long-term value. Subsequently, companies should transition from the mindset of managing regulatory risk to realising value creation through sustainability practices.





### 2.2.2 Risk Mitigation

According to the World Economic Forum (WEF) Global Risk Report 2023, the majority of the top-ranked global risks in the short term and long term are environmental, with “Natural disasters and extreme weather events” in the top three risks for both periods. This indicates that mitigating sustainability-related risks and improving sustainability performance is now a business imperative.

Figure 8: Top Global Risks

SHORT TERM	LONG TERM
Cost of living crisis	Failure to mitigate climate change
Natural disasters and extreme weather events	Failure of climate change adaptation
Geoeconomic confrontation	Natural disasters and extreme weather events
Failure to mitigate climate change	Biodiversity loss and ecosystem collapse
Erosion of social cohesion and societal polarisation	Large-scale involuntary migration
Large scale environmental damage incidents	Natural resources crises
Failure of climate change adaptation	Erosion of social cohesion and societal polarisation
Widespread cybercrime and cyber insecurity	Widespread cybercrime and cyber insecurity
Natural resources crises	Geoeconomic confrontation
Large-scale involuntary migration	Large scale environmental damage incidents

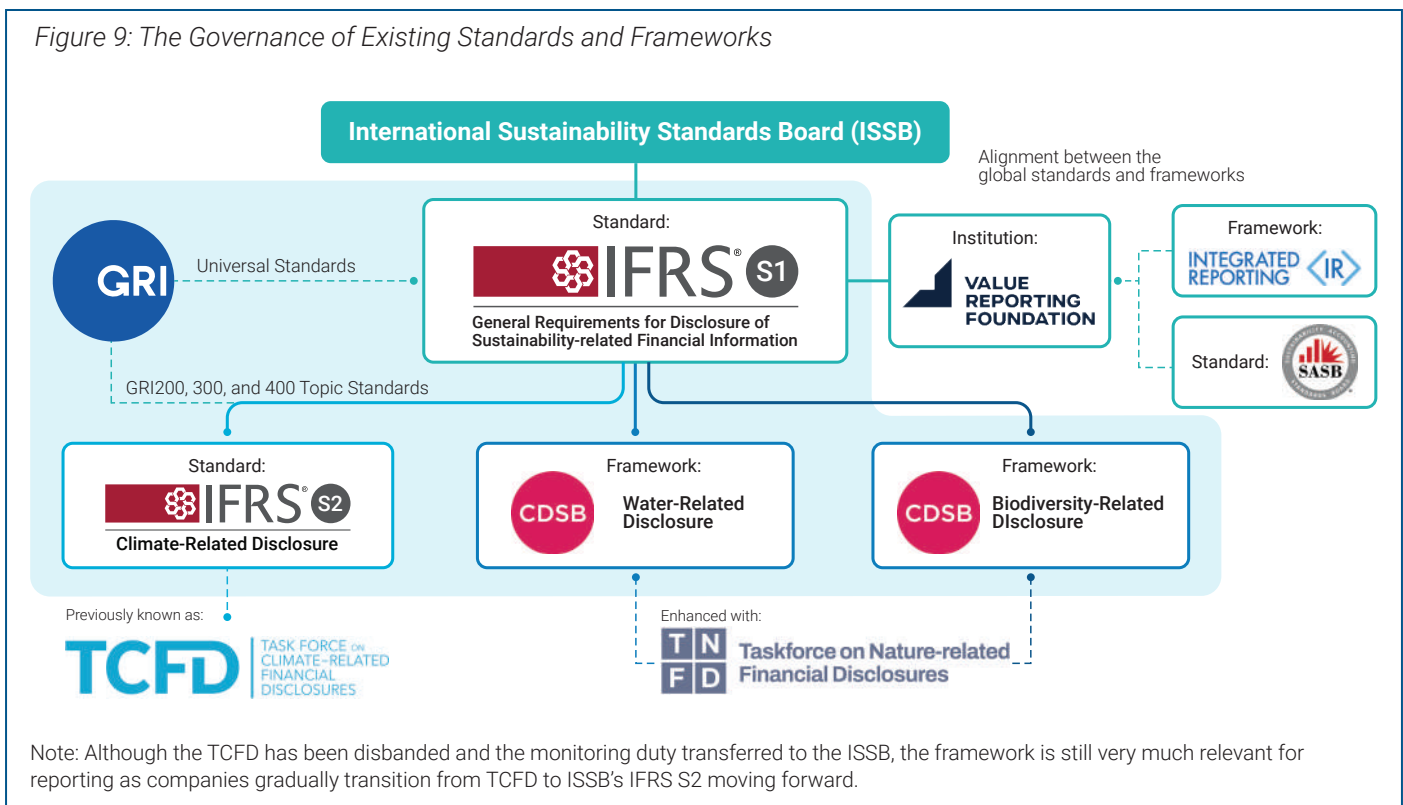
■ Environmental   
 ■ Societal   
 ■ Geopolitical   
 ■ Technological

Source: World Economic Forum Global Risk Report 2023

### 2.3 THE SUSTAINABILITY REPORTING LANDSCAPE

There is global recognition of the significance of transparent financial reporting and the inclusion of sustainability-related metrics. The recent convergence of financial and sustainability reporting also reflects a growing acknowledgement of the interconnectedness between financial performance and ESG factors. In Malaysia, 11 Common Sustainability Matters were introduced by Bursa Malaysia in its Enhanced Sustainability Reporting (3rd Edition) requirements that PLCs must comply with. Capital Markets Malaysia (CMM) has also developed the Simplified ESG Disclosure Guide (SEDG), which is aimed at supporting SMEs in their sustainability reporting.

Figure 9: The Governance of Existing Standards and Frameworks



# 03

**CHAPTER**

# **MALAYSIA'S OGSE SUSTAINABILITY LANDSCAPE**



### 3.1 ABOUT THE BASELINE ASSESSMENT

To gauge the extent to which OGSE companies integrate ESG considerations and adopt sustainability practices into their operations, a baseline assessment was carried out between September and October 2023. The approaches used for this assessment include:

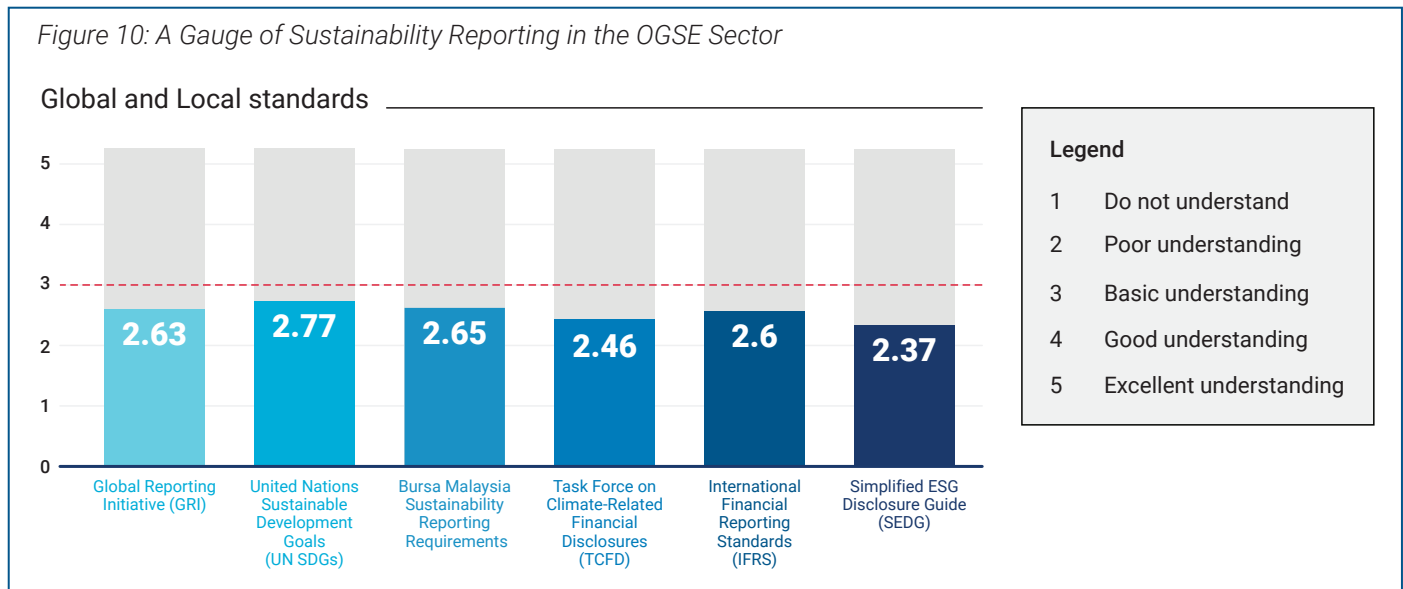
#### 3.1.1 NOS-R Questionnaire

123 respondents representing various sub-services of the OGSE sector, including chemicals, wells, electrical equipment, logistics & warehousing, services, process piping equipment, geological & geophysical, mechanical equipment, instrumentation & control equipment, material corrosion equipment, operation & maintenance, environmental, health & safety, engineering and construction. 15% of the respondents were listed in the OGSE100<sup>1</sup>, while the majority (>60%) were SMEs.

#### 3.1.2 Workshops

Two workshops were organised, with 40 organisations participating in the first and 45 organisations participating in the second. At least 50% of participants were from SMEs, followed by non-PLCs and PLCs.

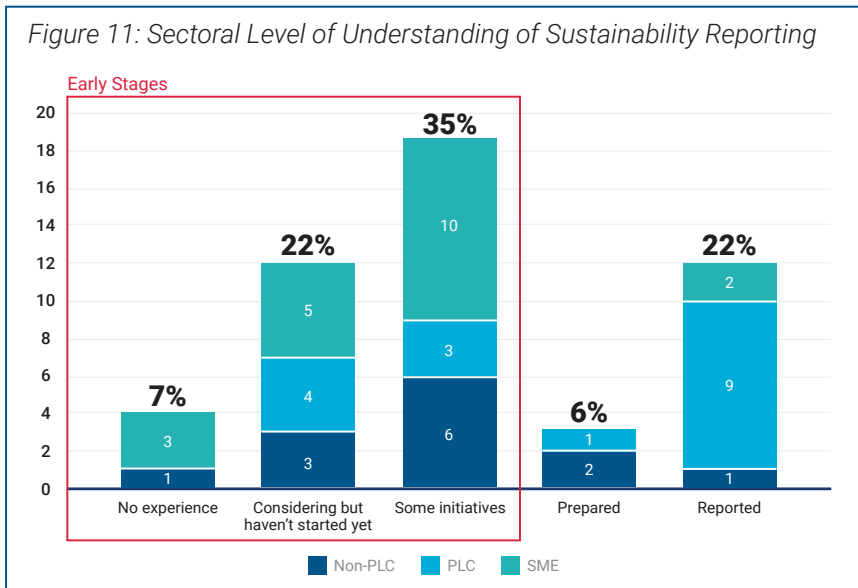
### 3.2 OGSE COMPANIES SUSTAINABILITY PRACTICES BASELINE ASSESSMENT



The findings from the baseline assessment highlighted that 85% of respondents had yet to publish their sustainability report, with 45% of companies planning to issue their first within the next 12-month period. This indicates a growing recognition and realisation among OGSE sector players on the importance of communicating their sustainability performance to external stakeholders.

<sup>1</sup> OGSE100 is MPRC’s flagship publication which analyses Malaysia’s OGSE sector and ranks its top 100 companies by revenue

Figure 11: Sectoral Level of Understanding of Sustainability Reporting



The assessment also showed a lack of comprehensive understanding amongst local OGSE companies on each sustainability reporting standard due to their complexities. This signifies and validates the need for a simplified guidance document to assist sector players in sustainability reporting. It was also observed that PLCs exhibit a higher level of maturity in their sustainability progress, which is largely influenced by regulatory requirements set by Bursa Malaysia.

Despite challenges such as clarity on standards and financial constraints, PLCs still identify opportunities in accessing funding and upgrading technology to meet evolving market demands. In contrast, non-PLCs and SMEs demonstrate a lower level of maturity in sustainability practices, primarily due to a lack of drivers and enablers. Most have not established ESG governance structures or conducted materiality assessments.

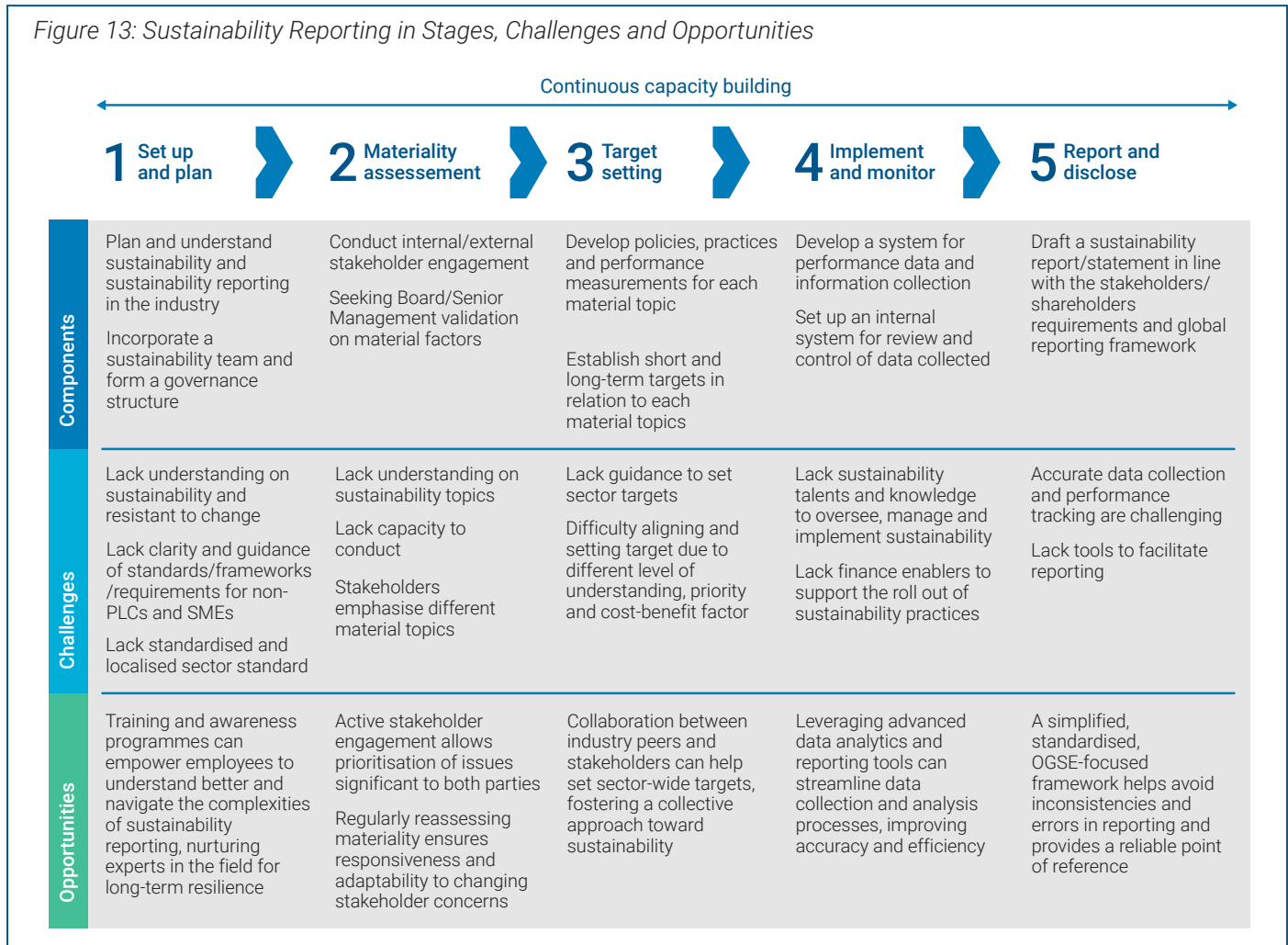
Figure 12: Observations from the Baseline Assessment

	PLCs	Non-PLCs and SMEs
<b>Drivers</b>	Maturity is driven by regulations and requirements by Bursa Malaysia.	Less mature in their sustainability journey due to the lack of drivers/enablers.
<b>Governance</b>	More mature in their sustainability journey with sustainability governance in place.	Majority have yet to embark on their sustainability journey and have ESG governance set up.
<b>Materiality Assessment</b>	Conducted materiality assessment and published sustainability reports.	Less than 40% have sustainability governance in place and conducted their materiality assessment.
<b>Targets and Metrics</b>	Still lacking in sustainability strategy and target setting.	Lack of meaningful data to set sustainability targets without baseline assessments
<b>Reporting and Disclosure</b>	85% of non-PLCs and SMEs have yet to report sustainability practices and consider publishing their sustainability report, while 45% plan to report within the next 12 months.	
<b>Challenges</b>	Top challenges identified: 1) Lack of clarity on sustainability standards, indicators and data required. 2) Financial constraints; 3) Lack of sustainability talents and capacity.	
<b>Opportunities</b>	Key opportunities identified: 1) Access to funding; 2) Equip employee knowledge and skills to respond to changing regulatory requirements and stakeholders' expectations; 3) Upgrade technology to adapt to a changing market.	

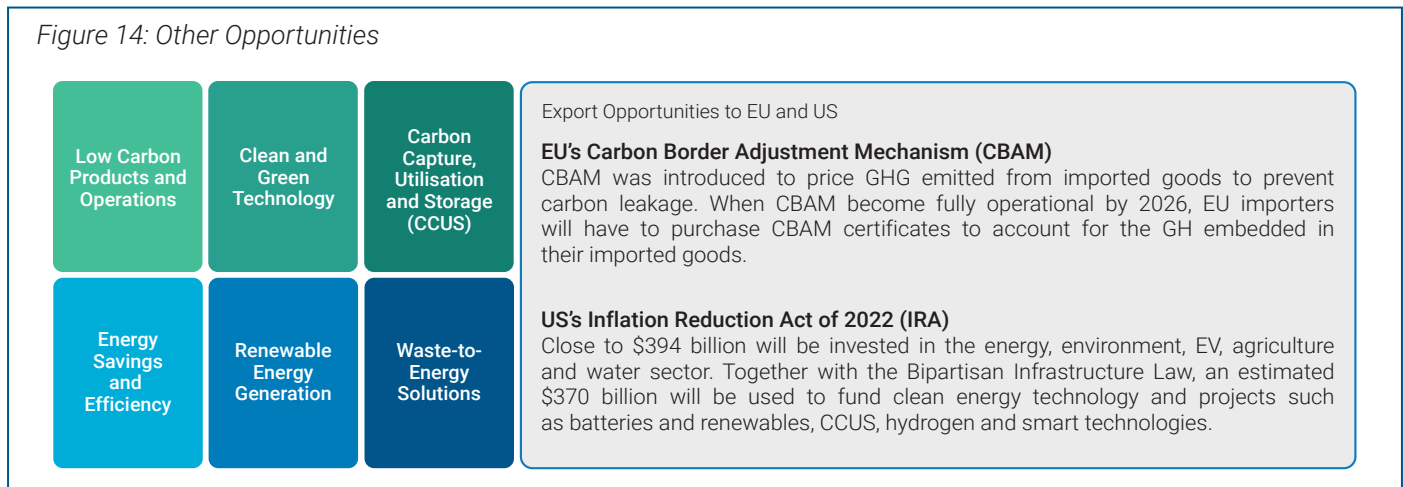


### 3.3 BEST PRACTICES, OPPORTUNITIES AND CHALLENGES FOR SUSTAINABILITY REPORTING

Five stages of sustainability reporting components were identified from the research, including the challenges and opportunities of implementing each stage.



#### 3.3.1 Other Relevant Opportunities for the OGSE Sector



# 04

CHAPTER

## OGSE MATERIAL TOPICS AND INDICATORS

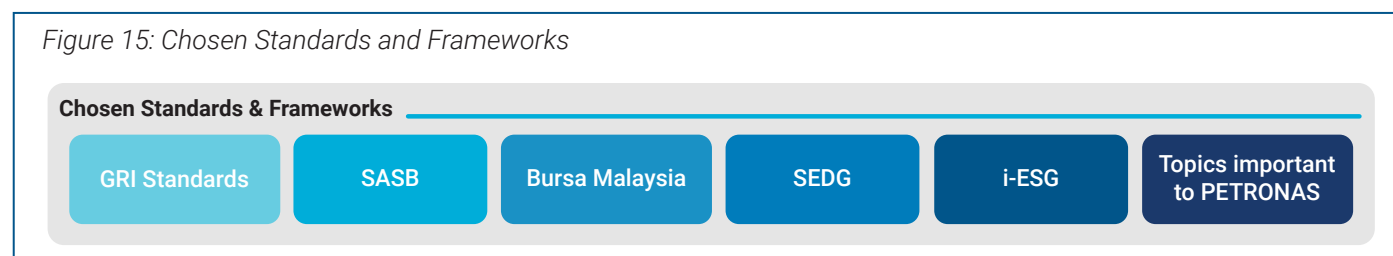


The OGSE material topics and indicators was developed to provide OGSE companies in Malaysia with a point of reference for sustainability topics and indicators deemed material to the sector. It provides measurable parameters that enable the assessment of performance in these sustainability topics across OGSE companies.

#### 4.1 MATERIAL SUSTAINABILITY TOPICS AND INDICATORS

The selection of material sustainability topics was determined based on those commonly found in both global and local sustainability standards and frameworks deemed to be material to the OGSE sector.

Figure 15: Chosen Standards and Frameworks



Thirteen material sustainability topics and 58 indicators were proposed based on the benchmarking exercise and underwent multiple rounds of public consultation with OGSE companies. PLCs are expected to report on 53 indicators, whereas non-PLCs/SMEs are expected to report on 43 indicators. While these topics and indicators represent material sustainability issues of the sector, it is advisable that OGSE companies still conduct their materiality assessments to determine other unique sustainability topics and indicators that may be material while also prioritising the sustainability topics that have been identified.

Figure 16: Proposed Sustainability Topics and Suggested Definitions

Material Sustainability Topic	Suggested Definition
Emissions	Striving to reduce our carbon footprint and impact on climate change through effective monitoring and management of GHG emissions.
Energy	Practising sustainable energy management by improving energy efficiency and managing our fossil fuel consumption.
Waste	Ensuring responsible management of waste throughout its lifecycle to prevent and minimise pollution.
Water & Effluent	Managing our water consumption efficiently and responsibly while ensuring our effluent limits do not exceed statutory requirements.
Health & Safety	Providing safe and secure working conditions to protect the well-being of all those associated with our operations.
Employment	Ensuring a transparent approach to hiring, recruitment, retention and related practices.
Human Rights	Operating according to the principles of basic human rights and ensuring human rights are respected in all our activities and business relationships.
Diversity & Equal Opportunities	Embracing and encouraging diversity and equal opportunity, regardless of age, gender, race, ability and other personal attributes.

Material Sustainability Topic	Suggested Definition
Local Community	Delivering meaningful social, economic and environmental value to the communities in which we operate.
Training & Education	Building a performance-driven workforce by providing learning and development opportunities.
Anti-Corruption	Upholding the highest standard of integrity and working against corruption in all its forms.
Data Privacy & Security	Ensuring the prevention of breaches of customer privacy and losses of customer data.
Supply Chain Management	Encouraging sustainable principles throughout our value chain.

A tiered guidance was prepared to assist different groups of companies in determining which pathway suits them the most and, hence, which indicators should be included in their sustainability reporting.

Figure 17: Tiered Guidance

	Basic	Intermediate	Advanced
<b>PLCs</b>	<ul style="list-style-type: none"> <li>Minimum reporting requirements as per Bursa Malaysia's recommendations</li> <li>New to sustainability journey and reporting i.e. Year 1</li> </ul>	<ul style="list-style-type: none"> <li>More mature in the sustainability journey and reporting i.e. Year 2-3</li> <li>Considering preferred funding/new investors</li> <li>Looking to engage in export activities</li> </ul>	<ul style="list-style-type: none"> <li>Have been on the sustainability journey/ reporting for four years</li> <li>Increased pressure from investors</li> <li>Have sizeable export activities</li> <li>Considering sustainability ratings</li> </ul>
<b>Non-PLCs and SMEs</b>	<ul style="list-style-type: none"> <li>Minimum reporting guidance as per NOS-F Guide</li> <li>New to sustainability journey and reporting i.e. Year 1</li> </ul>	<ul style="list-style-type: none"> <li>More mature in the sustainability journey and reporting i.e. Year 2-3</li> <li>Considering preferred funding/new investors</li> <li>Looking to engage in export activities</li> </ul>	<ul style="list-style-type: none"> <li>Have been on the sustainability journey/ reporting for four years</li> <li>Increased pressure from investors</li> <li>Looking to get listed on the ACE/Main market</li> <li>Have sizeable export activities</li> <li>Considering sustainability ratings</li> </ul>



Below is an outline of the proposed indicators for PLCs and non-PLCs/SMEs. These indicators are further divided into three pathways to assist companies in a phased approach according to their respective sustainability reporting journeys.

Figure 18: Proposed OGSE Material Topics and Indicators for PLCs

Environmental						
Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Emissions</b>	1. Total Scope 1 emissions (MtCO <sub>2</sub> e)	<ul style="list-style-type: none"> <li>• GRI 305-1</li> <li>• SEDG-E1.1</li> <li>• Bursa C11 (a)</li> <li>• IFRS S2 29 (a) (i) (1)</li> <li>• i-ESG 3.2.2.1</li> </ul>	1. Total Scope 3 emissions (MtCO <sub>2</sub> e) (at least for business travel and employee commuting)	<ul style="list-style-type: none"> <li>• GRI 305-3</li> <li>• Bursa C11 (c)</li> <li>• SEDG-E1.5</li> <li>• IFRS S2 29 (a) (i) (3)</li> <li>• i-ESG 3.2.2.3</li> </ul>	1. Total Scope 3 emissions (MtCO <sub>2</sub> e) (for categories other than business travel and employee commuting)	<ul style="list-style-type: none"> <li>• GRI 305-3</li> <li>• SEDG-E1.5</li> <li>• IFRS S2 29 (a) (i) (3)</li> <li>• i-ESG 3.2.2.3</li> </ul>
	2. Total Scope 2 emissions (MtCO <sub>2</sub> e)	<ul style="list-style-type: none"> <li>• GRI 305-2,</li> <li>• SEDG-E1.2</li> <li>• Bursa C11 (b)</li> <li>• IFRS S2 29 (a) (i) (2)</li> <li>• i-ESG 3.2.2.2</li> </ul>	2. Scope 1 and 2 emissions reduced as a direct result of reduction initiatives	<ul style="list-style-type: none"> <li>• SEDG-E1.3</li> <li>• SEDG-E1.4</li> </ul>	2. Scope 3 emissions reduced as a direct result of reduction initiatives	<ul style="list-style-type: none"> <li>• SEDG-E1.6</li> </ul>
				3. GHG emissions intensity	<ul style="list-style-type: none"> <li>• GRI 305-4</li> </ul>	
<b>Energy</b>	1. Total energy consumption, including, if applicable, renewable and non-renewable fuel sources, electricity, heating, cooling, and steam	<ul style="list-style-type: none"> <li>• GRI 302-1</li> <li>• SEDG-E2.1</li> <li>• Bursa C4 (a)</li> <li>• SASB 130a.1</li> <li>• i-ESG 3.1.2.1</li> </ul>	1. Energy intensity	<ul style="list-style-type: none"> <li>• GRI 302-3</li> <li>• i-ESG 3.1.2.2</li> </ul>	1. Reduction in energy requirements of products and services	<ul style="list-style-type: none"> <li>• GRI 302-5</li> </ul>
			2. Reduction in energy consumption	<ul style="list-style-type: none"> <li>• GRI 302-4</li> <li>• SEDG-E2.2</li> </ul>		
			3. Renewable energy commitments	<ul style="list-style-type: none"> <li>• RE100</li> <li>• i-ESG 3.1.2.3</li> </ul>		
<b>Waste</b>	1. Total waste generated	<ul style="list-style-type: none"> <li>• GRI 306-3</li> <li>• SEDG-E.4.1</li> <li>• Bursa C10 (a)</li> <li>• SASB 150a.1</li> <li>• i-ESG 3.4.2.1</li> </ul>	1. Total breakdown of waste by hazardous and non-hazardous waste	<ul style="list-style-type: none"> <li>• GRI 306-3</li> <li>• SEDG-E4.2</li> <li>• SASB 150a.1</li> <li>• i-ESG 3.4.2.4</li> </ul>	1. Total breakdown of hazardous and non-hazardous waste by recovery streams	<ul style="list-style-type: none"> <li>• GRI 306-4</li> <li>• SEDG-E4.3</li> </ul>
	2. Total waste diverted from disposal	<ul style="list-style-type: none"> <li>• GRI 306-4</li> <li>• SEDG-E.4.1</li> <li>• Bursa C10 (a)</li> <li>• i-ESG 3.4.2.3</li> </ul>			2. Total breakdown of hazardous and non-hazardous waste by disposal streams	<ul style="list-style-type: none"> <li>• GRI 306-5</li> <li>• SEDG-E4.4</li> </ul>

### Environmental

Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Waste</b>	3. Total waste directed to disposal	<ul style="list-style-type: none"> <li>• GRI 306-5</li> <li>• SEDG-E.4.1</li> <li>• Bursa C10 (a)</li> <li>• i-ESG 3.4.2.2</li> </ul>				
<b>Water &amp; Effluent</b>	1. Total volume of water used	<ul style="list-style-type: none"> <li>• GRI 303-5</li> <li>• Bursa C9 (a)</li> <li>• SASB 140a.1</li> <li>• i-ESG 3.3.2.1</li> </ul>	1. Water efficiency	• i-ESG 3.3.2.2	1. Total water discharged	<ul style="list-style-type: none"> <li>• GRI 303-4</li> <li>• Bursa S8 (a)</li> </ul>
			2. Total water withdrawn from all areas, and a breakdown by type	<ul style="list-style-type: none"> <li>• GRI 303-3</li> <li>• SEDG-E3.1</li> <li>• SASB 140a.1</li> </ul>		

### Social

Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Health &amp; Safety</b>	1. Total number of work-related fatalities	<ul style="list-style-type: none"> <li>• GRI 403-9</li> <li>• Bursa C5 (a)</li> <li>• SEDG-S4.1</li> </ul>	1. Number of healthcare programmes provided to employees	<ul style="list-style-type: none"> <li>• GRI 403-6</li> <li>• i-ESG 4.2.3.4</li> </ul>	1. Total number and percentage of workers covered by an OHS management system	• GRI 403-8
	2. Lost time incident rate	• Bursa C5 (b)			2. Total number of work-related ill health	• GRI 403-10
	3. Total number and percentage of employees trained on OHS standards	<ul style="list-style-type: none"> <li>• Bursa C5 (c)</li> <li>• SEDG-S4.2</li> </ul>				
<b>Employment</b>	1. Percentage of employees that are contractors or temporary staff	• Bursa C6 (b)	1. Total working hours per employee	• i-ESG 4.1.3.2	1. Parental leave	• GRI 401-3
	2. Total employee turnover by employee category	<ul style="list-style-type: none"> <li>• GRI 401-1</li> <li>• Bursa C6 (c)</li> <li>• SEDG-S2.2</li> </ul>			2. CEO to employee salary ratio	• i-ESG 4.1.3.6
<b>Human Rights</b>	1. Total number of substantiated complaints concerning human rights violations	• Bursa C6 (d)	1. List of operations and suppliers considered to have significant risk for human rights incidents	<ul style="list-style-type: none"> <li>• GRI 408-1</li> <li>• GRI 409-1</li> <li>• SEDG-S1.2</li> </ul>	1. Total number and percentage of security personnel trained on human rights	• GRI 410-1
			2. Due diligence on recruitment of migrant workers	• i-ESG 4.1.3.8		

**Social**

Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Diversity &amp; Equal Opportunities</b>	1. Percentage of employees by gender and age group, for each employee category	<ul style="list-style-type: none"> <li>• GRI 405-1</li> <li>• Bursa C3 (a)</li> <li>• SEDG-S3.1</li> </ul>	1. Percentage of employees by other indicators of diversity	<ul style="list-style-type: none"> <li>• GRI 405-1</li> </ul>	1. Ratio of basic salary and remuneration from women to men	<ul style="list-style-type: none"> <li>• GRI 405-2</li> </ul>
	2. Percentage of directors by gender and age group	<ul style="list-style-type: none"> <li>• GRI 405-1</li> <li>• Bursa C3 (b)</li> <li>• SEDG-S3.2</li> </ul>				
<b>Local Community</b>	1. Total amount invested in the community	<ul style="list-style-type: none"> <li>• Bursa C2 (a)</li> <li>• SEDG-S5.1</li> </ul>	1. Percentage of spending dedicated to the community	<ul style="list-style-type: none"> <li>• GRI 413-1</li> <li>• i-ESG 4.3.3.3</li> </ul>	1. List of operations with negative impact on the community	<ul style="list-style-type: none"> <li>• GRI 413-2</li> <li>• SEDG-S5.2</li> </ul>
	2. Total number of beneficiaries of investments in the community	<ul style="list-style-type: none"> <li>• GRI 201-1</li> <li>• Bursa C2 (b)</li> </ul>				
<b>Training &amp; Education</b>	1. Total hours of training by employee category	<ul style="list-style-type: none"> <li>• Bursa C6 (a)</li> <li>• i-ESG 4.1.3.4</li> </ul>	1. Percentage of employees receiving regular performance and career development reviews	<ul style="list-style-type: none"> <li>• GRI 404-3</li> </ul>		

**Governance**

Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Anti-Corruption</b>	1. Percentage of employees who have received training on anti-corruption by employee category	<ul style="list-style-type: none"> <li>• GRI 205-2</li> <li>• Bursa C1 (a)</li> <li>• SEDG-G4.2</li> </ul>	1. Total number and nature of confirmed incidents of corruption	<ul style="list-style-type: none"> <li>• GRI 205-3</li> <li>• Bursa C1 (c)</li> <li>• SEDG-G4.1</li> </ul>	1. Total number and percentage of operations assessed for risks related to corruption	<ul style="list-style-type: none"> <li>• GRI 205-1</li> <li>• Bursa C1 (b)</li> </ul>
<b>Data Privacy &amp; Security</b>	1. Number of substantiated complaints concerning breaches of data	<ul style="list-style-type: none"> <li>• GRI 418-1</li> <li>• Bursa C8 (a)</li> <li>• SEDG-G5.1</li> </ul>				
<b>Supply Chain Management</b>	1. Proportion of spending on local suppliers	<ul style="list-style-type: none"> <li>• GRI 204-1</li> <li>• Bursa C7 (a)</li> </ul>	1. Suppliers assessed for environmental and social impact	<ul style="list-style-type: none"> <li>• GRI 308-2</li> <li>• Bursa S6 (b)</li> <li>• Bursa S7 (b)</li> </ul>		



Figure 19: Proposed OGSE Material Topics and Indicators for Non-PLCs and SMEs

Environmental						
Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Emissions</b>	1. Total Scope 1 emissions (MtCO <sub>2</sub> e)	<ul style="list-style-type: none"> <li>• GRI 305-1</li> <li>• SEDG-E1.1</li> <li>• Bursa C11 (a)</li> <li>• IFRS S2 29 (a) (i) (1)</li> <li>• i-ESG 3.2.2.1</li> </ul>	1. Scope 1 and 2 emissions reduced as a direct result of reduction initiatives	<ul style="list-style-type: none"> <li>• SEDG-E1.3</li> <li>• SEDG-E1.4</li> </ul>	1. Total Scope 3 emissions (MtCO <sub>2</sub> e) (at least for business travel and employee commuting)	<ul style="list-style-type: none"> <li>• GRI 305-3</li> <li>• Bursa C11 (c)</li> <li>• SEDG-E1.5</li> <li>• IFRS S2 29 (a) (i) (3)</li> <li>• i-ESG 3.2.2.3</li> </ul>
	2. Total Scope 2 emissions (MtCO <sub>2</sub> e)	<ul style="list-style-type: none"> <li>• GRI 305-2</li> <li>• SEDG-E1.2</li> <li>• Bursa C11 (b)</li> <li>• IFRS S2 29 (a) (i) (2)</li> <li>• i-ESG 3.2.2.2</li> </ul>				
<b>Energy</b>	1. Total energy consumption, including, if applicable, renewable and non-renewable fuel sources, electricity, heating, cooling, and steam	<ul style="list-style-type: none"> <li>• GRI 302-1</li> <li>• SEDG-E2.1</li> <li>• Bursa C4 (a)</li> <li>• SASB 130a.1</li> <li>• i-ESG 3.1.2.1</li> </ul>	1. Reduction in energy consumption	<ul style="list-style-type: none"> <li>• GRI 302-4</li> <li>• SEDG-E2.2</li> </ul>	1. Energy intensity	<ul style="list-style-type: none"> <li>• GRI 302-3</li> <li>• i-ESG 3.1.2.2</li> </ul>
					2. Renewable energy commitments	<ul style="list-style-type: none"> <li>• RE100</li> <li>• i-ESG 3.1.2.3</li> </ul>
<b>Waste</b>	1. Total waste generated	<ul style="list-style-type: none"> <li>• GRI 306-3</li> <li>• SEDG-E.4.1</li> <li>• Bursa C10 (a)</li> <li>• SASB 150a.1</li> <li>• i-ESG 3.4.2.1</li> </ul>	1. Total breakdown of waste by hazardous and non-hazardous waste	<ul style="list-style-type: none"> <li>• GRI 306-3</li> <li>• SEDG-E4.2</li> <li>• SASB 150a.1</li> <li>• i-ESG 3.4.2.4</li> </ul>	1. Total breakdown of hazardous and non-hazardous waste by recovery streams	<ul style="list-style-type: none"> <li>• GRI 306-4</li> <li>• SEDG-E4.3</li> </ul>
	2. Total waste diverted from disposal	<ul style="list-style-type: none"> <li>• GRI 306-4</li> <li>• SEDG-E.4.1</li> <li>• Bursa C10 (a)</li> <li>• i-ESG 3.4.2.3</li> </ul>			2. Total breakdown of hazardous and non-hazardous waste by disposal streams	<ul style="list-style-type: none"> <li>• GRI 306-5</li> <li>• SEDG-E4.4</li> </ul>
	3. Total waste directed to disposal	<ul style="list-style-type: none"> <li>• GRI 306-5</li> <li>• SEDG-E.4.1</li> <li>• Bursa C10 (a)</li> <li>• i-ESG 3.4.2.2</li> </ul>				
<b>Water &amp; Effluent</b>	1. Total water withdrawn from all areas, and a breakdown by type	<ul style="list-style-type: none"> <li>• GRI 303-3</li> <li>• SEDG-E3.1</li> <li>• SASB 140a.1</li> </ul>	1. Water efficiency	• i-ESG 3.3.2.2	1. Total water discharged	<ul style="list-style-type: none"> <li>• GRI 303-4</li> <li>• Bursa S8(a)</li> </ul>
			2. Total volume of water used	<ul style="list-style-type: none"> <li>• GRI 303-5</li> <li>• Bursa C9 (a)</li> <li>• SASB 140a.1</li> <li>• i-ESG 3.3.2.1</li> </ul>		

Social						
Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Health &amp; Safety</b>	1. Total number of work-related fatalities	<ul style="list-style-type: none"> <li>• GRI 403-9</li> <li>• Bursa C5 (a)</li> <li>• SEDG-S4.1</li> </ul>	1. Total number and percentage of employees trained on OHS standards	<ul style="list-style-type: none"> <li>• Bursa C5 (c)</li> <li>• SEDG-S4.2</li> </ul>	1. Number of healthcare programmes provided to employees	<ul style="list-style-type: none"> <li>• GRI 403-6</li> <li>• i-ESG 4.2.3.4</li> </ul>
	2. Total number of work-related injuries	<ul style="list-style-type: none"> <li>• SEDG-S4.1</li> </ul>			2. Lost time incident rate	<ul style="list-style-type: none"> <li>• Bursa C5 (b)</li> </ul>
<b>Employment</b>	1. Total number of employees	<ul style="list-style-type: none"> <li>• SEDG-S2.2</li> <li>• GRI 2-7</li> </ul>	1. Total employee turnover by employee category	<ul style="list-style-type: none"> <li>• GRI 401-1</li> <li>• Bursa C6 (c)</li> <li>• SEDG-S2.2</li> </ul>	1. Percentage of employees that are contractors or temporary staff	<ul style="list-style-type: none"> <li>• Bursa C6 (b)</li> </ul>
<b>Human Rights</b>	1. Total number of human rights incidents, including child labour and forced labour	<ul style="list-style-type: none"> <li>• Bursa C6 (d)</li> <li>• SEDG-S1.1</li> </ul>	1. List of operations and suppliers considered to have significant risk for human rights incidents	<ul style="list-style-type: none"> <li>• GRI 408-1</li> <li>• GRI 409-1</li> <li>• SEDG-S1.2</li> </ul>	1. Total number of substantiated complaints concerning human rights violations	<ul style="list-style-type: none"> <li>• Bursa C6 (d)</li> </ul>
<b>Diversity &amp; Equal Opportunities</b>	1. Percentage of employees by gender and age group, for each employee category	<ul style="list-style-type: none"> <li>• GRI 405-1</li> <li>• Bursa C3 (a)</li> <li>• SEDG-S3.1</li> </ul>	1. Percentage of directors by gender and age group	<ul style="list-style-type: none"> <li>• GRI 405-1</li> <li>• Bursa C3 (b)</li> <li>• SEDG-S3.2</li> </ul>	1. Percentage of employees by other indicators of diversity	<ul style="list-style-type: none"> <li>• GRI 405-1</li> </ul>
<b>Local Community</b>	1. Total amount invested in the community	<ul style="list-style-type: none"> <li>• Bursa C2 (a)</li> <li>• SEDG-S5.1</li> </ul>	1. Total number of beneficiaries of investments in the community	<ul style="list-style-type: none"> <li>• GRI 201-1</li> <li>• Bursa C2 (b)</li> </ul>	1. List of operations with negative impact on the community	<ul style="list-style-type: none"> <li>• GRI 413-2</li> <li>• SEDG-S5.2</li> </ul>
<b>Training &amp; Education</b>	1. Average hours of training per employee	<ul style="list-style-type: none"> <li>• GRI 404-1</li> <li>• SEDG-S2.1</li> </ul>	1. Percentage of employees receiving regular performance and career development reviews	<ul style="list-style-type: none"> <li>• GRI 404-3</li> </ul>		

Governance						
Indicator	Basic	Reference	Intermediate	Reference	Advanced	Reference
<b>Anti-Corruption</b>	1. Total number and nature of confirmed incidents of corruption	<ul style="list-style-type: none"> <li>• GRI 205-3</li> <li>• Bursa C1 (c)</li> <li>• SEDG-G4.1</li> </ul>	1. Total number and percentage of employees who have received training on anti-bribery and corruption policy	<ul style="list-style-type: none"> <li>• GRI 205-2</li> <li>• Bursa C1 (a)</li> <li>• SEDG-G4.2a</li> </ul>	1. List the significant risks related to corruption	<ul style="list-style-type: none"> <li>• GRI 205-1</li> <li>• SEDG-G4.3</li> </ul>
<b>Data Privacy &amp; Security</b>			1. Total number and nature of substantiated complaints received concerning breaches of customer privacy and loss of customer data	<ul style="list-style-type: none"> <li>• GRI 418-1</li> <li>• Bursa C8 (a)</li> <li>• SEDG-G5.1</li> </ul>		
<b>Supply Chain Management</b>			1. Proportion of spending on local suppliers	<ul style="list-style-type: none"> <li>• GRI 204-1</li> <li>• Bursa C7 (a)</li> </ul>	1. Suppliers assessed for environmental and social impact	<ul style="list-style-type: none"> <li>• GRI 308-2</li> <li>• Bursa S6 (b)</li> <li>• Bursa S7 (b)</li> </ul>

# 05

CHAPTER

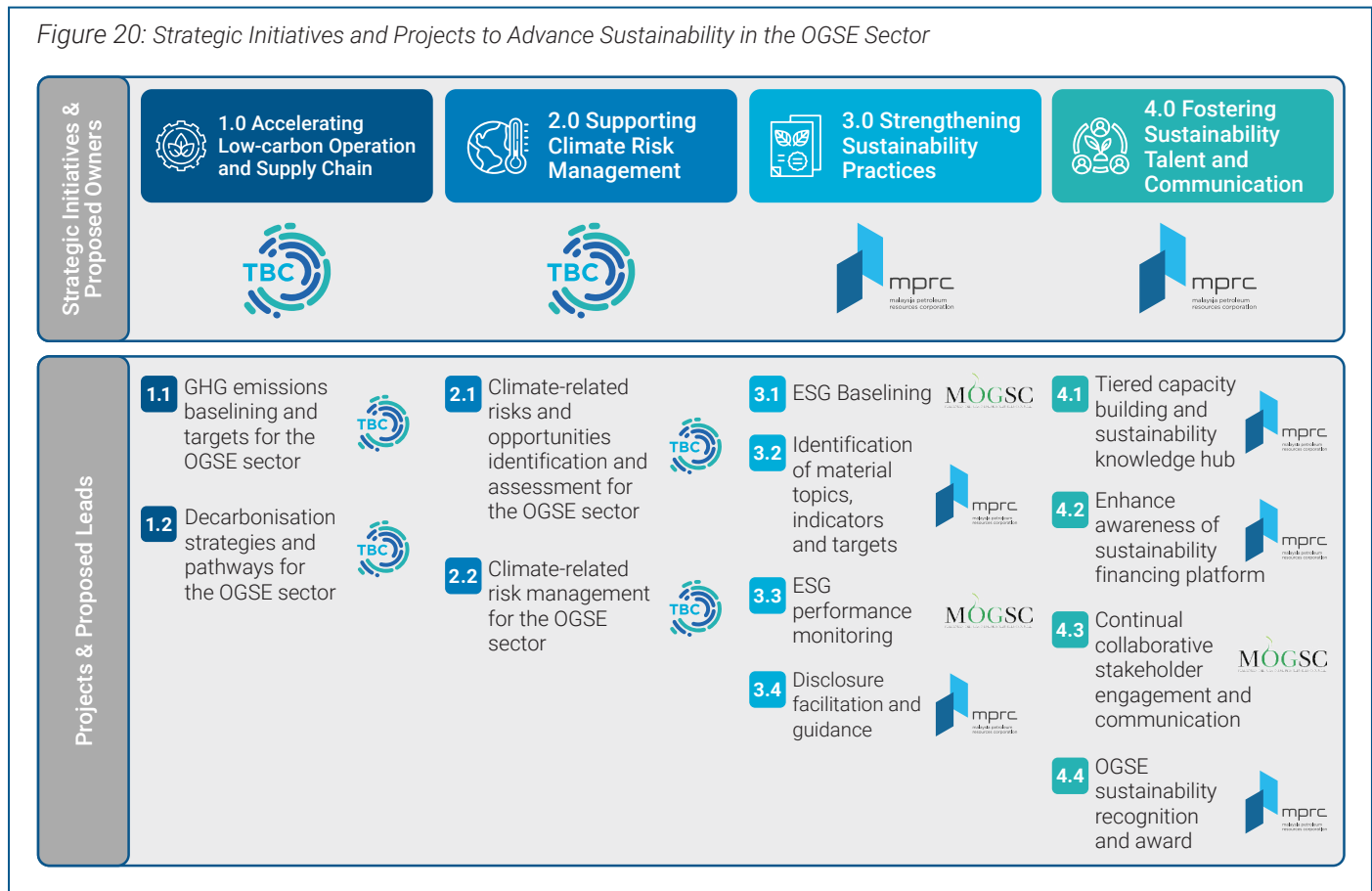
## NOS-R STRATEGIC INITIATIVES





Based on the NOS-P recommendations, input from the OGSE companies, stakeholders, and the project team’s research, the NOS-R proposes implementing four Strategic Initiatives and 12 Projects that will advance sustainability among OGSE companies.

Figure 20: Strategic Initiatives and Projects to Advance Sustainability in the OGSE Sector



## 5.1 STRATEGIC INITIATIVE 1: ACCELERATING LOW-CARBON OPERATION AND SUPPLY CHAIN

### Project 1.1 GHG Emissions Baselining and Targets for the OGSE Sector

#### Case for Change

The rising scrutiny surrounding the low-carbon economy transition and demand for accurate emissions data pivot the drafting and implementation of sound policies and regulations, such as carbon tax and decarbonisation targets, to ensure they meet their intended purposes. Most Malaysian OGSE companies find emissions data collation challenging and have yet to set meaningful reduction targets. For the OGSE sector to play its part in meeting Malaysia’s target to be a net zero nation as early as 2050, companies need to be equipped with the capacity to conduct their respective GHG emissions baselining and contribute accurate emissions data.

#### Key Objectives

1. Conduct a thorough assessment of Malaysian OGSE companies’ current GHG emissions and establish a baseline that accurately reflects the sector’s environmental footprint.
2. Collaborate with sector stakeholders to establish achievable sectoral GHG emissions reduction targets. These targets will align with national aspirations and international standards and contribute to mitigating climate change impacts.

## Approach

<b>Proposed Project Lead</b>	TBC
<b>Suggested Implementation Team</b>	Low-carbon Operation and Supply Chain Implementation Team, oil and gas operators

The Project involves a comprehensive GHG emissions baselining assessment, collaborating with participating companies to gather emissions data using standardised methodologies to ensure consistency of data reported. Additionally, progress monitoring is implemented, offering transparency and tracking of sector-wide progress to stakeholders.

The Project Lead will establish an Implementation Team to support the project, guiding companies in their respective GHG emissions baselining. The Team will identify 20 OGSE companies for the Early Adopter Programme to refine the Project processes prior to a large-scale rollout.

The starting year entails a GHG Emission Baselining from the Early Adopter programme and the setting of an interim target involving 20 selected OGSE companies. The second and third years entail a GHG Emission Baselining programme progressively involving sector participation, at above 30% and 80%, respectively. Throughout the programme, the implementation team will gather all the data, information, and key findings that will be used to identify the OGSE sector's GHG emissions baseline, a sectoral GHG emissions reduction target for 2030 and 2050, and the baseline year.

### Impacts and KPIs

- Percentage of OGSE companies establishing GHG emissions baseline (Scopes 1 & 2)
- Percentage of OGSE companies setting up emissions reduction targets
- Percentage of OGSE companies developing emissions reduction pathways

### Funding and Investment

- Professional fees
- Logistic

### Dependencies and Risks

- Companies' collaborative efforts and support
- Access to trainers and professionals with expertise in climate-related disclosures
- Resistance to change
- Changes in regulation and policies
- Limited sector and stakeholder engagements
- Lack of quality and available data

## Project 1.2 Decarbonisation Strategies and Pathways for the OGSE Sector

### Case for Change

Heightened impacts from climate-related physical risks, such as global warming, extreme heat and water stress, have made it imperative for governments and regulators to introduce policies and regulations aimed at controlling emissions. Based on the emissions data collected and emissions reduction targets set in Project 1.1, companies will need guidance and collaboration to identify suitable decarbonisation strategies and pathways to meet both their individual and sectoral emissions reduction targets.

### Key Objectives

1. Collaborate with sector stakeholders to identify technical and economically feasible decarbonisation activities and pathways and formulate comprehensive and tailored decarbonisation strategies designed for the OGSE sector.
2. Encourage widespread acceptance and implementation of decarbonisation strategies among OGSE companies.

### Approach

<b>Proposed Project Lead</b>	TBC
<b>Suggested Implementation Team</b>	Low-carbon Operation and Supply Chain Implementation Team, oil and gas operators

Upon completion of a decarbonisation strategy and pathway identification, consolidated guidance will be developed together with findings from Project 1.1, which will then be communicated to the sector to upskill and guide companies in their decarbonisation journey.

The Implementation Team will identify 20 OGSE companies that are reflective of the OGSE sector in terms of their emissions profile, emerging technologies available, and innovation scan. These companies are suggested to be maintained based on the selection in Project 1.1.

The Team will then formulate decarbonisation strategies for the sector that can be emulated by OGSE companies through stakeholder engagement, identifying best practice identification and research complemented by findings from Project 1.1. Key findings from research and engagements, alongside information gathered from Project 1.1, will be consolidated and published.

Once the document is ready for publication, selected OGSE companies will be engaged as early adopters, whereby tailored training and guidance will be provided on the use of the document, how to implement and manage decarbonisation initiatives and financial options that can support their implementation.

Upon publication, the implementation team will develop a communication strategy for the continuous sectoral promotion of the guidance document adoption and emphasise the importance of embarking on the decarbonisation journey. This will be supported by capacity building (Project 4.1) and available financial options for decarbonisation (Project 4.2).

### Impacts and KPIs

- Percentage of OGSE companies adopting and implementing decarbonisation pathways and strategies

### Funding and Investment

- Professional fees
- Logistic

### Dependencies and Risks

- Companies' collaborative efforts and support
- Access to trainers and professionals with expertise in climate-related disclosures
- Resistance to change
- Changes in regulation and policies
- Limited sector and stakeholder engagements
- Lack of quality and available data

## 5.2 STRATEGIC INITIATIVE 2: SUPPORTING CLIMATE RISK MANAGEMENT

### Case for Change

#### Project 2.1 Climate-related Risks and Opportunities Identification and Assessment

Stakeholders, including regulators and financiers, now demand heightened transparency and accountability concerning climate-related risks. Both global and local legislation emphasise the need for organisations to integrate climate risk considerations seamlessly into their operations. Beyond mere regulatory compliance, taking proactive steps to address climate risks is vital for mitigating potential financial losses, safeguarding against reputational damage, and preventing operational disruptions. Climate-related impacts go beyond compliance; they represent a strategic imperative for ensuring long-term resilience and sustainability.

Embracing climate risk management not only fulfils a moral obligation but also constitutes a prudent business decision that shields organisations against future uncertainties and positions them as leaders in a rapidly evolving global landscape.

#### Key Objectives

1. Conduct a thorough analysis to recognise potential risks associated with climate change, such as extreme weather events, regulatory shifts, and changes in market demand.
2. Evaluate opportunities that may arise from climate-related trends.
3. Establish a comprehensive monitoring system to track key climate indicators and their potential impact on the OGSE sector, ensuring a proactive stance in risk management.

#### Approach

<b>Proposed Project Lead</b>	MGTC
<b>Suggested Implementation Team</b>	Climate Risk Management Implementaion Team, oil and gas operators

The Project Lead will endeavour to establish and identify implementation partners, including knowledge partners, capable of supporting the Project's implementation. Upon the selection and participation of 20 OGSE companies, the Project Lead will initiate data collection, including clearly defining assessment metrics and key stakeholders' involvement, establishing communication channels with relevant personnel, tailoring information request lists to each company's context, using quantitative and qualitative data sources and implementing consistency checks. Timely follow-ups will be conducted to address any outstanding inquiries.

The Project Lead, alongside appointed implementation and knowledge partners, will identify climate risks and opportunities using collected data, followed by thorough analyses to understand qualitative aspects of each company's exposure and synthesise the findings to establish connections between climate risks, opportunities, influencing factors, and overall business strategies. Comparative analysis and benchmarking will be employed to identify sectoral best practices and areas for improvement.

The Team will also identify trends to derive sector-wide insights from the assessment. A comprehensive report will then be crafted to communicate key findings, recommendations and sectoral insights, including transparent disclosures on the methodology employed for credibility. This will be followed by the development of a communication plan to distribute the report through various channels. Stakeholder feedback will be encouraged, with continuous communication and monitoring of the report's reception.



**Impacts and KPIs**

- Percentage of OGSE companies identifying and/or assessing climate-related risks and opportunities
- Publication of a sectoral document that identifies and assesses climate-related risks and opportunities for the OGSE sector

**Funding and Investment**

- Professional fees
- Logistic

**Dependencies and Risks**

- Companies' collaborative efforts and support
- Access to trainers and professionals with expertise in climate-related disclosures
- Resistance to change
- Changes in regulation and policies
- Limited sector and stakeholder engagements
- Lack of quality and available data

**Project 2.2 Climate-related Risk Management**

**Key Objectives**

1. Develop a deep understanding of climate risks specific to the OGSE sector through rigorous identification and analysis.
2. Extract, analyse, and integrate climate risk management best practices from leading OGSE companies globally into the sector's framework.
3. Foster collaboration among sector stakeholders, including OGSE companies, experts, and environmental agencies, to ensure a holistic and well-informed approach.

**Approach**

<b>Proposed Project Lead</b>	MGTC
<b>Suggested Implementation Team</b>	Climate Risk Management Implementaion Team, oil and gas operators

A comprehensive desktop review will be undertaken to gather insights into existing climate risk management strategies employed by global OGSE companies. Best practices in climate risk management will be extracted and consolidated from the identified companies. Validation of findings and the inclusion of diverse perspectives will be ensured through collaboration with sector experts, environmental agencies, and OGSE companies. The identification of leading global companies for climate risk management benchmarking will be conducted through the establishment of internally determined criteria based on publicly disclosed information.

The collated information will be published in the sectoral document on climate risk alongside information from Project 2.1, offering practical insights and recommendations to manage climate-related risks and opportunities. Continuous monitoring of climate risk management processes adopted by OGSE companies will be ensured.

### Impacts and KPIs

- Percentage of OGSE companies adopting and implementing climate risk management
- Publication of a sectoral document that identifies and assesses climate-related risks and opportunities for the OGSE sector

### Funding and Investment

- Professional fees
- Logistic

### Dependencies and Risks

- Companies' collaborative efforts and support
- Access to trainers and professionals with expertise in climate-related disclosures
- Resistance to change
- Changes in regulation and policies
- Limited sector and stakeholder engagements
- Lack of quality and available data

## 5.3 STRATEGIC INITIATIVE 3: STRENGTHENING SUSTAINABILITY PRACTICES

### Project 3.1 GHG Baselineing

#### Case for Change

Sustainability is no longer optional; companies must start making a business case for investing in the transition towards a sustainable business module. This means establishing an ESG baseline before establishing and implementing initiatives that address ESG topics. This will also enable companies to identify material sustainability-related impact areas and gaps to be addressed.

#### Key Objectives

1. Create a deeper understanding with OGSE sector companies as to their current ESG performance and necessary steps for improvement.
2. Provide a solid foundation for OGSE companies to initiate and embark on sustainability initiatives.
3. Establish a point from where progress is measured.

#### Approach

<b>Proposed Project Lead</b>	MOGSC
<b>Suggested Implementation Team</b>	Sustainability Practices Implementation Team, UNGC and MITI as ESG baselining tool owners

The Project Lead will encourage OGSE companies to conduct an ESG baselining assessment as a preliminary step in their sustainability journey by highlighting the importance of understanding ESG baselining through key events and engagements. Useful information and references on existing ESG baselining tools, including MITI's i-ESG Ready Self Assessment and UNGC's ESG Start Tool, will be promoted on MPRC's corporate website as a one-stop location. Throughout the Project duration, the Implementation Team will ensure continuous monitoring and evaluation of ESG baselining practices and performance against success metrics and KPIs.

**Impacts and KPIs**

- Percentage of OGSE companies complying with relevant ESG regulations and standards
- Percentage of OGSE companies conducting ESG baselining assessment to identify gaps and recommendations for improvement

**Dependencies and Risks**

- Companies’ ambition
- Access to expertise and professionals in ESG
- Accuracy of existing ESG assessment tools
- Investments and/or potential collaboration needed
- Resistance to change

**Funding and Investment**

- Platform training fees

**Project 3.2 Identification of Material Sustainability Topics, Indicators and Targets**

**Case for Change**

The sustainability reporting landscape is ever-evolving, but a constant feature is the identification of material sustainability topics that refer to environmental, social and governance issues. These topics are commonly identified through a materiality assessment, which is fundamental for determining strategies, as companies can identify the topics that matter to them and their stakeholders, subsequently incorporating them into decision-making processes. It is also crucial that companies establish meaningful indicators and targets that will enable them to measure their performance and identify areas for improvement while managing expectations of and demonstrating transparency and accountability to stakeholders.

**Key Objectives**

1. Understand the impacts of the OGSE sector on ESG and the impacts of ESG on the OGSE sector.
2. Identify key ESG topics that are specific to the OGSE sector.
3. Increase the consistency and comparability of sustainability reports and related data within the OGSE sector.

**Approach**

<b>Proposed Project Lead</b>	MPRC
<b>Suggested Implementation Team</b>	Sustainability Practices Implementation Team, Sustainability Talent and Communication Implementation Team, Sustainability/ESG Performance Monitoring Tools providers

The NOS-F Guide will be introduced at key events and published on MPRC’s corporate website. The Project Lead is involved in other publicity efforts to familiarise the OGSE sector with the framework. To encourage uptake, the Project Lead will endeavour to develop an incentivisation programme whereby OGSE companies that adopt the NOS-F Guide and submit their reports to MPRC are eligible to receive an assessment rating and indication of improvement. The programme will culminate in an award, whereby performing OGSE companies will be recognised for their sustainability reporting practices. Refer to Project 4.4 for more information. The Project Lead will officially launch the programme, followed by the public release of key programme information and the entry form via MPRC’s corporate website.

### Impacts and KPIs

- Percentage of OGSE companies referencing the NOS-F Guide for material sustainability topics in their materiality assessments, reporting and/or data collection and management

### Funding and Investment

- Platform subscription fees

### Dependencies and Risks

- Companies' collaborative efforts and support
- Companies' participation
- Access to expertise and professionals in ESG
- Limited sector and stakeholder engagement
- Resistance to change
- Changes in reporting regulations

## Project 3.3 ESG Performance Monitoring

### Case for Change

Monitoring, measuring and reporting ESG performance has become integral to long-term success. This process refers to systematic and periodic observation of relevant ESG data over time to develop a baseline for target setting, identify inefficient and ineffective practices and opportunities for improvement, and encourage transparent reporting. ESG performance monitoring also benefits a company's risk management process, as robust ESG data and monitoring processes enable the identification of potential risks and opportunities through performance trends. It also allows for benchmarking and comparative analysis and helps companies align their strategies with sustainable practices.

### Key Objectives

1. Drive the OGSE sector to enhance its sustainability and reporting practices through better management, monitoring, tracking and analysis of performance data.
2. Measure progress towards sustainability-related goals and targets.
3. Allow for centralised, definitive data that ensures essential information is collected and improves collaboration.

### Approach

<b>Proposed Project Lead</b>	MOGSC
<b>Suggested Implementation Team</b>	Sustainability Practices Implementation Team, Bursa Malaysia, PANTAS and MGTC as ESG performance monitoring tool providers

Existing ESG performance monitoring tools will be identified for the OGSE sector to leverage, including Bursa Malaysia's Centralised Sustainability Intelligence (CSI) Platform, PANTAS and MGTC's Low Carbon Operating System (LCOS). The benefits of using these tools for the sector include streamlined reporting, accelerated decarbonisation and enhanced access to funds. The tools will encourage PLCs to monitor and decarbonise their supply chain, while MTCs and SMEs will have access to technical advice and transition financing through the Joint Committee on Climate Change's (JC3) Greening Value Chain (GVC) programme.

An early adopter and implementation programme will be launched for selected OGSE companies. Prior to the launch, OGSE companies with the largest supply chains might be prioritised and included in the programme in phases.



The selected OGSE companies will then participate in the early adopter programme. These companies will be guided on using the applicable tools to monitor their supply chain performance and subsequently extract relevant information that will enable them to decarbonise their value chain. The Project Lead and tool providers will continuously seek feedback from participating companies to identify key challenges faced and recommendations for improving the platform.

Following the culmination of the early adopter programme, the implementation programme will be launched, allowing 50% of the initially identified OGSE companies to participate in the adoption of the applicable tools. The Project Lead will facilitate discussions between early adopter programme participants and implementation programme participants to share best practices, lessons learned and key observations. Upon completion of the partial implementation programme launch, the final cohort of remaining OGSE companies with the largest supply chains will adopt the applicable tools.

**Impacts and KPIs**

- Percentage of OGSE companies leveraging on and/or covered (if they are part of a larger supply chain) by Sustainability/ESG performance monitoring tools

**Funding and Investment**

- Platform subscription fees

**Dependencies and Risks**

- Companies' participation
- Collaboration with digital tool owners
- Resistance to change
- Potential costs associated with the Sustainability/ ESG Performance Monitoring Tools
- Lack of quality and available data

**Project 3.4 Disclosure Facilitation and Guidance**

**Case for Change**

Due to the extensive sustainability reporting frameworks and standards available, the material topics and indicators need to be simplified and consolidated while ensuring relevance to the OGSE sector. This simplified guidance aims to create a common language for the sector by illustrating specific indicators that are applicable to all members and showcasing the best reporting practices.

**Key Objectives**

1. Consolidate topics, indicators and reporting requirements from various global and local standards and frameworks to create a simplified disclosure guide.
2. Assist OGSE companies, in particular, SMEs, to start or enhance their sustainability journey and reporting practices in a phased approach.

**Approach**

<b>Proposed Project Lead</b>	MPRC
<b>Suggested Implementation Team</b>	Sustainability Practices Implementation Team

NOS-F Guide will be developed based on the material topics and indicators in the NOS-R to provide practical information to OGSE companies on integrating and implementing key sustainability aspects. Stakeholder engagement sessions will be conducted throughout the development of the guidance to gather insights and perspectives from the sector and relevant authorities, while further research will be conducted into best practices. It is anticipated that there will be a virtual open dialogue with OGSE companies, followed by a comprehensive public consultation process to obtain feedback on the disclosure guidance, as well as extensive presentations to relevant stakeholders.

Upon stakeholder validation and finalisation, the Project Lead will execute a launch strategy and programme, including communication of the disclosure guidance to all stakeholders. It will be made accessible on public platforms, with physical or digital copies disseminated to OGSE sustainability practitioners. Throughout the launch and rollout, the Project Lead will evaluate, adjust, and update the disclosure guidance by monitoring performance against KPIs, conducting periodic surveys, establishing an open feedback mechanism, and leveraging user analytics.

#### Impacts and KPIs

- Percentage of OGSE companies referencing the disclosure guidance in their sustainability report

#### Funding and Investment

- Professional fees
- Logistics

#### Dependencies and Risks

- Companies' uptake of the guidance
- Companies' participation
- Collaboration with digital tool owners
- Resistance to change
- Limited sector and stakeholder engagement
- Changes in reporting regulations

## 5.4 STRATEGIC INITIATIVE 4: FOSTERING SUSTAINABILITY TALENT AND COMMUNICATION

### Project 4.1 Tiered Capacity Building and Sustainability Knowledge Hub

#### Case for Change

The intricate global and local sustainability landscape, increasing stakeholder expectations on sustainability measures and scarcity of sustainability talent necessitate a centralised hub and robust capacity building to navigate the complexities. A tiered capacity-building approach thus emerges as indispensable, ensuring tailored strategies are deployed to address levels of expertise and organisational readiness and provide comprehensive development for all stakeholders. The tiered approach not only equips but also fosters sustainability, resilience, and innovation, driving meaningful and lasting change in the global landscape. By addressing these critical drivers for change, the Project can emerge as a pivotal platform in driving organisational and societal sustainability efforts forward.

#### Key Objectives

1. Create a sustainability-focused talent pool within the OGSE sector.
2. Equip OGSE companies with a robust sustainability management and reporting understanding.
3. Promote the integration of sustainable practices within the operations of OGSE companies.
4. Futureproof OGSE companies in their sustainability journey and building business resilience.

## Approach

<b>Proposed Project Lead</b>	MPRC
<b>Suggested Implementation Team</b>	Sustainability Talent and Communication Implementation Team, training providers, sustainability knowledge hub owners

The approach to capacity building will be tiered, encompassing beginner, intermediate, and advanced modules covering three key topics, namely ESG Implementation, GHG Management, and Climate-related Risk and Opportunity. The project will also promote existing sustainability knowledge hubs as reliable sources of information and collaboration to produce OGSE-focused sustainability content. Moving forward, developing and maintaining this digital sustainability knowledge hub will serve as the Centre of Excellence for Sustainability (CoES), producing OGSE-focused sustainability content, consolidating case studies and best practices and acting as a sustainability report repository.

The Project Lead will identify and appoint training providers to support the delivery of the capacity-building programme, as well as organise and coordinate the capacity-building sessions. The Project Lead will also identify targeted OGSE companies and encourage their participation in the programme. The tiered capacity-building programme will be implemented in stages across three years.

This is followed by the promotion of existing sustainability knowledge hubs for OGSE companies that are reliable sources of sustainability-related information. The Project Lead will engage and collaborate with the various existing hubs to produce OGSE-focused content that would provide targeted support to the sector.

Moving forward, a project team will be established to spearhead the development of an OGSE CoES in the form of a microsite or a standalone digital platform. In the long term, the CoES will become the OGSE sector's reference point for OGSE-focused sustainability content and a repository for companies' sustainability reports.

### Impacts and KPIs

- Percentage of OGSE companies implementing and reporting on ESG
- OGSE companies' understanding of sustainability-related topics
- Percentage of OGSE companies enrolling for capacity building
- Percentage of OGSE companies utilising the sustainability knowledge hubs
- Percentage of OGSE companies creating sustainability-related roles

### Dependencies and Risks

- Companies' ambition, participation and willingness to invest resources
- Knowledge hub's willingness to produce OGSE-focused content
- Project Lead's willingness to develop and maintain an OGSE-focused sustainability knowledge hub
- Outdated content on knowledge hubs
- Resistance to change
- Changes in regulation policies and standards

### Funding and Investment

- Training fees
- Website/CoES platform development cost

## Project 4.2 Enhance Awareness of Sustainability Financing Platform

### Case for Change

The lack of awareness of sustainability-related financial incentives and options has left organisations unaware of the potential benefits and opportunities associated with sustainable investments, limiting the potential for financial returns and positive impact. The prevailing lack of financial resources for sustainability initiatives further exacerbates the issue, impeding progress towards addressing pressing climate and social challenges. Amidst global economic instability, prioritising sustainable finance is even more pronounced to foster resilience and mitigate financial risks. Navigating the complex web of global and local regulations, including central bank policies, presents a formidable challenge, necessitating a deeper understanding of sustainability financing mechanisms to ensure compliance and leverage opportunities. The enhanced awareness of the sustainability financing platform can be a catalyst for transformative action, enabling stakeholders to make informed decisions and drive positive change towards a more sustainable future.

### Key Objectives

1. Improve awareness and utilisation of sustainability-related financing options within the OGSE sector.
2. Support OGSE companies financially to embark on their sustainability journey.
3. Ensure a seamless application process for sustainability-related financing options.
4. Build a communication channel between financial institutions and the OGSE sector.

### Approach

<b>Proposed Project Lead</b>	MPRC
<b>Suggested Implementation Team</b>	Sustainability Talent and Communication Implementation Team, training providers, sustainability knowledge hub owners

The Implementation Team will engage with relevant stakeholders from financial institutions, Bank Negara Malaysia, and PETRONAS regarding green value chain financing. The Project Lead and implementation team will also need to collaborate with sustainability-related financing platforms and options owners.

Available sustainability-related financing options that OGSE companies can utilise will be consolidated and promoted to build organisational capacity and talent in sustainability, implement decarbonisation initiatives, and maximise opportunities that arise from energy transition. Support will be provided to the OGSE companies on their application for these sustainability-related financing options to improve the success rate of approval.

The Project Lead, supported by the Implementation Team, will consolidate and promote sustainability financing platforms to the OGSE companies, which will then be listed on MPRC's website and included in the OGSE CoES.



The Project Lead will also initiate and facilitate discussion on green value chain financing between the Implementation Team and the relevant stakeholders, including but not limited to Bank Negara Malaysia, financial institutions, and PETRONAS, to allow the sector and financial institutions form a strategic partnership to drive sustainability of the sector. They are also responsible for securing additional financial support from the government on the greening of the OGSE sector. The funds will be used to incentivise the OGSE companies that are implementing sustainable practices. Incentives can include but are not limited to the implementation of NOS-R Projects, OGSE Sustainability Awards, and subsidised assurance of sustainability reports for the OGSE companies.

**Impacts and KPIs**

- Number of OGSE companies applying for sustainability-related financing options
- Number of OGSE companies with approved financing applications

**Dependencies and Risks**

- Companies’ ambition, participation and willingness to invest resources
- Availability of sustainability-related financing options
- Eligibility criteria for financing options
- Changing financing landscape

**Project 4.3 Continual Collaborative Stakeholder Engagement and Communication**

**Case for Change**

Continual collaborative stakeholder engagement and communication are paramount in navigating the evolving landscape shaped by rapid global and local legislation developments. As regulatory frameworks tighten and reporting obligations increase, such proactive engagements are indispensable to ensure compliance and strategic alignment with emerging standards. Within the OGSE sector, sustainability and decarbonisation initiatives necessitate multi-stakeholder support.

**Key Objectives**

1. Promote engagement between the OGSE sector and key stakeholders regarding the issues, challenges, and collaboration regarding sustainability.
2. Galvanise the OGSE sector to collectively promote innovation, sustainability, and best practices, aligning with sector stakeholders’ and societal expectations.
3. Provide a platform for the OGSE sector to be heard.
4. Communicate the NOS-R within the OGSE sector and external stakeholders.

**Approach**

<b>Proposed Project Lead</b>	MOGSC
<b>Suggested Implementation Team</b>	Sustainability Talent and Communication Implementation Team

The Implementation Team is required to conduct stakeholder engagements within the sector and externally to prioritise transparent communication, address concerns, and align with evolving expectations. The Project Lead will support and facilitate these sessions when necessary and will organise sector-sharing sessions to disseminate sustainability best practices. The Project Lead will also raise awareness of the NOS-R among OGSE companies and external stakeholders.

The Project Lead is tasked with promoting the NOS-R Strategic Initiatives and Projects among OGSE companies, including highlighting the NOS-R during key events. In addition to engaging key stakeholders on green value chain financing under Project 4.2, the Project should also involve other stakeholders to address sustainability-related challenges faced by the sector. The Project Lead should also organise sector-sharing sessions where experienced OGSE companies can share their sustainability journey to inspire and provide guidance for those beginning their sustainability journey.

**Impacts and KPIs**

- Satisfaction rate of OGSE companies on the outcome of engagement and collaboration with stakeholders

**Funding and Investment**

- Logistics

**Dependencies and Risks**

- Companies’ participation
- Stakeholder willingness to be engaged
- Ineffective feedback loop
- Ineffective cooperation between Implementation Teams

**Project 4.4 OGSE Sustainability Recognition and Award**

**Case for Change**

Escalating stakeholder expectations, including those of regulators, clients, and financiers, demand a heightened focus on sustainability initiatives. Amidst growing pressures to address climate change and environmental degradation, there’s an urgent call to action to encourage OGSE companies to embark on their sustainability journey. Promoting sustainability as a competitive advantage through recognition and awards enhances a company’s reputation and incentivises companies to innovate and differentiate themselves in the marketplace. By addressing these critical drivers for change, the OGSE sustainability recognition and award program can play a pivotal role in driving positive environmental, social, and economic outcomes within the sector.

**Key Objectives**

1. Recognise, reward and celebrate the outstanding efforts of OGSE companies in their commitment to sustainable practices and sustainability reporting while setting a benchmark for responsible business conduct.
2. Encourage the adoption of sustainable practices within the OGSE sector by highlighting and promoting award recipients as exemplars of sector best practices.
3. Encourage the adoption of the NOS-F Guide material sustainability topics in sustainability reports.

**Approach**

<b>Proposed Project Lead</b>	MPRC
<b>Suggested Implementation Team</b>	Sustainability Talent and Communication Implementation Team

The Implementation Team will identify relevant organisations that will be part of the award adjudication panel. The award will be guided by a clear and transparent set of assessment criteria and will be in a tiered system to accommodate the different company sizes. Companies that submit their sustainability reports for the awards will also be given a rating and feedback on areas for improvement. Award-winning companies will be incentivised with grants to further their sustainability journey and be prioritised for future MPRC networking events that would provide more market exposure.

The main award assessment criteria for the OGSE sustainability award are the alignment of OGSE companies' sustainability reports with the NOS-F Guide, covering material sustainability topics and indicators. OGSE companies that submit their sustainability report for the award will be given a rating based on the assessment criteria and feedback to further improve their sustainability report. Common eligibility criteria for all awards require companies to be part of the OGSE sector, publish a sustainability report, reference the NOS-F Guide, and submit the report to MPRC.

To enhance the credibility and recognition of the OGSE Sustainability Award, the award adjudication panel should consist of key stakeholder groups of the OGSE sector, which will then assess the sustainability reports through their specific stakeholder lenses, considering factors such as the availability of comprehensive sustainability data, alignment with local and global reporting standards, and common requirements from financial institutions, based on a weightage calculation system. Alternatively, the Project Lead can engage with existing Sustainability Award organisers to leverage their award platforms and create a new category for the OGSE sector.

To encourage participation, awards will be given to winners in the form of cash prizes or grants, market exposure, and networking opportunities prioritisation at key OGSE events. The award rating and feedback to participating companies (subject to the referencing of the NOS-F Guide) will also be an incentive to prepare sustainability reports, reference the NOS-F Guide and participate in the award.

#### **Impacts and KPIs**

- Number of OGSE companies submitting sustainability reports for the award
- Percentage of OGSE companies implementing and reporting on ESG
- Business growth of the award-winning OGSE companies

#### **Dependencies and Risks**

- Companies' ambition and participation
- Attractiveness of the award prizes
- Lack of recognition for the award

#### **Funding and Investment**

- Professional fees
- Logistics
- Prizes and incentives for award recipients

# 06

## CHAPTER

# NOS-R ENABLERS





The NOS-R enablers and solutions have been proposed to support the implementation of the Strategic Initiatives.

Figure 21: Enablers, Related Projects and Proposed Solutions

Enabler	Related Projects	Solution
<b>Human capital, mindset and ways of working</b>	<ul style="list-style-type: none"> <li>• GHG emissions baselining and targets</li> <li>• Decarbonisation strategies and pathways</li> <li>• Climate-related risks and opportunities identification and assessment</li> <li>• Climate-related risk management</li> <li>• Disclosure facilitation and guidance</li> <li>• Tiered capacity building and sustainability knowledge hub</li> <li>• Continual collaborative stakeholder engagement and communication</li> </ul>	<ul style="list-style-type: none"> <li>• Training, education and certification</li> <li>• Knowledge transfer programmes</li> <li>• Cross-functional collaboration</li> </ul>
<b>Technology, innovation and infrastructure</b>	<ul style="list-style-type: none"> <li>• GHG emissions baselining and targets</li> <li>• Decarbonisation strategies and pathways</li> <li>• Climate-related risks and opportunities identification and assessment</li> <li>• Climate-related risk management</li> <li>• ESG Baselining</li> <li>• Identification of material topics, indicators and targets</li> <li>• ESG performance monitoring</li> <li>• Tiered capacity building and sustainability knowledge hub</li> <li>• Enhance awareness of the sustainability financing platform</li> </ul>	<ul style="list-style-type: none"> <li>• Renewable energy technologies</li> <li>• Carbon Capture and Storage</li> </ul>
<b>Market regulation and Bumiputera participation</b>	<ul style="list-style-type: none"> <li>• Identification of material topics, indicators and targets</li> <li>• Disclosure facilitation and guidance</li> <li>• Enhance awareness of the sustainability financing platform</li> <li>• OGSE sustainability recognition and award</li> </ul>	<ul style="list-style-type: none"> <li>• Implement stringent environmental standards</li> <li>• Incentives for sustainable practices</li> </ul>
<b>Domestic and international market access</b>	<ul style="list-style-type: none"> <li>• GHG emissions baselining and targets</li> <li>• Decarbonisation strategies and pathways</li> <li>• Identification of material topics, indicators and targets</li> <li>• Disclosure facilitation and guidance</li> <li>• Tiered capacity building and sustainability knowledge hub</li> </ul>	<ul style="list-style-type: none"> <li>• Certification and standards</li> <li>• Promote sustainable export practices</li> </ul>
<b>Funding and investments</b>	<ul style="list-style-type: none"> <li>• Enhance awareness of the sustainability financing platform</li> <li>• Continual collaborative stakeholder engagement and communication</li> </ul>	<ul style="list-style-type: none"> <li>• Green financing</li> <li>• Sustainable investment funds</li> </ul>

# 07

## CHAPTER

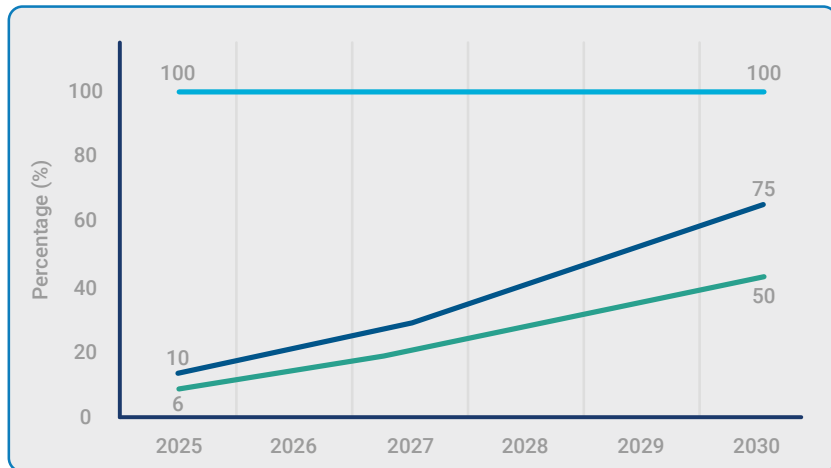
# NOS-R SUCCESS MEASURES



## 7.1 SUSTAINABILITY REPORTING TARGETS

Figure 22: Key Sustainability Reporting Targets

- 100%** OGSE PLCs to continue their sustainability reporting, as required by Bursa Malaysia
- 75%** OGSE mid-tier companies (MTCs) to begin sustainability reporting by 2030
- 50%** OGSE SMEs to begin sustainability reporting by 2030



## 7.2 SUSTAINABILITY INDEX INCLUSION





Malaysian PLCs listed on the FBM EMAS Index and have achieved an ESG score of 2.9 and above will be included in the FTSE4Good Bursa Malaysia (F4GBM) Index. At the time of publication, six of the 26 OGSE PLCs are currently included in the index.

The aim is for a 50% increase in the number of OGSE PLCs to be included by 2030, with 2023 as the baseline year.

## 7.3 STRATEGIC INITIATIVES KPI

KPIs have been identified at the Strategic Initiative level that are aligned with the more detailed project KPIs:

Figure 23: KPIs for the Strategic Initiatives

 <b>Accelerating Low-carbon Operation and Supply Chain</b>	 <b>Supporting Climate Risk Management</b>	 <b>Strengthening Sustainability Practices</b>	 <b>Fostering Sustainability Talent and Communication</b>
Percentage of OGSE companies adopting and implementing decarbonisation pathways and strategies	Publication of a sectoral document that identifies and assesses climate-related risks and opportunities for the OGSE sector*	Percentage of OGSE companies implementing and reporting on ESG	<ul style="list-style-type: none"> <li>• Number of OGSE companies with approved financial applications</li> <li>• Satisfaction rate of OGSE companies on the outcome of engagement and collaboration with stakeholders</li> <li>• Number of OGSE companies participating in the OGSE sustainability award</li> </ul>

\*Publication of sectoral document by 2026 and to be reviewed when necessary



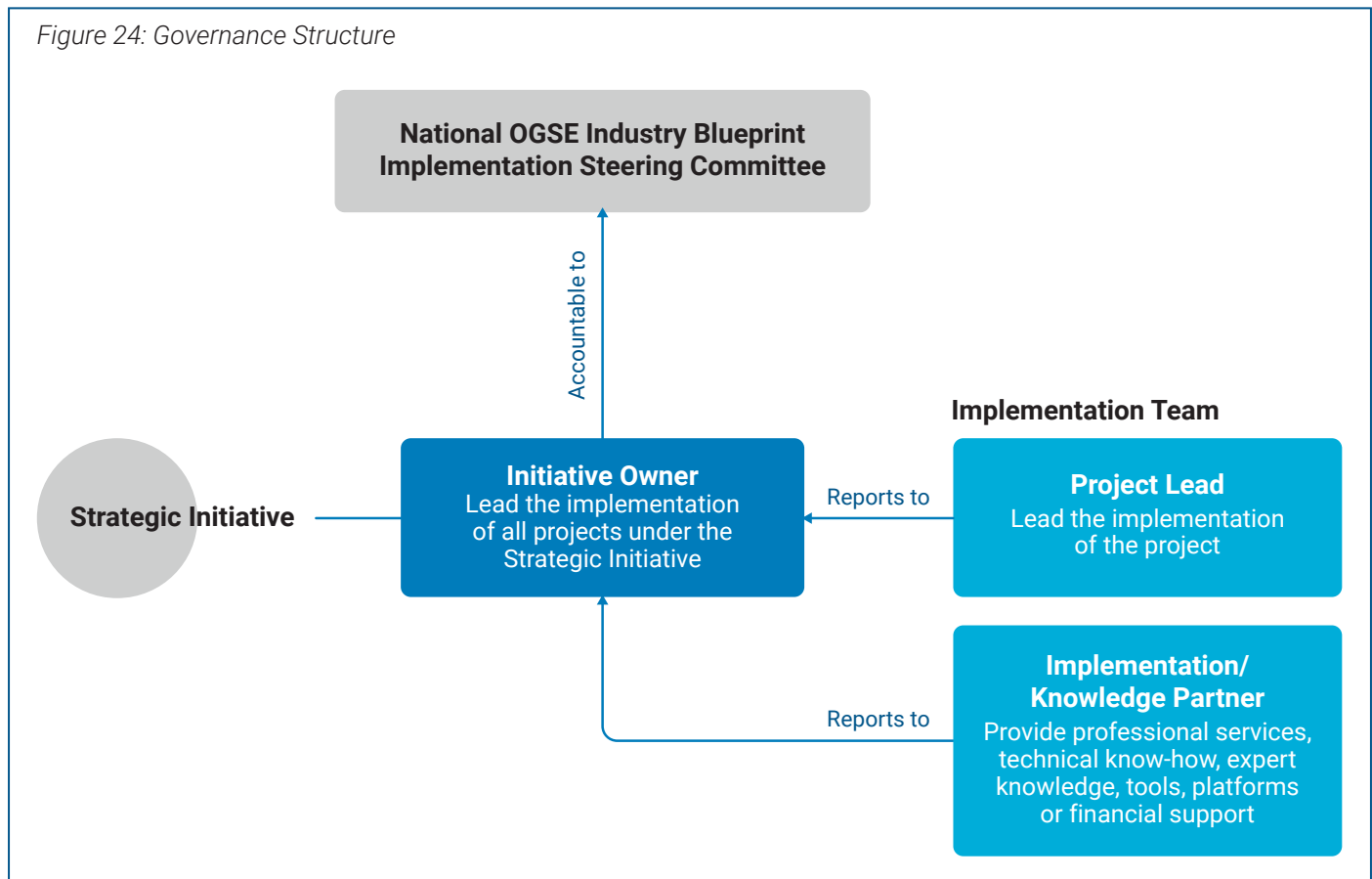
# 08

CHAPTER

## NOS-R GOVERNANCE STRUCTURE

Each Strategic Initiative will be led by an Initiative Owner and supported by an Implementation Team. The Team will consist of a Project Lead for each Project and any Implementation Partner or Knowledge Partner appointed to support its implementation.

Figure 24: Governance Structure





# 09

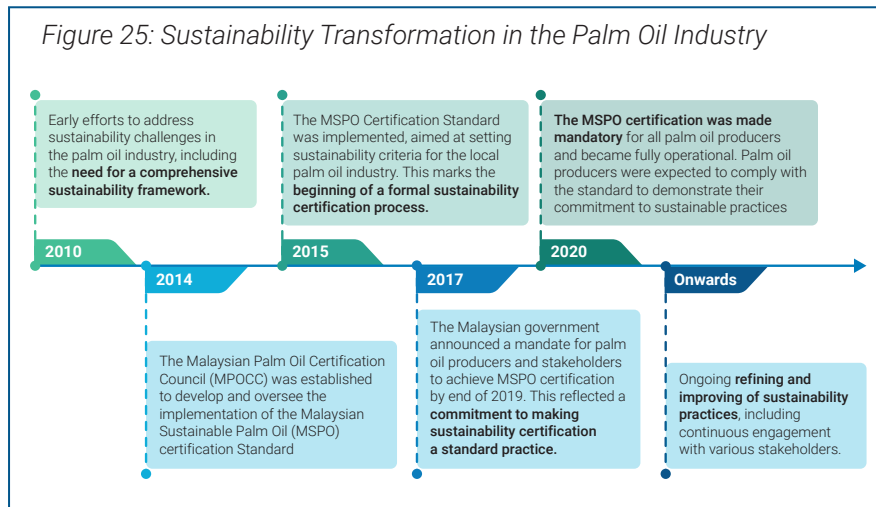
## CHAPTER

# CASE STUDIES: SUCCESSFUL SUSTAINABILITY TRANSFORMATION



## The Malaysian Palm Oil Industry

Figure 25: Sustainability Transformation in the Palm Oil Industry



The palm oil industry's sustainability initiatives can serve as guidance to the OGSE sector; both operate in sectors where responsible resource extraction is paramount. There is a shared commitment to environmental stewardship and social responsibility that bridges the gap between both sectors. OGSE companies can adapt sustainability initiatives, tailoring them to the specific challenges and opportunities within the energy sector, including standardising sustainability reporting requirements.

## Global and Regional Success Stories

Figure 26: Selected Global and Regional Success Stories

Value creation through whole-enterprise transformation		Commitments rapidly translate into business integration across the supply chain		
<p><b>Danish MNC (energy)</b></p> <p><b>2006</b></p> <ul style="list-style-type: none"> <li>One of the most coal-intensive companies in Europe, responsible for 1/3 of Denmark's carbon emissions</li> <li>15% of heat and power production from renewables</li> <li>Not listed</li> </ul>	<p><b>American energy company</b></p> <p><b>1989</b></p> <ul style="list-style-type: none"> <li>Investment in first wind and solar project</li> </ul> <p><b>2001</b></p> <ul style="list-style-type: none"> <li>Incorporated sustainability metrics into CXO compensation goals</li> <li>Used most oil in power generation in US</li> </ul>	<p><b>Indonesian O&amp;G company</b></p> <p><b>2018</b></p> <ul style="list-style-type: none"> <li>Reoriented business strategy-focus on low-carbon energy transition</li> </ul> <p><b>2021</b></p> <ul style="list-style-type: none"> <li>Published interim targets of reducing absolute Scope 1 &amp; 2 emissions: 20% (by 2025); 30% (by 2030)</li> </ul>	<p><b>Thai multinational retail company</b></p> <p><b>2020</b></p> <ul style="list-style-type: none"> <li>Established baselines Scope 1,2 and 3 GHG emissions throughout complex retail operations in Thailand, to expand to Vietnam and Italy</li> <li>Assessed exposure to climate physical and transition risks</li> </ul>	<p><b>Indonesian O&amp;G company</b></p> <p><b>2021</b></p> <p>Announced:</p> <ul style="list-style-type: none"> <li>Carbon neutral by 2050</li> <li>Interim targets: 10% carbon emissions intensity reduction by 2030</li> <li>Increase: renewable energy to 30% of total generating capacity by 2030</li> </ul>
<p><b>2017 - 2022</b></p> <ul style="list-style-type: none"> <li>Largest offshore wind developer</li> <li>Ranked most sustainable energy company globally 4 years running</li> <li>90% of heat and power production from renewables</li> </ul>	<p><b>2017 - 2022</b></p> <ul style="list-style-type: none"> <li>Largest producer of wind and solar energy</li> <li>#1 in Fortune's "World's Most Admired Companies" in electric &amp; gas utilities</li> </ul>	<p><b>2022</b></p> <ul style="list-style-type: none"> <li>Identifying and evaluating GHG reduction opportunities across key assets in Indonesia, Thailand, Oman</li> <li>Announced longer-term Net Zero targets for Scopes 1-3 emissions</li> </ul>	<p><b>2022</b></p> <ul style="list-style-type: none"> <li>Published TCFD report</li> </ul>	<p><b>2022</b></p> <ul style="list-style-type: none"> <li>Created carbon Neutral Roadmap</li> <li>Assessed climate risk, TCFD report</li> <li>Exploring CCS opportunities</li> </ul>
<p><b>Market Cap &gt;3X since IPO (2016)</b></p>	<p><b>Market Cap &gt;5X (2012 to 2022)</b></p>			

## Local Success Stories

Figure 27: Selected Local Success Stories

Capitalising on ESG/low-carbon opportunities to create new business and new value			
<b>Multi-sectoral Conglomerate*</b> <ul style="list-style-type: none"> <li>ESG integrated into corporate culture</li> <li>Quarry wasteland &gt; Malaysia's first Green Integrated and Low Carbon township</li> <li>Implemented internal carbon pricing (RM15/tCO<sub>2</sub>e)</li> </ul>	<b>American energy company</b> <p><b>2021</b></p> <ul style="list-style-type: none"> <li>Launched green technologies division</li> <li>Raised RM1Billion: Malaysia's 1st Sustainability-linked Sukuk Wakalah Programme</li> </ul>	<b>Bank</b> <ul style="list-style-type: none"> <li>Deployed sustainable finance specialists to build pipeline of green finance opportunities</li> <li>Doubled sustainable finance target to RM60Billion</li> </ul>	<b>O&amp;G and energy company</b> <p><b>2021</b></p> <ul style="list-style-type: none"> <li>Launched energy solutions company to drive Renewables, Hydrogen and Green Mobility business</li> <li>Published Pathway to Net Zero Carbon Emission 2050 Booklet</li> </ul>
<p><b>2022</b></p> <ul style="list-style-type: none"> <li>Won Long-Tem Achiever Award @ The Edge Awards 2022</li> </ul>	<p><b>2022</b></p> <ul style="list-style-type: none"> <li>Subsidiary debuts e-mobility ecosystem services</li> </ul>	<p><b>2019 onwards</b></p> <ul style="list-style-type: none"> <li>Annual Cooler Earth Sustainability Summit deliberate the challenges and urgent action plans to shape a more sustainable future</li> </ul>	<p><b>2023</b></p> <ul style="list-style-type: none"> <li>Energy Asia Conference Charting Pathways for a Sustainable Asia</li> </ul>

\*Property, construction, hospitality, retail, leisure, commercial, trading & manufacturing, building materials, quarry, healthcare, education and real estate investment trust



# 10

**CHAPTER**

# CONCLUSION



Successful implementation of the NOS-R has the potential to produce tangible benefits not only for the OGSE sector but also for Malaysia as a whole. For the OGSE sector, the NOS-R's simplification of the sustainability reporting and monitoring process will benefit companies, especially SMEs, by helping them understand the risks, opportunities, and impacts of sustainability and climate change.

From an investment perspective, the sector's supply chain readiness for a sustainable future will attract billions of dollars in investments in the production and exploration of upstream oil and gas in Malaysia. The provision of accurate GHG emissions and sustainability-related data for the OGSE sector will also benefit policymakers, allowing them to draft more targeted and effective sustainability policies.

Malaysia's reputation is expected to rise towards COP29 with the establishment of the NOS-R, as the Oil and Gas sector meets the reporting requirement and methane reduction target. This provides the country with a competitive advantage for further investment into the local OGSE sector, critical to supporting the country's becoming a 'net zero nation' as early as 2050 and being on track to achieve a top 12 ranking in the Global Competitiveness Index as targeted in the Ekonomi MADANI Framework.

The research again highlights that the development in the global and local landscape is pointing towards sustainability practices moving from just being "good for business" to a "license to operate" scenario. However, the baseline assessment shows that OGSE companies are still in the early stages of their sustainability journey. Hence, the proposed Strategic Initiatives and projects need to be implemented promptly and effectively, supported by much-needed funding to create an ecosystem that would nurture the adoption and integration of sustainability practices within OGSE companies, especially in sustainability reporting, and ensure the transition towards greener operations. This transition also requires continuous stakeholder engagement to ensure effective and clear communication of NOS-R projects and promote active participation.

Moving forward, the NOS-F Guide will be developed as a much-needed guide for the sector on how to implement and embed sustainability practices within operations and enhance sustainability performance. Coupled with the effects of the successful implementation of NOS-R projects, the OGSE sector will have a smooth transition into a more sustainable future.



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### Technical Committee Members

1. Malaysia Petroleum Resources Corporation (MPRC)
2. Energy Division, Ministry of Economy (BTE)
3. Environment and Natural Resources Division, Ministry of Economy (BEASSA)
4. Sustainable Energy Development Authority Malaysia (SEDA)
5. Energy Commission (ST)
6. Bursa Malaysia
7. Malaysian Investment Development Authority (MIDA)
8. Malaysian Green Technology and Climate Change Corporation (MGTC)
9. Malaysia External Trade Development Corporation (MATRADE)
10. SME Corp. Malaysia (SME Corp.)
11. Petroliaam Nasional Berhad (PETRONAS)
12. Petroleum Sarawak Berhad (PETROS)
13. Sabah Maju Jaya Energy (SMJE)
14. United Nations Global Compact (UNGC)
15. Climate Governance Malaysia (CGM)
16. Malaysian Oil, Gas and Energy Services Council (MOGSC)
17. Malaysia OSV Owners' Association (MOSVA)
18. Malaysian Oil & Gas Engineering Council (MOGEC)
19. Malaysian Offshore Contractors Association (MOCA)

### Steering Committee Members

1. Ministry of Economy (KE)
2. Ministry of Finance (MOF)
3. Ministry of Natural Resources, Environment and Climate Change (NRECC)\*
4. Ministry of Investment, Trade and Industry (MITI)
5. Ministry of Entrepreneur and Cooperatives Development (MECD)
6. Sarawak State Economic Planning Unit (EPU Sarawak)
7. Sabah State Economic Planning Unit (UPEN Sabah)
8. Ministry of Industrial Development and Entrepreneurship (MIDE)
9. Bank Negara Malaysia (BNM)
10. Securities Commission Malaysia (SC)
11. Malaysia Petroleum Resources Corporation (MPRC)

\*The NRECC was restructured into 2 different ministries, namely the Ministry of Natural Resources and Environmental Sustainability (NRES) and the Ministry of Energy Transition and Water Transformation (PETRA) following an announcement by the Prime Minister on the 12 December 2023.

**GLOSSARY**

<b>CBAM</b>	Carbon Border Adjustment Mechanism
<b>CCS/CCUS</b>	Carbon capture, utilisation and storage
<b>CMM</b>	Capital Markets Malaysia
<b>CO<sub>2</sub></b>	Carbon dioxide
<b>COP</b>	Conference of Parties
<b>ESG</b>	Environmental, social and governance
<b>EU</b>	European Union
<b>F4GBM</b>	FTSE4Good Bursa Malaysia
<b>FTSE</b>	Financial Times Stock Exchange
<b>GHG</b>	Greenhouse gas
<b>GRI</b>	Global Reporting Initiative
<b>IFRS</b>	International Financial Reporting Standards
<b>IRA</b>	US Inflation Reduction Act of 2022
<b>ISSB</b>	International Sustainability Standards Board
<b>KPI</b>	Key performance indicators
<b>MPOCC</b>	Malaysian Palm Oil Certification Council
<b>MSPO</b>	Malaysia Sustainable Palm Oil
<b>MTC</b>	Mid-tier companies
<b>NOS-F</b>	National OGSE Sustainability Framework
<b>NOS-R</b>	National OGSE Sustainability Roadmap
<b>OGSE</b>	Oil and Gas Services and Equipment
<b>PLC</b>	Public listed companies
<b>SASB</b>	Sustainability Accounting Standards Board
<b>SEDG</b>	Simplified ESG Disclosure Guide
<b>SGX</b>	Singapore Exchange
<b>SME</b>	Small and medium-sized enterprises
<b>TCFD</b>	Task Force on Climate-Related Financial Disclosures
<b>UK</b>	United Kingdom
<b>UN SDG</b>	United Nations Sustainable Development Goal
<b>US</b>	United States

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## Contact Details



**Malaysia Petroleum Resources Corporation**  
Level 19, MoF Inc. Tower 9, Persiaran KLCC  
50088, Kuala Lumpur, Malaysia

- ☎ : +60 3 8655 8750
- ☎ : +60 3 8655 8799
- ✉ : [communications@mprc.gov.my](mailto:communications@mprc.gov.my)
- 🌐 : [www.mprc.gov.my](http://www.mprc.gov.my)
- 📘 : Malaysia Petroleum Resources Corporation - MPRC
- 🌐 : Malaysia Petroleum Resources Corporation - MPRC
- 📷 : [mprc\\_malaysia](https://www.instagram.com/mprc_malaysia)