



Empowering Human Life
Through Sustainable Energy and Chemicals

2023 Thaioil Group's Supply Chain Management (SCM) Report



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Introduction



Sustainable Supply Chain Management



Since 2020, **Thai Oil Public Company Limited ("Company")** has been the first refinery in Thailand that have successfully implemented ISO 20400: Sustainable Procurement to ensure that sustainability (ESG) management is fully embedded into our procurement processes with a systematic approach and aligns with the Company's Sustainability Management with cover all products and service categories for non-crude procurement processes. Therefore, the Company has the systems and procedures in place to ensure effective internal implementation of the supplier ESG program and to identify and address any potential ESG risks and impacts resulting from supply activities.

Moreover, the Company has verified the whole work process from MASCI who is a certified body authorized to award a formal accreditation to ISO20400. This is to make sure that the due diligence approach is deployed also within the organization, to guarantee harmonization between ESG strategy for the supply chain and the company's purchasing practices.

Clear and structured governance, together with internal communication and training, are well-implemented to ensure the correct plan, implementation, and continuous improvement through Plan-Do-Check-Act (PDCA) methodology.

The Company not only has the systems and procedures in place to track the impact of ESG along our supply chains, but the Company also ensures that these practices are regularly reviewed every year to ensure that the business needs and expectations are aligned with the Company's ESG requirements.

"Suppliers" include but are not limited to agents, brokers, consultants, contractors, distributors, and suppliers of products or services for the Company must be covered in the Sustainable Supply Chain Management Process.

In 2023, the Company an official re-assessment of ISO 20400: Sustainable Procurement from MASCI to ensure that our strategic direction is aligned with the corporate ESG requirements and according to international standard practices. Moreover, the Company seek more opportunities for improvement continuously.

2020 | A formal accreditation of ISO 20400



Our Executive Vice President-Organization Effectiveness and Vice President-Procurement and Contract were the representatives of Thaioil Group to receive a formal accreditation of ISO20400: Sustainable Procurement from MASCI.

2023 | A formal accreditation of ISO 20400



Sustainable Supply Chain Management

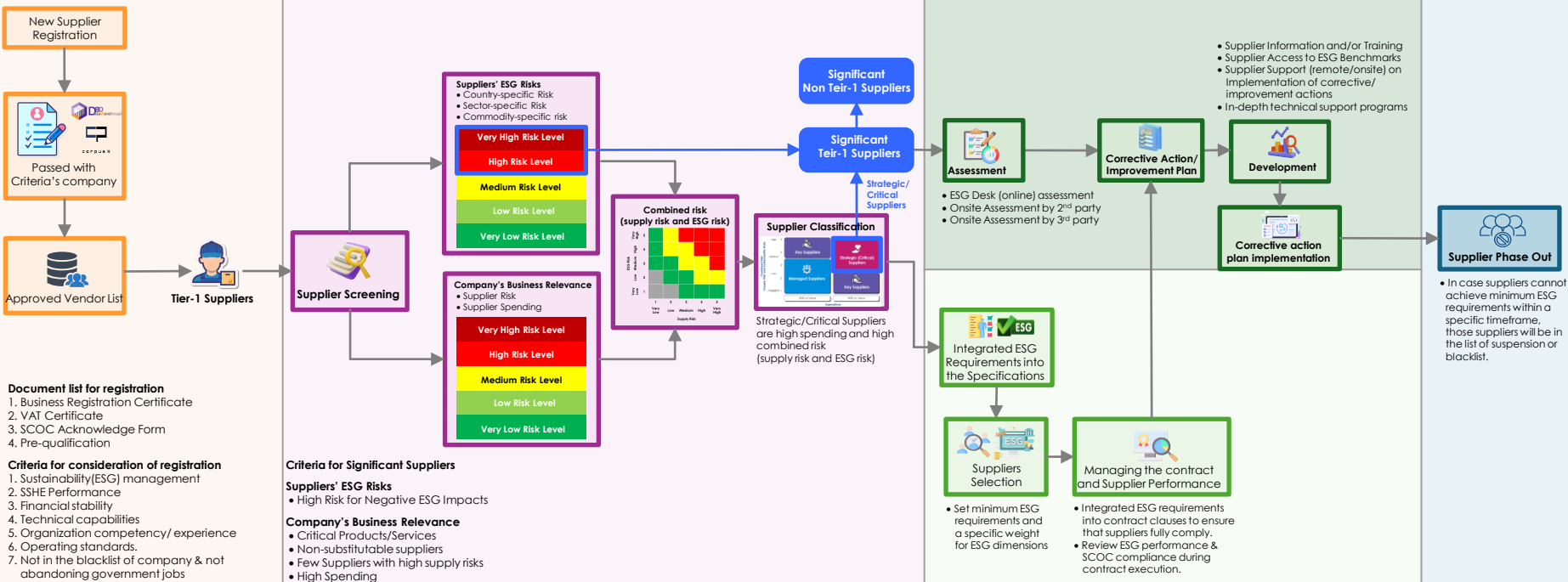
1. Supplier Portfolio Management

2. Supplier Screening

3. Source To Contract Process

4. Supplier Assessment and Development

5. Supplier Phase Out





Sustainable Code of Conduct for Suppliers of Thaioil Group: SCOC



According to the Company's Sustainability Management Policy and Procurement Policy, the Company fully integrated sustainability into the supply chain through the adherence of all Suppliers to the **Sustainable Code of Conduct for Suppliers of Thaioil Group ("SCOC")**.

SCOC has complied with international practices and is mandatory for Suppliers. Suppliers shall conduct business in all their activities to operate in full compliance with all applicable laws, regulations, and business ethics and respect human rights according to the International Bill on Human Rights and the principles concerning fundamental rights set out in the Declaration of Fundamental Principles and Right at Work of the International Labour Organization. In addition, **the Company always encourages Suppliers to establish their supplier code of conduct for their suppliers to enhance the operation of their supply chain management and sustainable procurement.**

Since 2015, all newly registered suppliers must acknowledge to comply with SCOC, and we have continued monitoring and driving suppliers to improve their performance in this area.

The purchasing practices towards suppliers are annually reviewed to ensure alignment with SCOC and to avoid potential conflicts with ESG requirements.

In 2023, we have revised SCOC to keep aligning with ESG trends, with international standards, and with the changing global landscape. To ensure that all suppliers understand the SCOC, the Company has communicated the SCOC through the Company's website and the supplier seminar.

Finally, **to ensure the Company's Suppliers fully understand and commit to SCOC, the Company has asked all Suppliers to acknowledge SCOC. Moreover, the Company has communicated SCOC through the website and emphasized SCOC in annual supplier seminars with Suppliers.**

Sustainable Code of Conduct for Suppliers of Thailoil Group: SCOC



Environment

- **Environmental Management**
- **Sustainable Resource Efficiency**
- **Biodiversity, Deforestation or Land Conservation**
- **Pollution Prevention and Waste Management**
- **Greenhouse Gas Reduction and Climate Change Mitigation**



Social

- **Human Rights**
 - ✓ Non-Discrimination
 - ✓ Anti-Harassment
 - ✓ Child Labor
 - ✓ Forced Labor
 - ✓ Freedom of Association
 - ✓ Working Conditions
 - ✓ Wages and Benefits
 - ✓ Employment Creation and Skill Development
- **Occupational Health and Safety**
 - ✓ Safety and Working Environment
 - ✓ Emergency Prevention, Preparedness, and Response
- **Community Involvement and Development**



Governance

- **Regulatory Compliance**
- **Anti-Corruption & Bribery**
- **Anti-Competitiveness**
- **Gifts**
- **Conflicts of Interest**
- **Confidentiality of Information**
- **Disclosure**
- **Respect for Intellectual Property Rights**
- **Customer Issues**
 - ✓ Customer Data Protection and Privacy
 - ✓ Protecting Customers' Health and Safety
 - ✓ Education and Awareness
 - ✓ Customer Service, Support and Complaint and Dispute Resolution

Sustainable Code of Conduct for Suppliers of Thaioil Group: SCOC



SCOC covers all 7 Social Responsibility Core Subjects identified in ISO 26000:2010, Guidance on social responsibility which consists of Organizational Governance, Human Rights, Labor Practices, Environment, Fair Operating Practices, Consumer Issues, and Community Involvement & Development.



Social Responsibility Core Subjects	Environment	Social	Governance
Organizational Governance			- Regulatory Compliance - Confidentiality of Information - Disclosure
Human Rights		Human Resources - Employee Health & Safety - Working conditions Human Rights - Child Labor - Forced Labor - Human Trafficking - Diversity - Discrimination	
Labor Practices			
The Environment	- Environmental Management - Sustainable Resource Efficiency - Biodiversity, Deforestation or Land Conservation - Pollution Prevention and Waste Management - Greenhouse Gas Reduction and Climate Change Mitigation		
Fair Operating Practices			- Anti-Corruption & Bribery - Anti-Competitiveness - Conflicts of Interest - Gifts - Respect for Intellectual Property Rights
Consumer Issues		- Customer Data Protection and Privacy - Protecting Customers' Health and Safety - Education and Awareness - Customer Service, Support and Complaint and Dispute Resolution	
Community Involvement and Development		- Employment creation and skills development - Technology development and access - Wealth and income creation - Health - Social Investment	



Supplier ESG Program: Oversight of Implementation



The strategic oversight of ESG implementation is instructed through the Company's Sustainability Management Policy which is endorsed by the Chairman of the **Board of Directors ("BoD")** and CEO. This policy is deployed to BOD, the Managements, and all the Company's employees, and communicated and deployed to all stakeholders to ensure that ESG strategies and programs are successfully implemented and drive the whole business to reach sustainability goals.

According to the Sustainability Management Policy, the Board of Directors instructed that Managements and all the Company's employees shall deploy ESG to their stakeholders. Therefore, ESG strategic oversight of implementation from the Board of Directors is cascaded to the Sustainable Procurement Policy endorsed by the CEO, Procurement and Contract Strategic Direction, a Five-Year Roadmap that consists of supply chain ESG strategy and supplier ESG programs respectively.

Finally, **oversight of the implementation of the supplier ESG program is well-defined and aligned with the corporate vision and Sustainability Management Policy endorsed by the Chairman of the Board of Directors and CEO** to ensure successful strategies and programs, guarantee maximal priority and focus, and drive the procurement organization to reach its sustainability goals.

Supplier ESG Program: Oversight of Implementation



Thaioil Group Sustainability Management Policy

Procurement Policy



TOP Sustainability Management Policy

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Supplier ESG Program



The Company has implemented a supplier-focused ESG program which is the collection of activities and measures that enables businesses to recognize and assess potential ESG risks, and consequently, plan remedial measures to assure solid sustainability performance along the supply chain. A Supplier ESG program is integrated into the Company's Sustainable Supply Chain Management Process.

1. Supplier Portfolio Management

- **Supplier Registration:**
The supplier shall acknowledge SCOC and signed by an authorized person.
- **Supplier Qualification:**
ESG is the criteria/ dimension for evaluation to be AVL.

Annual Review for SCOC and disclose through Thai Oil Website.

2. Supplier Screening

• Identification of the significant suppliers (Strategic/Critical & High ESG risk)

- ✓ Business Relevance Analysis e.g., Spending, Business Impact (Criticality), and Supply Risks.
- ✓ ESG Risks e.g., Country-Specific Risk, Sector-Specific Risk, Commodity-specific risk

Annual Assessment for Identification of the significant suppliers (Strategic/Critical & High ESG risk) and disclose through Thai Oil Website.

3. Source To Contract Process

• Integrated ESG Requirements into the Specifications.

- **Suppliers Selection:** Set minimum ESG requirements and a specific weight for ESG dimensions.
- **Managing the contract and Supplier Performance:**
 - ✓ Integrated ESG requirements into contract clauses to ensure that suppliers fully comply.
 - ✓ Review ESG performance & SCOC compliance during contract execution.

Evaluate Supplier ESG performance & SCOC compliance during supplier selection, contract execution and after work completion.

4. Supplier Assessment and Development

• Supplier Assessment

- ✓ Supplier desk assessments
- ✓ 2nd party supplier onsite assessments
- ✓ 3rd party supplier onsite assessments

• Supplier Development

- ✓ Supplier information/training
- ✓ Supplier access to ESG benchmarks
- ✓ Supplier support (remote/onsite) on implementation of corrective/ improvement actions
- ✓ In-depth technical support programs to build capacity and ESG performance in suppliers

Annual Assessment and disclose through Thai Oil Website.

5. Supplier Phase Out

In case suppliers cannot achieve minimum ESG requirements within a specific timeframe, those suppliers will be in the list of suspension or blacklist.

Review Supplier ESG performance & SCOC compliance during contract execution and after work completion.

Supply Chain Risk Management

Annual Review of purchasing practices to avoid potential conflicts with ESG requirements (using P-D-C-A methodology)

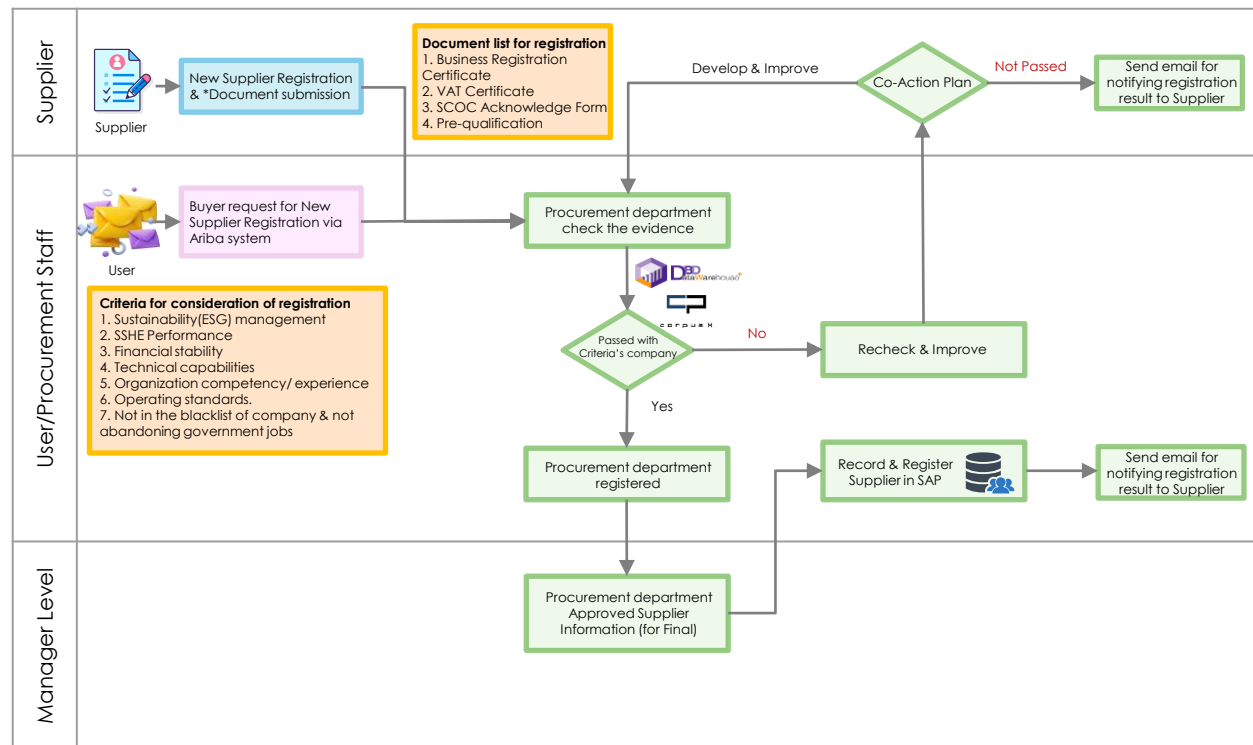
Supplier ESG Program

1.1. Supplier Registration

During supplier registration process, Suppliers must acknowledge Sustainable Code of Conduct for Suppliers of Thaioil Group: SCOC to ensure that suppliers fully understand and commit to comply with all of the Company's ESG requirements and policies.

1.2. Supplier Qualification

After completing the registration process, suppliers who are suitable to do business with, are requested to comprehensively qualify the required capabilities based on multi-dimension criteria such as sustainability(ESG) management, SSHE performance, financial stability, technical capabilities, organization competency/ experience, and operating standards.



Supplier ESG Program

2. Supplier Screening

The Company has screened suppliers through the Ariba System which embeds the supplier selection criteria that include the assessment of the quality of products and services, and suppliers' financial status (business relevance) as well as the ESG aspects, including product delivery information, QSHE (Quality, Safety, Occupational Health and Environment) management, SCOC acknowledge, 3rd party verification.

The Company groups all Suppliers identified supplier screening by grouping the suppliers based on country, business sector, and commodity-specific – products, services, and activities. Then, screening suppliers to identify the potential ESG risk for each supplier group

Identification of the significant suppliers (Strategic & High Potential ESG risk)

The Company uses the Spending Analysis, Supply Risk & Sustainability(ESG) Risk assessment, and Supplier Classification to Identify the significant suppliers as follows;

2.1 Strategic Supplier from Supplier Classification

- High Spending Supplier
- High/Medium Risk (Supply Risk & ESG Risk Assessment)

2.2 High Potential ESG Risk Suppliers from ESG Risk Assessment

- Environment Risk
- Social Risk
- Governance/ Business Relevance Risk



Country-specific risk



Sector-specific risk



Commodity-specific risk

Please see more details in Supplier Screening Session on page 22-40.

3. Source To Contract Process

3.1 Integrating ESG Requirements into the Specifications:

- The Company integrates ESG requirements into specifications and ITB that address sustainability criteria.
- This is the most effective means of ensuring that ESG risks (including opportunities) are incorporated into the purchaser's Company decision-making.
- This should be done in coordination with key internal stakeholders, to reflect practical and technical considerations.

3.2 Suppliers Selection:

- The Company sets minimum ESG requirements and a specific weight for ESG dimensions that suppliers must comply with to access tenders or be selected for contract awarding.
- ESG performance is one of the standard evaluation criteria/dimensions for supplier selection which guarantees that sustainability is embedded into supplier selection and contract awarding.
- Suppliers with better ESG performance are recognized and preferred by applying a minimum weight to ESG criteria in supplier selection and contract awarding.
- A Supplier who does not meet ESG requirements is requested to clarify and provide a committed improvement plan within a specific timeframe.
- If a supplier with lesser ESG performance is selected, agreements should be made on how the supplier could progress to increased ESG performance in the future. This should be monitored in the contract phase.

3.3 Managing the Contract and Supplier Performance:

- The Company integrates Thaioil Group's ESG requirements (e.g., Compliance to SCOC) into contract clauses to ensure that Suppliers fully comply.
- The Company carries out periodic audits of Suppliers throughout the life of the contract, especially for significant suppliers, to verify that sustainability claims and work practices meet our ESG requirements stated in the Contract.
- The Company continuously reviews ESG performance. If suppliers cannot achieve minimum ESG requirements, we offer capacity-building support to the Suppliers to help them address the problems.
- After the Company has made the effort to support the supplier to meet agreed ESG requirements, but where the supplier has made little or no effort to improve or the supplier has proved to be incapable of improvement. Those suppliers are excluded from contracting, suspended, or terminated if they cannot achieve minimum ESG requirements within a set timeframe.

4. Supplier Assessment

To assess and improve individual suppliers' performance, this process includes increased performance visibility and aligning customer and supplier business practices, and risk mitigation.

4.1. Supplier Desk ESG Assessments with systematic verification of evidence by using third party's comprehensive assessment by considering supplier's audit reports such as ISO 14001, ISO 50001, ISO 45001, OHSAS 18001, ISO 9001, ISO/IEC 17025, ISO 27001, the Green Industry Award by Department of Industrial Works, the CAC project and the CSR-DIW project.

4.2. Supplier Onsite ESG Assessments

4.2.1 The 2nd party Supplier Onsite ESG assessment by the Company's employees such as Safety Audit at the Company site, SSHE (Security, Safety, Occupational Health, and Environment) Assessments at Supplier Sites. and Waste Audits at supplier sites.

4.2.2 The 3rd party Supplier Onsite ESG assessment by MASCI such as Supplier Onsite ESG assessment.

Sustainability potential assessment form

5 Dimension with 43 Questions

A. Policy (9 questions)

- Communication of operational policies to the company's supply chain

B. Business Integrity(8 questions)

- Business Ethics and Transparency
- Quality Standards
- Risk Management

C. Social (9 questions)

- Human Rights
- Labour Relations
- Social Responsibility

D. Occupational Health and Safety (13 questions)

- Occupational Health and Safety
- Security and Emergency Preparedness

E. Environment (4 questions)

Please see more details in Supplier Screening Session on page 42-46.

Supplier ESG Program

5. Supplier Development

- **Supplier information/training:** Providing the supplier with information and/or training on the purchasing Company's supplier ESG program and best practices, to information on the Company's assessment and development process.
- **Supplier ESG benchmarking:** Provide information on suppliers' sustainability performances in each dimension and case studies on how other suppliers achieved that level of performance.
- **Supplier support on corrective/improvement actions:** The company provides guidance and full support on the implementation of corrective and improvement actions. This can happen remotely or through supplier on-site visits.
- **In-depth technical support programs to build capacity and ESG performance in suppliers:** Comprehensive capacity-building programs to systematically improve supplier practices and performance on specific ESG topics through training, baseline assessments, collaborative system development, and progress measurement. These technical support programs are long-term and sustained over time to improve ESG performance.



Please see more details in Supplier Screening Session on page 47-57.

Supplier ESG Program

Annual Review of purchasing practices towards suppliers to ensure alignment with SCOC and to avoid potential conflicts with ESG requirements:

To ensure that we successfully implement ESG across the supply chain with a systematic management approach in accordance with international standard practice, since 2020, the Company has applied ISO 20400 (Sustainable Procurement) to the whole non-crude procurement process and covered all product and service categories.

The Company has integrated supplier ESG program into sustainable supply chain management process (e.g., SCOC compliance in contract clauses, SCOC compliance in performance evaluation criteria, supplier recognition for a supplier who has better ESG performance and applies a minimum weight to ESG criteria in supplier selection and contract awarding for the future sourcing, suspension/blacklist for a supplier who does not comply Thaioil Group's ESG requirements and ignore to remedy, etc.) alongside supply chain risk management.

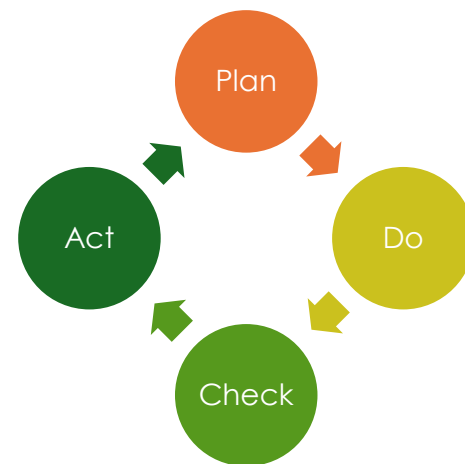
So, the Company's practices not only include the choice of the product and service to be bought or the supplier from which to purchase the needed items, but we also include specific indications on at least costs, quality of the products, and delivery times. In addition, the Company's ESG requirements are integrated into the contract and purchase order and supplier performance evaluation criteria, such as the Security, Safety, Health, and Environment (SSHE) management and ESG management as well as compliance with laws and regulations on the transportation of products and services, and the delivery of hazardous goods.

To ensure that purchasing practices towards suppliers including all processes and related documents are regularly reviewed, we have managed and controlled them according to ISO9001 by using P-D-C-A Methodology and Internal Audit. For example, the Company has annually reviewed the Supplier Portfolio, Supplier Screening, and Supplier Risk Assessment (e.g., Supply Risks, ESG Risks) to ensure that the data keep up to date and protect our supply chain from uncertainty and avoid any business disruption. Moreover, procurement and contract practices towards suppliers are regularly reviewed to ensure alignment with SCOC and to avoid potential conflicts with ESG requirements.

The Company has closely communicated and collaborated with all internal stakeholders to understand how to play their part in such implementation and are given the means to achieve sustainable procurement. Those individuals tasked with delivering sustainable procurement should be enabled to do so through a supportive organizational culture, performance management, education, training, and support. This is to ensure about deployment and conformance of procurement and contract practices towards suppliers as well.

Finally, our procurement processes will be reassessed by a third party, a certified body authorized to award a formal accreditation to ISO20400 every three years.

As mentioned above, all activities guarantee that we are continuously reviewing its purchasing practices to avoid potential conflicts with its ESG strategy.



To ensure that all processes and documents related to purchasing practices towards suppliers are regularly reviewed every year, we have managed and controlled according to ISO9001 by using P-D-C-A Methodology and Internal Audit.

Supplier ESG Program

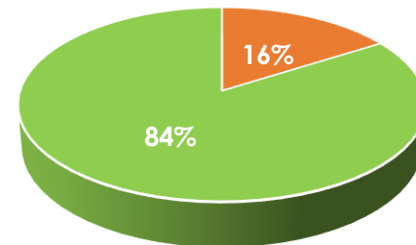
Training Program for Thai Oil's Buyers and/or Internal Stakeholders

Effective delivery of the sustainable procurement policy and strategy requires that individuals involved in procurement, including internal stakeholders and business partners (e.g., SSHE, contract holders, PTT Group, or others engaged with suppliers in any capacity), understand the reasons for implementing sustainable procurement.

Therefore, the Company has closely communicated with buyers and all internal stakeholders to understand how to play their role in such implementation and are given the means to do so. Those individuals tasked with delivering sustainable procurement should be enabled to do so through a supportive organizational culture, performance management, education, training, and support.

To enhance the skills and competencies of our buyers and internal stakeholders, the training program is conducted on an annual basis to keep updating the ESG policy, SCOC, and other relevant standards/procedures to ensure that buyers and internal stakeholders will understand their roles in ESG program and realize how their works or day-to-day actions and decisions are fundamental and important to achieve the Company's sustainability (ESG) objectives.

Training Provided for Responsible Supply Chain Management



In Y2023, 84% of Supply Chain Management Training Programs for the Company's Buyers and/or Internal Stakeholders are fully supported on the ESG Program.

Supplier ESG Program



Training Programs for the Company's Buyers and/or Internal Stakeholders include but are not limited to classroom training, e-learning, workshops, and knowledge sharing. The examples of training programs are shown as follows :

ISO 20400: Sustainable Procurement Training for Thai Oil's Buyers and Internal Stakeholders



The Company organized Sustainable Procurement Guidance (ISO 20400) Training for Buyers and Internal Stakeholders, covering topics such as integrating Sustainability into Procurement Policy, Strategies, and End-To-End Processes, organizing the Procurement Function including role & responsibility of day-to-day operation towards Sustainability, and developing a robust Supplier ESG Program.

Supplier ESG Assessment Training for Thai Oil's Buyers and Internal Stakeholders



Buyers and Internal Stakeholders were invited to participate in this training. The objective of this training is to deploy Supplier ESG onsite assessment questionnaires and criteria. The Company went through all ESG items and mapping with our SCOC, ESG policies and requirements and Sustainable Procurement Guidance (ISO 20400) to ensure that buyers and internal stakeholders fully understand their role during ESG onsite assessment.

PTT Group Procurement Knowledge Sharing for Sustainable Procurement "Net Zero" related in actions



The Company fully contributes to sharing knowledge about sustainable procurement with PTT Group companies and the Company's Buyers have participated to learn and capture knowledge from this knowledge-sharing session

Sustainability (ESG) Risk Workshop for Thai Oil's Buyers



Buyers participated this hands-on training to perform how to evaluate ESG Risk Assessment. This is to enhance the skills and competencies that their day-to-day actions and decisions are fundamental and important to minimize ESG risk in the supply chain.

SCOC Online Training for Thai Oil's Buyers and Internal Stakeholders



The Company has deployed SCOC (Sustainable Code of Conduct for Suppliers of Thaioil Group) to Thai Oil's Buyers and Internal Stakeholders. The objective of this training is to communicate how SCOC is important and buyers and internal stakeholders will fully support engaging suppliers. It is requested to do pre-test and post-test to ensure that all participants understand SCOC.

Thai Oil Knowledge Sharing for Overview CFO&CFP for Thai Oil's Employees

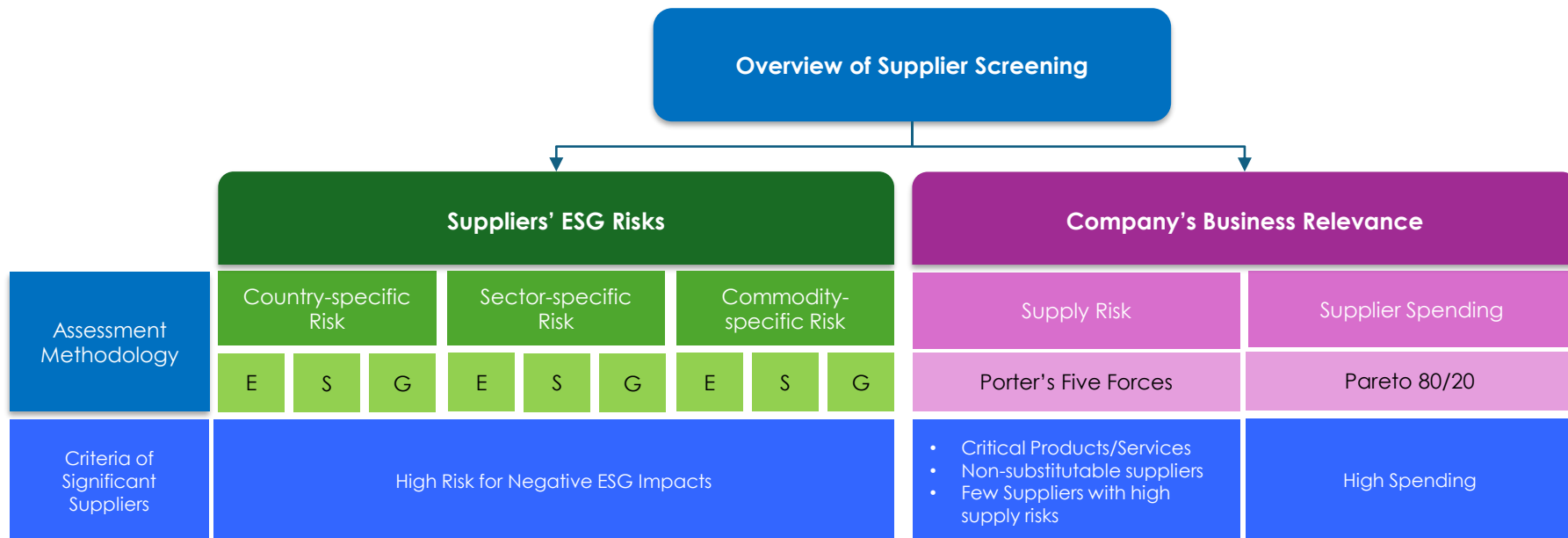


The Company's Sustainability Development Team conducted knowledge sharing about Carbon Footprint for Organization (CFO) and Carbon Footprint Product (CFP) to the Company's employees. The Company's Buyers also participated to learn and capture knowledge from this session which is to enhance their competency since the role of Buyers will support GHG Scope 3 to reach Net Zero which is one of the Company's vision measurements.



Supplier Screening

Supplier Screening is considered the initial step to identify potential sustainability risks in the supply chain and is systematic desk research of Suppliers' risk for negative ESG impacts and the Company's business relevance, considering available data sources such as country, sector, or commodity ESG risks, spending, business relevance, etc.



Supplier Screening

ESG Risk Assessment Methodology of Supplier Screening Process for Significant Suppliers



Country-specific Risk: The risk for negative environmental, social, and governance impacts related to a country's political, social, economic, environmental, or regulatory situation that occur in the country where the company's Suppliers are located.



Sector-specific risk: The risk for negative environmental, social, and governance impacts related to a sector's distinct characteristics regarding labor situation, energy consumption, resource intensity, emissions, or pollution potential.



Commodity-specific risk: The risk for negative environmental, social, and governance impacts related to a commodity's supply chain structure, and social responsibility core subjects* which consists of Organizational Governance, Human Rights, Labor Practices, Environment, Fair Operating Practices, Consumer Issues, and Community Involvement & Development.

NOTE: * Social responsibility core subjects refers to ISO 26000:2010 (Guidance on social responsibility) and ISO 20400:2017 (Sustainable Procurement-Guidance)

ESG Risk Aspects of Supplier Screening Process for Significant Suppliers



Environmental aspects: The risk for negative impacts related to environmental topics, including but not limited to GHG emission and energy consumption, toxic emission & waste, water consumption, biodiversity



Social aspects: The risk for negative impacts related to social topics, including but not limited to human rights, labor management, occupational Health and safety, community relations.



Governance aspects: The risk for negative impacts related to governance topics, including but not limited to corporate governance, corruption, money laundering, government effectiveness occupational fraud, information security/ cybersecurity.

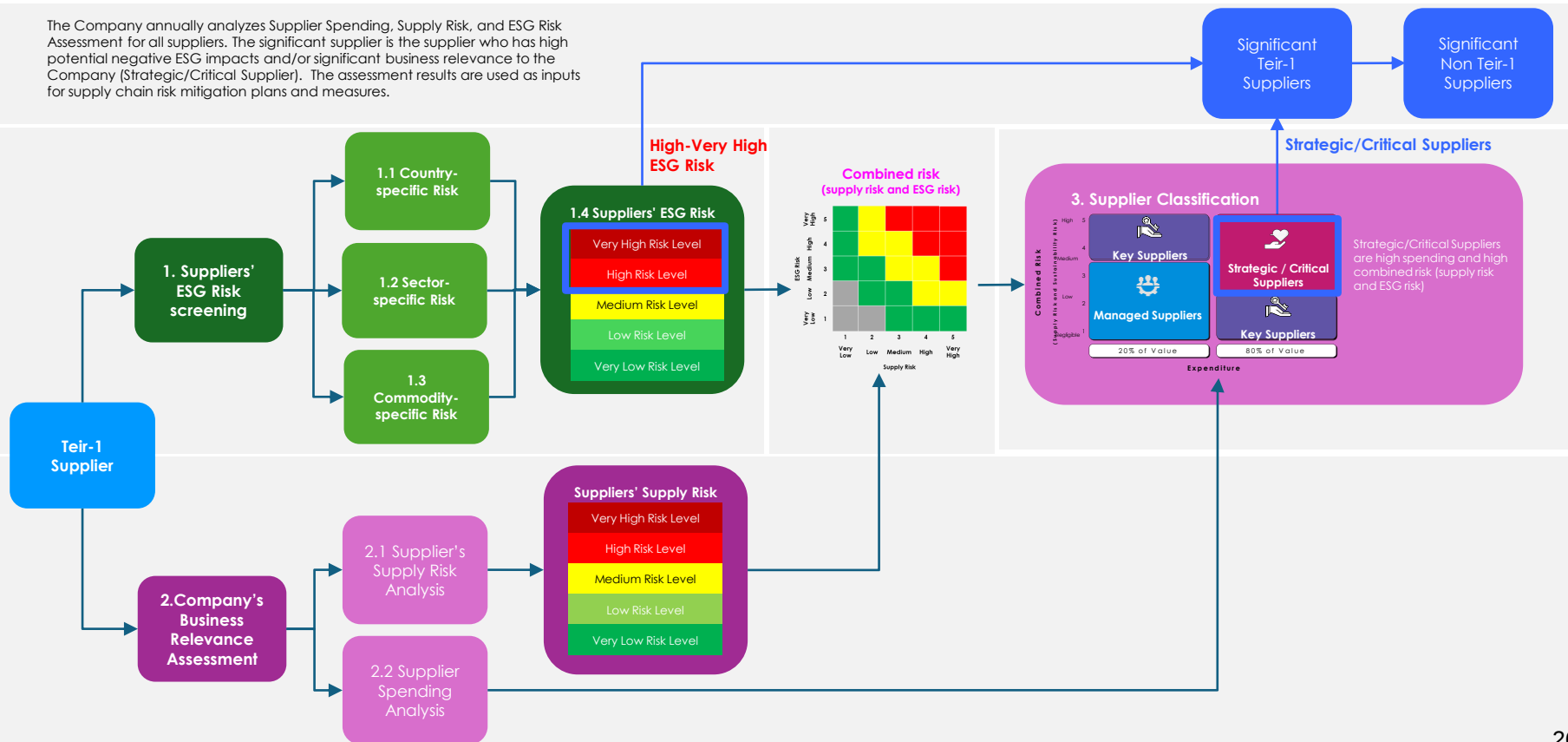


Business relevance: Business relevance considerations, including but not limited to share of spend/volume and substitutability.

Supplier Screening

Overview of Supplier Screening Process to identify Significant Suppliers

The Company annually analyzes Supplier Spending, Supply Risk, and ESG Risk Assessment for all suppliers. The significant supplier is the supplier who has high potential negative ESG impacts and/or significant business relevance to the Company (Strategic/Critical Supplier). The assessment results are used as inputs for supply chain risk mitigation plans and measures.



Supplier Screening

1. ESG Risk Assessment Methodology of Supplier Screening Process for Significant Suppliers

1.1 Country-specific Risk Methodology

Step 1: Identify procurement location and ESG risk universe

The Company has identified 42 procurement locations and utilize the developed tool to explore ESG risk universe of all procurement locations. The tool enable us to visualize ESG risk data over the world geography based on the aggregated data of various ESG indices.

Example:

Visualization of ESG risk data from the tool



Step 2: Identify country-specific ESG risk issues

As explore ESG risk universe, the Company has identified 15 relevant ESG risk issues to evaluate all procurement location as follows:

- **Environmental aspect**
Climate Change: GHG emission, Average temperature, Energy Security, Water Security, Biodiversity
- **Social aspect**
Human rights, Child Labor, Human Trafficking, Labor Practice: LGBT employment discrimination, Labor flexibility, and Occupational Health & Safety: Fatal work-related accidents.
- **Corporate Governance aspect**
Corporate Governance, Corruption, Money Laundering, Government Effectiveness.

Step 3: Assess & summarize country-specific risk

To assess and summarize the country specific risk of the procurement location, the Company calculate the total risk score by country obtained from the developed tool to determine the risk ranking based on the 5-scale risk assessment criteria, which ranged from very high to very low.

ESG Risk Level		Example: Country ESG risk result	
		Country	ESG risk level
Very High Risk Level		Australia	Medium Risk Level
High Risk Level		Austria	Low Risk Level
Medium Risk Level		Barbados	Very Low Risk Level
Low Risk Level			
Very Low Risk Level			

Supplier Screening

1.1 Country-specific Risk Methodology

Step 1 and 2: Identify procurement location and ESG risk universe & short-listed of the risk issues

ESG	Dimensions	Indices/Risk issue	Assessment focus
Environment	Climate change	CO2 emission	
		Average temperature	
	Energy	Energy security	
	Water	Water security	
Social	Biodiversity	Biodiversity	
	Human right	Human right	
		Child labor	
		Human trafficking score	
	Labor practice	LGBT employment	
		Discrimination	
Governance		Labor flexibility	
	OHS	Fatal work-related accidents	
	Corporate governance	Corporate governance	
	Corruption & government stability	Corruption	
		Money laundering	
		Government effectiveness	

Process to collect the list of procurement location and identify country specific ESG risk issue. This resulted in 15 ESG risk issues identified to assess ESG risk level of a countries, where the procurement activities take place.

Step 3: Assess & summarize country-specific risk

Country	Risk score	ESG risk level
Australia		
Austria		
Barbados		
Belgium		
Canada		
China		
Czechia		
Denmark		
Finland		
France		
Germany		
Greece		
Hong Kong		
Hungary		

Supplier Screening

1. ESG Risk Assessment Methodology of Supplier Screening Process for Significant Suppliers

1.2 Sector-specific Risk Methodology

Step 1: Initial Sector Classification

The Company classifies our suppliers' sub-groups based on the Global Industry Classification Standard (GICS®), which encompasses 11 sectors and 46 sub-industries, according to business activities of each suppliers. This step ensures that Thaioil suppliers' sub-groups are accurately classified in accordance with internationally accepted standard.

Example:



Step 2: Identify Sector-specific ESG Risk Issues

The Company has identified sector-specific ESG risks by utilizing the MSCI's ESG Materiality Map, the SASB Materiality Finder, and the 2024 CSA Weight by Industry. Each industry will be assigned a weight based on its significance within the sector to ensure the most validated results for the final risk assessment as follows:

- **Environmental aspects**
Carbon Emissions & Energy Consumption, Toxic Emissions & Waste, Water Stress, Biodiversity.
- **Social aspects**
Occupational Health & Safety, Labor Management, Community relations.
- **Governance/Business aspects**
Governance, Information Security/Cybersecurity.

Step 3: Assess Sector-specific ESG Risk

The level of ESG risk for each sector is determined based on the analysis of available statistical information regarding the 9 ESG risk issues, using a 5-ranking scale. The criteria are designed to encompass both quantitative and qualitative factors. ESG risk issues have been assessed at the sector level, and the results will be applied to the sub-industries listed under each specific sector. The final risk level is determined by the weight assigned, which varies according to its relevance to the sector.

ESG Risk Level	
Very High Risk Level	
High Risk Level	
Medium Risk Level	
Low Risk Level	
Very Low Risk Level	

Example: Sector ESG risk result	
Sector	ESG Risk
SERVICE (OIL & GAS) CONSTRUCTION, PAVING, GRADING & BLACKTOP	M
SERVICE, ELECTRICAL, GENERAL	M

Supplier Screening

1.2 Sector-specific Risk Methodology

Step 1: Sector classification

Main Group	Main Group Des.	Main Description	GICS Sub-Industries	GICS Sectors
C03710	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, ROAD CONSTRUCTION, PAVING, GRADING & BLACKTOP	20103010: Construction & Engineering	Industrials
C03720	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, CANAL WORKS/MAINTENANCE	20103010: Construction & Engineering	Industrials
C04310	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, COOLING TOWER	20103010: Construction & Engineering	Industrials
C04320	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, FLARE/CHIMNEY	20103010: Construction & Engineering	Industrials
C04330	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, REFRACTORY/LINING	20103010: Construction & Engineering	Industrials
C04340	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, STACKING	20103010: Construction & Engineering	Industrials
C04110	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, STEEL TANK FABRICATION & TANK BODY SHOP	20103010: Construction & Engineering	Industrials
C04130	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, STEEL STRUCTURES	20103010: Construction & Engineering	Industrials
C04150	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, TEMPORARY BUILDINGS, INCLUDING PORTA CABINS RENTAL	20103010: Construction & Engineering	Industrials
C04160	MAIN GROUP, CIVIL EQUIPMENT AND SERVICE	SERVICE, PILE DRIVING, CONCRETE PILES & CORRUGATED SHEETS	20103010: Construction & Engineering	Industrials
LF0000	MAIN GROUP, GENERAL NON-TECHNICAL SERVICE	SERVICE, MEDIA/ADVERTISE	50201010: Advertising	Communication Services
NA9760	MAIN GROUP, GENERAL NON-TECHNICAL SERVICE	SERVICE, TANK CLEANING/RESIDUE DISPLACER INTERCEPTORS, COMPOUNDS	20201070: Diversified Support Services	Industrials
NA9770	MAIN GROUP, GENERAL NON-TECHNICAL SERVICE	SERVICE, INDUSTRIAL CLEANING GENERAL	20201070: Diversified Support Services	Industrials
HC9110	MAIN GROUP, GENERAL NON-TECHNICAL SERVICE	SERVICE, HEALTH CLINICAL - MEDICAL SERVICES AND REPORTS	35102015: Health Care Services	Health Care
HC9130	MAIN GROUP, GENERAL NON-TECHNICAL SERVICE	SERVICE, DISEASE CONTROL, INCLUDING VACCINATION PEST CONTROL	35102015: Health Care Services	Health Care

Mapping suppliers' business activities with GICS sector/ sub-industry

Step 2: Identify Sector-specific ESG Risk Issues

Process to identifying ESG issues and weight

MSCI	S&P Global	W - Weight
ESG	ESG	ESG
Carbon Emissions & Energy Consumption	Carbon Emissions & Energy Consumption	Carbon Emissions & Energy Consumption
Toxic Emissions & Waste & Pollutants	Toxic Emissions & Waste & Pollutants	Toxic Emissions & Waste & Pollutants
Water Stress	Water Stress	Water Stress
Biodiversity & Land Use	Biodiversity & Land Use	Biodiversity & Land Use
Occupational Health & Safety	Occupational Health & Safety	Occupational Health & Safety
Labor Management	Labor Management	Labor Management
Community Relations	Community Relations	Community Relations
Governance (Board Cases)	Governance (Board Cases)	Governance (Board Cases)
Information Security/Cybersecurity	Information Security/Cybersecurity	Information Security/Cybersecurity

Sub-Sector	Sub-Industry	Weight
Information Technology	IT Hardware Equipment & Instruments	15%
Carbon Emissions & Energy Consumption	Carbon Emissions & Energy Consumption	15%
Toxic Emissions & Waste & Pollutants	Toxic Emissions & Waste & Pollutants	15%
Water Stress	Water Stress	15%
Biodiversity & Land Use	Biodiversity & Land Use	15%
Occupational Health & Safety	Occupational Health & Safety	15%
Labor Management	Labor Management	15%
Community Relations	Community Relations	15%
Governance (Board Cases)	Governance (Board Cases)	15%
Information Security/Cybersecurity	Information Security/Cybersecurity	15%

Step 3: Assess Sector-specific ESG Risk

Sector risk assessment criteria

ESG Risk	Carbon Emissions & Energy Consumption	Toxic Emissions & Waste	Water Stress	Biodiversity & Land Use	Occupational Health & Safety	Social	Labour Management & Community Relations	Governance	Information Security/Cybersecurity
High	High	High	High	High	High	High	High	High	High
Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

Sector ESG risk assessment result

ESG Risk Issues	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Health Care	Financials	Information Technology	Communication Services	Utilities	Real Estate
Carbon Emissions & Energy Consumption	High	High	High	High	High	High	High	High	High	High	High
Toxic Emissions & Waste & Pollutants	High	High	High	High	High	High	High	High	High	High	High
Water Stress	High	High	High	High	High	High	High	High	High	High	High
Biodiversity & Land Use	High	High	High	High	High	High	High	High	High	High	High
Occupational Health & Safety	High	High	High	High	High	High	High	High	High	High	High
Labor Management	High	High	High	High	High	High	High	High	High	High	High
Community Relations	High	High	High	High	High	High	High	High	High	High	High
Governance	High	High	High	High	High	High	High	High	High	High	High
Information Security/Cybersecurity	High	High	High	High	High	High	High	High	High	High	High

Sector	Sub-Industry	ESG Risk Issues	Sector	Sub-Industry	ESG Risk Issues
Energy	Oil & Gas Refining	Carbon Emissions & Energy Consumption	Health Care	Pharmaceuticals	Water Stress
Energy	Oil & Gas Equipment & Services	Toxic Emissions & Waste & Pollutants	Health Care	Medical Devices	Water Stress
Energy	Integrated Oil & Gas	Water Stress	Health Care	Health Care Services	Water Stress
Energy	Oil & Gas Exploration & Production	Biodiversity & Land Use	Health Care	Health Care Services	Water Stress
Energy	Coal & Consumable Fuels	Occupational Health & Safety	Health Care	Health Care Services	Water Stress
Energy	Community Chemicals	Labor Management	Health Care	Health Care Services	Water Stress
Energy	Diversified Chemicals	Community Relations	Health Care	Health Care Services	Water Stress
Energy	Industrial Gases	Governance	Health Care	Health Care Services	Water Stress
Energy	Specialty Chemicals	Information Security/Cybersecurity	Health Care	Health Care Services	Water Stress
Energy	Construction Materials & Materials		Health Care	Health Care Services	Water Stress
Energy	Metal, Glass & Plastic Containers		Health Care	Health Care Services	Water Stress
Energy	Rubber & Plastic Packaging Products & Materials		Health Care	Health Care Services	Water Stress
Energy	Construction & Engineering		Health Care	Health Care Services	Water Stress
Energy	Electrical Components & Equipment		Health Care	Health Care Services	Water Stress
Energy	Heavy Electrical Equipment		Health Care	Health Care Services	Water Stress
Energy	Industrial Machinery & Supplies & Components		Health Care	Health Care Services	Water Stress
Energy	Environmental & Facilities Services		Health Care	Health Care Services	Water Stress
Energy	Diversified Support Services		Health Care	Health Care Services	Water Stress
Energy	Security & Alarm Services		Health Care	Health Care Services	Water Stress
Energy	Human Resource & Employment Services		Health Care	Health Care Services	Water Stress
Energy	Research & Consulting Services		Health Care	Health Care Services	Water Stress
Energy	Air Freight & Logistics		Health Care	Health Care Services	Water Stress
Energy	Marine Transportation		Health Care	Health Care Services	Water Stress
Energy	Carry Goods Transportation		Health Care	Health Care Services	Water Stress
Energy	Warehouse Ground Transportation		Health Care	Health Care Services	Water Stress

Supplier Screening

1. ESG Risk Assessment Methodology of Supplier Screening Process for Significant Suppliers

1.3 Commodity-specific Risk

Step 1: Initial Commodity Classification

The Company defines commodities according to Shell's Product and Service Group Code (PSGC) and will be utilized to identify commodity-specific ESG risk issues using the Company's Historical Database.

Step 2: Identify Commodity-specific ESG Risk Issues

Environmental aspects:

GHG emissions, energy consumption, water consumption, resource efficiency, pollution presentation, waste management, or biodiversity.

Social aspects:

Human Rights (child labor, forced labor, discrimination and harassment, freedom of associations, right to collective bargaining, Working conditions, occupational health and safety, or the rights of local communities.

Governance/Business aspects:

Corruption, bribery, conflicts of interest, or anti-competitive practices.

Step 3: Assess Commodity-specific ESG Risk

The Company determine ESG Risk Level by Commodity. The Level of ESG risk issue from each commodity are determined based on Risk Assessment Matrix (RAM) which consists of likelihood and impact factors. The final risk level will be determined by using the highest risk level result.

ESG Risk Level

Very High Risk Level
High Risk Level
Medium Risk Level
Low Risk Level
Very Low Risk Level

Example:

Commodity	ESG Risk Level
SERVICE, CONTRACT LABOUR	Medium
SERVICE, SOFTWARE MAINTENANCE AND SUPPORT	Very Low
SERVICE, MAIN MECHANICAL WORK UNDER EPC	Very Low
SERVICE, TANK CONSTRUCTION/MAINTENANCE	Very Low
SERVICE, STEAM TURBINE SERVICE	Very Low
MATERIAL, CATALYST, HYDROTREATING/CATALYST	Medium
SERVICE, AUTOMATION SYSTEM, INCLUDING DCS	Very Low
MATERIAL, CATALYST, GENERAL	Medium
SERVICE, CONTRACT LABOUR	Medium
SERVICE, LOGISTICS MARINE	Very Low
SERVICE, SOFTWARE APPLICATION SERVICE AND	Very Low
MATERIAL, CATALYST, TAIL GAS CLAUDICOPHY	Medium
SERVICE, REAL ESTATE LEASE/RENT (LAND/HOUSE)	Low

Supplier Screening

1. ESG Risk Assessment Methodology of Supplier Screening Process for Significant Suppliers

ESG Risk aspects cover all 7 Social Responsibility Core Subjects identified in ISO 26000:2010, Guidance on social responsibility which consists of Organizational Governance, Human Rights, Labor Practices, Environment, Fair Operating Practices, Consumer Issues, and Community Involvement & Development.



Social Responsibility Core Subjects	Environment Aspect	Social Aspect	Governance Aspect
Organizational Governance			- Regulatory Compliance - Confidentiality of Information - Disclosure
Human Rights		Human Resources - Employee Health & Safety - Working conditions	
Labor Practices		Human Rights - Child Labor - Forced Labor - Human Trafficking - Diversity - Discrimination	
The Environment	- Environmental Management - Sustainable Resource Efficiency - Biodiversity, Deforestation or Land Conservation - Pollution Prevention and Waste Management - Greenhouse Gas Reduction and Climate Change Mitigation		
Fair Operating Practices			- Anti-Corruption & Bribery - Anti-Competitiveness - Conflicts of Interest - Gifts - Respect for Intellectual Property Rights
Consumer Issues		- Customer Data Protection and Privacy - Protecting Customers' Health and Safety - Education and Awareness - Customer Service, Support and Complaint and Dispute Resolution	
Community Involvement and Development		- Employment creation and skills development - Technology development and access - Wealth and income creation - Health - Social Investment	

Supplier Screening

1.3 Commodity-specific Risk

Step 1: Initial Commodity Classification

Commodity Code	Commodity Description
CD3710	
CD3720	
CD4310	
CD4320	
CD4330	
CD4340	
CD6110	
CD6130	
CD6150	
CD6160	
CD6170	
CD6180	

Example

Step 2: Identify Commodity-specific ESG Risk Issues

ESG MAIN GROUP: CIVIL EQUIPMENT AND SERVICE		List of Commodity-specific ESG Risk Assessment									
Item	Risk Description	Category	Severity	Impact	Frequency	Time	Cost	Reputation	Materiality	ESG Risk Level	ESG Risk Owner
1	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	...	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...
32	...	...	...	...	...	...	...	...	...	...	...
33	...	...	...	...	...	...	...	...	...	...	...
34	...	...	...	...	...	...	...	...	...	...	...
35	...	...	...	...	...	...	...	...	...	...	...
36	...	...	...	...	...	...	...	...	...	...	...
37	...	...	...	...	...	...	...	...	...	...	...
38	...	...	...	...	...	...	...	...	...	...	...
39	...	...	...	...	...	...	...	...	...	...	...
40	...	...	...	...	...	...	...	...	...	...	...
41	...	...	...	...	...	...	...	...	...	...	...
42	...	...	...	...	...	...	...	...	...	...	...
43	...	...	...	...	...	...	...	...	...	...	...
44	...	...	...	...	...	...	...	...	...	...	...
45	...	...	...	...	...	...	...	...	...	...	...
46	...	...	...	...	...	...	...	...	...	...	...
47	...	...	...	...	...	...	...	...	...	...	...
48	...	...	...	...	...	...	...	...	...	...	...
49	...	...	...	...	...	...	...	...	...	...	...
50	...	...	...	...	...	...	...	...	...	...	...
51	...	...	...	...	...	...	...	...	...	...	...
52	...	...	...	...	...	...	...	...	...	...	...
53	...	...	...	...	...	...	...	...	...	...	...
54	...	...	...	...	...	...	...	...	...	...	...
55	...	...	...	...	...	...	...	...	...	...	...
56	...	...	...	...	...	...	...	...	...	...	...
57	...	...	...	...	...	...	...	...	...	...	...
58	...	...	...	...	...	...	...	...	...	...	...
59	...	...	...	...	...	...	...	...	...	...	...
60	...	...	...	...	...	...	...	...	...	...	...
61	...	...	...	...	...	...	...	...	...	...	...
62	...	...	...	...	...	...	...	...	...	...	...
63	...	...	...	...	...	...	...	...	...	...	...
64	...	...	...	...	...	...	...	...	...	...	...
65	...	...	...	...	...	...	...	...	...	...	...
66	...	...	...	...	...	...	...	...	...	...	...
67	...	...	...	...	...	...	...	...	...	...	...
68	...	...	...	...	...	...	...	...	...	...	...
69	...	...	...	...	...	...	...	...	...	...	...
70	...	...	...	...	...	...	...	...	...	...	...
71	...	...	...	...	...	...	...	...	...	...	...
72	...	...	...	...	...	...	...	...	...	...	...
73	...	...	...	...	...	...	...	...	...	...	...
74	...	...	...	...	...	...	...	...	...	...	...
75	...	...	...	...	...	...	...	...	...	...	...
76	...	...	...	...	...	...	...	...	...	...	...
77	...	...	...	...	...	...	...	...	...	...	...
78	...	...	...	...	...	...	...	...	...	...	...
79	...	...	...	...	...	...	...	...	...	...	...
80	...	...	...	...	...	...	...	...	...	...	...
81	...	...	...	...	...	...	...	...	...	...	...
82	...	...	...	...	...	...	...	...	...	...	...
83	...	...	...	...	...	...	...	...	...	...	...
84	...	...	...	...	...	...	...	...	...	...	...
85	...	...	...	...	...	...	...	...	...	...	...
86	...	...	...	...	...	...	...	...	...	...	...
87	...	...	...	...	...	...	...	...	...	...	...
88	...	...	...	...	...	...	...	...	...	...	...
89	...	...	...	...	...	...	...	...	...	...	...
90	...	...	...	...	...	...	...	...	...	...	...
91	...	...	...	...	...	...	...	...	...	...	...
92	...	...	...	...	...	...	...	...	...	...	...
93	...	...	...	...	...	...	...	...	...	...	...
94	...	...	...	...	...	...	...	...	...	...	...
95	...	...	...	...	...	...	...	...	...	...	...
96	...	...	...	...	...	...	...	...	...	...	...
97	...	...	...	...	...	...	...	...	...	...	...
98	...	...	...	...	...	...	...	...	...	...	...
99	...	...	...	...	...	...	...	...	...	...	...
100	...	...	...	...	...	...	...	...	...	...	...

Example

Step 3: Assess Commodity-specific ESG Risk

	Economic	Environment	Regulation
1. Very Low	No impact on CO2 emissions on business Have impact on product/delivery of product or main services resulting in less than 1% decrease in product/delivery	Minimum impact on environment Does not exceed the limit required in the period	No impact on regulation Does not exceed the limit required in the period
2. Low	Result in expenditure but does not cause disruption to business or operation Have impact on the product/delivery of the product or main services resulting in 1-20% decrease in product/delivery	Damage is restricted to the operation area Have impact on the product/delivery of the product or main services resulting in 1-20% decrease in product/delivery	Limited impact regulation (day/week) Have impact on the product/delivery of the product or main services resulting in 1-20% decrease in product/delivery
3. Medium	Result in medium expenditure and negative impact on business Have impact on the product/delivery of the products or main services resulting in 20-50% decrease in product/delivery	Medium damage (less than 5 km radius from the point of incident) Have impact on the product/delivery of the products or main services resulting in 20-50% decrease in product/delivery	Impact on regulation (month/year) Have impact on the product/delivery of the products or main services resulting in 20-50% decrease in product/delivery
4. High	Result in high expenditure and negative impact to business Have impact on the product/delivery of the products or main services resulting in 50-80% decrease in product/delivery	High damage (within 5-10 km radius from the point of incident) Have impact on the product/delivery of the products or main services resulting in 50-80% decrease in product/delivery	Impact on regulation (month/year) Have impact on the product/delivery of the products or main services resulting in 50-80% decrease in product/delivery
5. Very High	Result in very high expenditure and negative impact to business Have impact on the product/delivery of the products or main services resulting in over 80% decrease in product/delivery	Extreme damage (over 10 km radius from the point of incident) Have impact on the product/delivery of the products or main services resulting in over 80% decrease in product/delivery	Impact on regulation (month/year) Have impact on the product/delivery of the products or main services resulting in over 80% decrease in product/delivery

Impacts

Likelihood



Impact	Very Low	Low	Medium	High	Very High
Very Low	L3	L2	L1	VL2	VL1
Low	M2	M1	L5	L4	VL3
Medium	H1	M4	M3	L7	L6
High	H3	H2	M6	M5	L8
Very High	VH1	H5	H4	M7	L9

ESG Risk Level

Very High Risk Level
High Risk Level
Medium Risk Level
Low Risk Level
Very Low Risk Level



Supplier Name	Commodity	ESG Risk Level
...	SERVICE, CONTRACT LABOUR	Medium
...	SERVICE, SOFTWARE MAINTENANCE AND SUPPORT	Very Low
...	SERVICE, MAIN MECHANICAL WORK UNDER EPC	Very Low
...	SERVICE, TANK CONSTRUCTION/MAINTENANCE	Very Low
...	SERVICE, STEAM TURBINE SERVICE	Very Low
...	MATERIAL, CATALYST, HYDROTREATING, CATALYST	Medium
...	SERVICE, AUTOMATION SYSTEM, INCLUDING DCS	Very Low
...	MATERIAL, CATALYST, GENERAL	Medium
...	SERVICE, CONTRACT LABOUR	Medium
...	SERVICE, LOGISTICS MARINE	Very Low
...	SERVICE, SOFTWARE APPLICATION SERVICE AND	Very Low
...	MATERIAL, CATALYST, TAIL GAS, CLAUDIUS-PELOTT	Medium
...	SERVICE, REAL ESTATE LEASE/RENT (LAND/HOUSE)	Low

Summary of Commodity-specific Risk

RAM: Impacts X Likelihood = ESG Risk Level

Supplier Screening

1. ESG Risk Assessment Methodology of Supplier Screening Process for Significant Suppliers

1.4 Summarizing the Suppliers' ESG Risk

1.4A. The Company uses the following formula to calculate the **suppliers' ESG risk score (X)** as to combine the score obtained from 1.1-1.3

$$X = \frac{(\text{Country risk score} + \text{Sector risk score} + \text{Commodity risk score})}{3}$$

1.4B. To summarize the **ESG risk level**, the Company benchmark 1.4A result with the 4-scale supplier ESG risk criteria.

Risk score	Risk Level
4.51-5.00	5 (Very High)
3.51-4.50	4 (High)
2.51-3.50	3 (Medium)
1.51-2.50	2 (Low)
1.00-1.50	1 (Very Low)

Example: Summarizing the supplier ESG risk score & level

Country	Matl. Description (Default)	Sector	Result from 1.1		Result from 1.2		Result from 1.3		Result from 1.4A&B	
			Country risk score	Country risk level	Sector risk score	Sector risk level	Commodity risk score	Commodity risk level	Combined ESG Risk Score	ESG risk Level
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, AUTOMATION SYSTEM, INCLUDING D	20103010: Construction & Engineering								
TH	SERVICE, ELECTRICAL INSTRUMENT COMMUNI	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, ELECTRICAL INSTRUMENT COMMUNI	20103010: Construction & Engineering								
TH	SERVICE, ELECTRICAL INSTRUMENT COMMUNI	20103010: Construction & Engineering								
TH	SERVICE, U.P.S. SYSTEMS	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, ELECTRICAL INSTRUMENT COMMUNI	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, QMI PROCESS INSTRUMENTS MAINTI	20103010: Construction & Engineering								
TH	SERVICE, ELECTRICAL INSTRUMENT COMMUNI	20103010: Construction & Engineering								
TH	SERVICE, FIELD INSTRUMENT MAINTENANCE	20103010: Construction & Engineering								

Supplier Screening

2. Business Relevance Assessment Methodology of Supplier Screening Process for Significant Suppliers

2.1 Supplier's Supply Risk Analysis

The Company uses Porter's Five Force Model for Supplier's Supply Risk Analysis and visualizes it via the Company's in-house software, namely "SRM (Supplier Relationship Management) Platform".

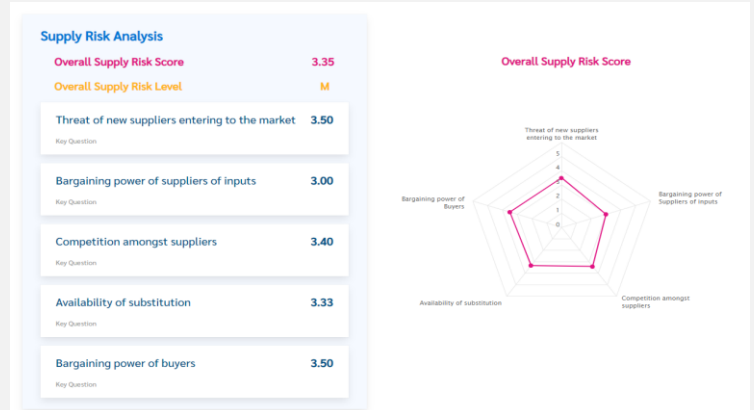
Porter's Five Force Model consists of main 5 questionnaires and each questionnaire has a set of questionnaires for deep drive analysis. The Company will evaluate each questionnaire with a score range (1 to 5).

No.	Main Questionnaire	Rationale	No. of Questionnaire
1	Threat of New Suppliers entering to the market	Low entry barriers into the industry can lead to higher competition and thus lower complexity of the industry. High entry barriers prevent new players from entering the industry and challenge existing players.	10
2	Bargaining power of suppliers of inputs	The industry is complex when these suppliers possess/offer unique assets or assets with limited accessibility as this will increase their power.	4
3	Competition amongst suppliers	This refers to the competition among the suppliers. Low competition can be caused by a limited number of players (e.g., monopoly, oligopoly,...)	5
4	Availability of substitution products/Services	A high potential for availability of substitution leads to a less complex industry.	3
5	Bargaining power of buyers	A low level of buying power implies a higher complexity of the industry.	4
			26

So, the Company can evaluate the supply risk in the score and convert it to risk level.

Supplier's Supply Risk Score	Supplier's Supply Risk Level
4.51-5.00	Very High Risk Level
3.51-4.50	High Risk Level
2.51-3.50	Medium Risk Level
1.51-2.50	Low Risk Level
1.00-1.50	Very Low Risk Level

Example: Supply Risk Analysis via SRM Platform



Example: Key Questionnaires with a set of questionnaires that evaluated via SRM Platform

Bargaining power of buyers				Overall Score : 3.50
Action	Key Question	Answer	Score(1-5)	Comment
1	Are there many buyers in the market?		3.00	
2	Are switching costs high when changing suppliers?		4.00	
3	Is buying from any alternative supply markets difficult or will it result in a high total cost?		3.00	
4	Is there a high level of loyalty to suppliers in this market?		4.00	

Supplier Screening

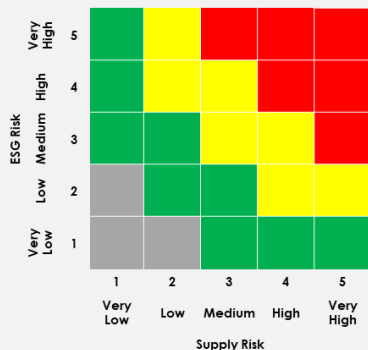
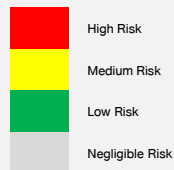
2. Business Relevance Assessment Methodology of Supplier Screening Process for Significant Suppliers

$$\text{Combined Risk} = \text{Supplier's Supply Risk} \times \text{Supplier's ESG Risk}$$

The supply risk level will combine with ESG risk.

Combined Risks

This ESG Risk Level is from the result that the Company conducts in 1.4 Supplier's ESG Risk



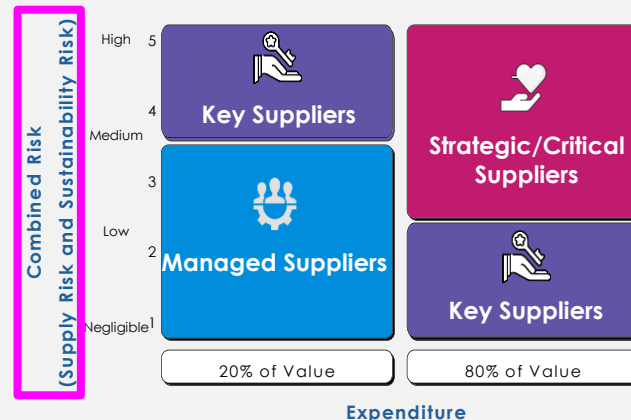
This Supplier ESG Level is from the result that the Company conducts in 2.1 Supplier's Supply Risk Assessment

Combined Risk is assessed based on Supply Risk and Sustainability Risk which is related to 5 key dimensions.

1. Operations and SSHE / Sustainability Management Risk
2. Competitive Advantage
3. Planning Risk
4. Competitive Risk
5. Spend

Key Dimensions	Risk Assessment Methodology
Operations and SSHE / Sustainability Management Risk	Sustainability Risk Analysis
Competitive Advantage	Supply Risk Analysis Sustainability Risk Analysis
Planning Risk	Supply Risk Analysis Sustainability Risk Analysis
Competitive Risk	Supply Risk Analysis
Spend	Supply Risk Analysis

The combined risk is to be one factor of Business relevance to identify significant suppliers.



One factor of Business relevance to identify significant suppliers

Supplier Screening

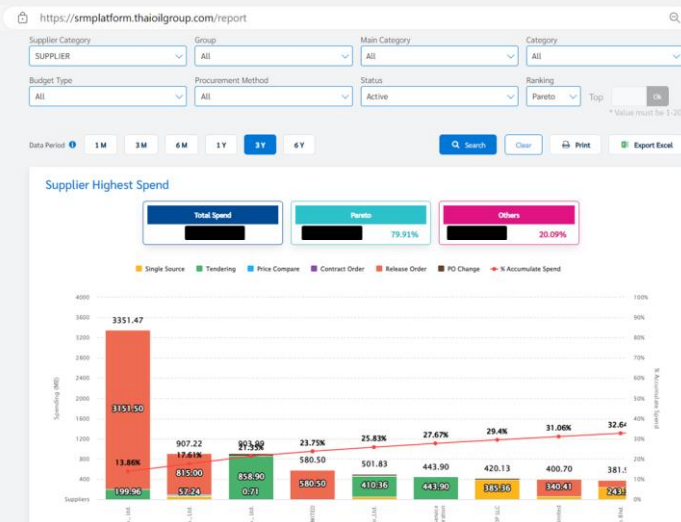


2. Business Relevance Assessment Methodology of Supplier Screening Process for Significant Suppliers

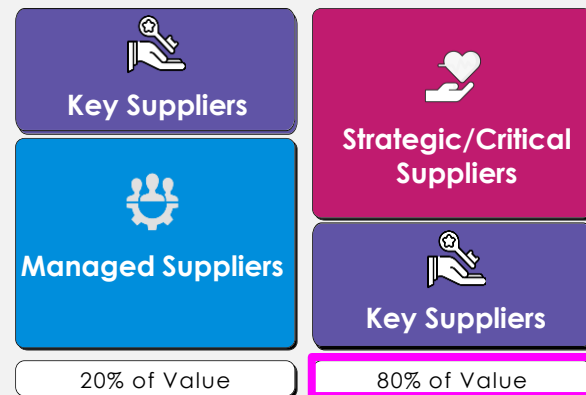
2.2 Supplier Spending Analysis

The Company uses Pareto 80/20 for Supplier Spending Analysis. The Company gathers the historical spending data from ERP and visualizes it via the Company's in-house software, namely "SRM (Supplier Relationship Management) Platform".

Example: Pareto 80/20 Analysis via SRM Platform



So, the Company can classify which suppliers are in 80% of values or 20% of values. The suppliers who are in 80% of values is one factor of **Business relevance** to identify significant suppliers.



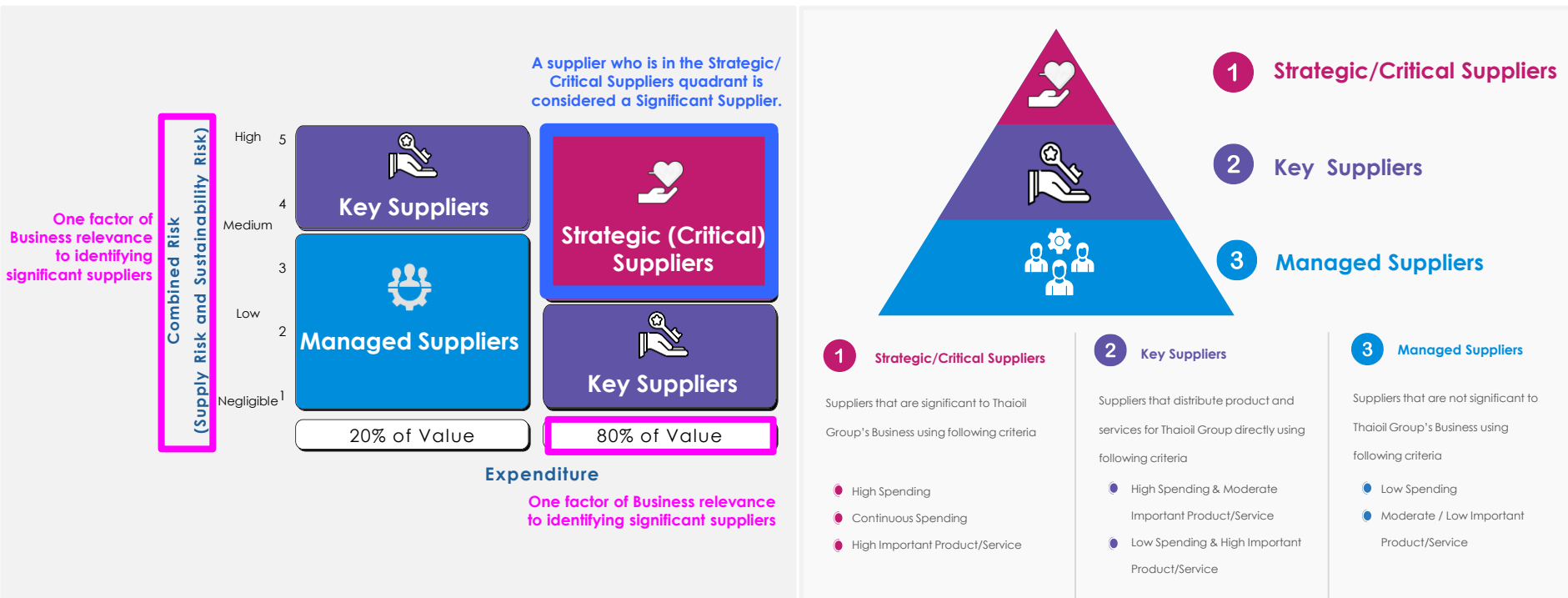
Expenditure

One factor of Business relevance to identify significant suppliers

Supplier Screening

2. Business Relevance Assessment Methodology of Supplier Screening Process for Significant Suppliers

2.3 Supplier Classification



Supplier Screening

2. Business Relevance Assessment Methodology of Supplier Screening Process for Significant Suppliers

The Identification of Significant Suppliers

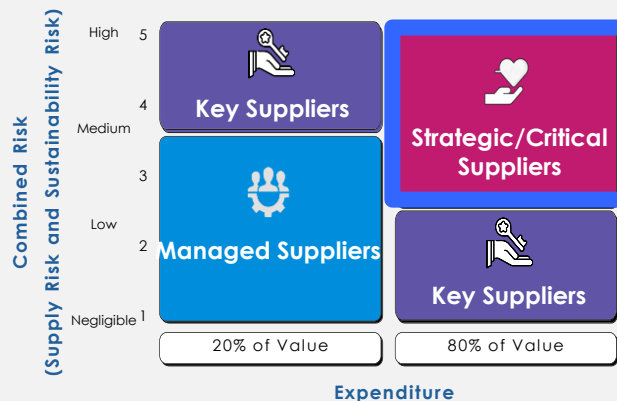
The significant suppliers are “High Potential ESG Risk Suppliers” and/or “Strategic/Critical Suppliers”.

Supplier's ESG Risk Level



A supplier who has a Very High or High ESG risk level is considered as a Significant Supplier.

Supplier Classification



A supplier who is in the Strategic/Critical Suppliers quadrant is considered as a Significant Supplier.

Supplier Screening

Risk Management Process for Significant Suppliers



1. Risk Assessment

After conducting risk assessment (Risk Identification, Analysis, and Evaluation) via the Supplier's ESG risk assessment and the Company's business relevance assessment.

The Company will give the priority on the significant suppliers are "High Potential ESG Risk Suppliers" and/or "Strategic/Critical Suppliers".



2. Risk Treatment and Risk Management Measures

Significant Suppliers

- Supplier's SCOC Acknowledgement
- Internal Monitoring and Assessment
- Supplier Assessment with Corrective Action Plans (CAP).
- Supplier Development.

Non-Significant Suppliers

- Supplier's SCOC Acknowledgement
- Internal Monitoring and Assessment



3. Monitoring & Review

- Plan for monitoring, assessing, and reviewing risks and risk management measures.
- Meeting with key internal stakeholders and significant suppliers to monitor, assess, and review risks and risk management measures and record them in the database.



4. Recording & Reporting

- Prepare risk analysis records and reports in the form of risk registers to ensure uniformity.
- Regular proactive risk reports by Significant Suppliers through formal channels as planned.

Supplier Assessment and Development



The company has committed to conducting supplier assessments on sustainability topics and promoting suppliers' capacity in supplier ESG program. The company has established a long-term plan to proactively assess the significant suppliers and high ESG risk suppliers.

The company has carried out the supplier assessment process to reduce costs, mitigate ESG risks, and drive improvement including increased supplier ESG performance visibility and aligning between the company and supplier business practices, and supply chain risk mitigation.

Supplier assessments (desk or on-site) are carried out using standards and methodologies of a recognized industry as follows:

- ISO (The International Organization for Standardization) such as ISO 14001, ISO 50001, ISO 45001, OHSAS 18001, ISO 9001, ISO/IEC 17025, ISO 27001, ISO 20400.
- Collective Action Against Corruption (CAC) Certificate by Thai Private Sector Collective Action Against Corruption, Thailand.
- Corporate Social Responsibility, Department of Industrial Work (CSR-DIW) by Department of Industrial Works, Ministry of Industry, Thailand.
- Green Industry (GI) Certificate by Ministry of Industry, Thailand.
- SMETA standard convert to URSA by SGS (Thailand).

Supplier Assessment Process

Supplier Screening

Supplier Assessment

Supplier Development

Significant Suppliers & High ESG Suppliers

ESG Desk (Online) Assessment (Annually)

Does Supplier have ESG management approach (e.g. ESG relevant standards) in place ?

No

Supplier ESG Onsite Assessment (Annually)

Yes

Supplier ESG Onsite Assessment (Every 3 Years)

Have any actual/potential negative impacts found during assessment ?

Yes

Supplier Development Process

END

END

Please see details on page 47-57

ESG Desk Assessment

- Suppliers are requested to provide information and supporting evidence on their ESG policies, practices, performance, and public disclosures. This information is reviewed, verified, and analyzed, resulting in an appraisal of the supplier's ESG performance.
- The company accepts other comprehensive assessment verifications performed through external party assessment including, but not limited to as follows: international standards/ a third party certification/audit/verification including, but not limited to ISO9001, ISO14001, ISO45001, ISO50001, ISO17025, ISO27001, OHSAS18001, Other ESG relevant standards.

ESG Onsite Assessment

- The company has conducted Supplier ESG Onsite Assessment as follows:
- The 2nd party supplier onsite assessments by the Company's employees or contracted consultant or PTT Group's Supplier ESG Assessment (Joint-Program) by PTT Group's employees or external party assessment.
 - The 3rd party supplier onsite assessments by independent accredited auditing organizations that are approved/accredited by the standard-setting organization (e.g., ISO Standard, etc.)

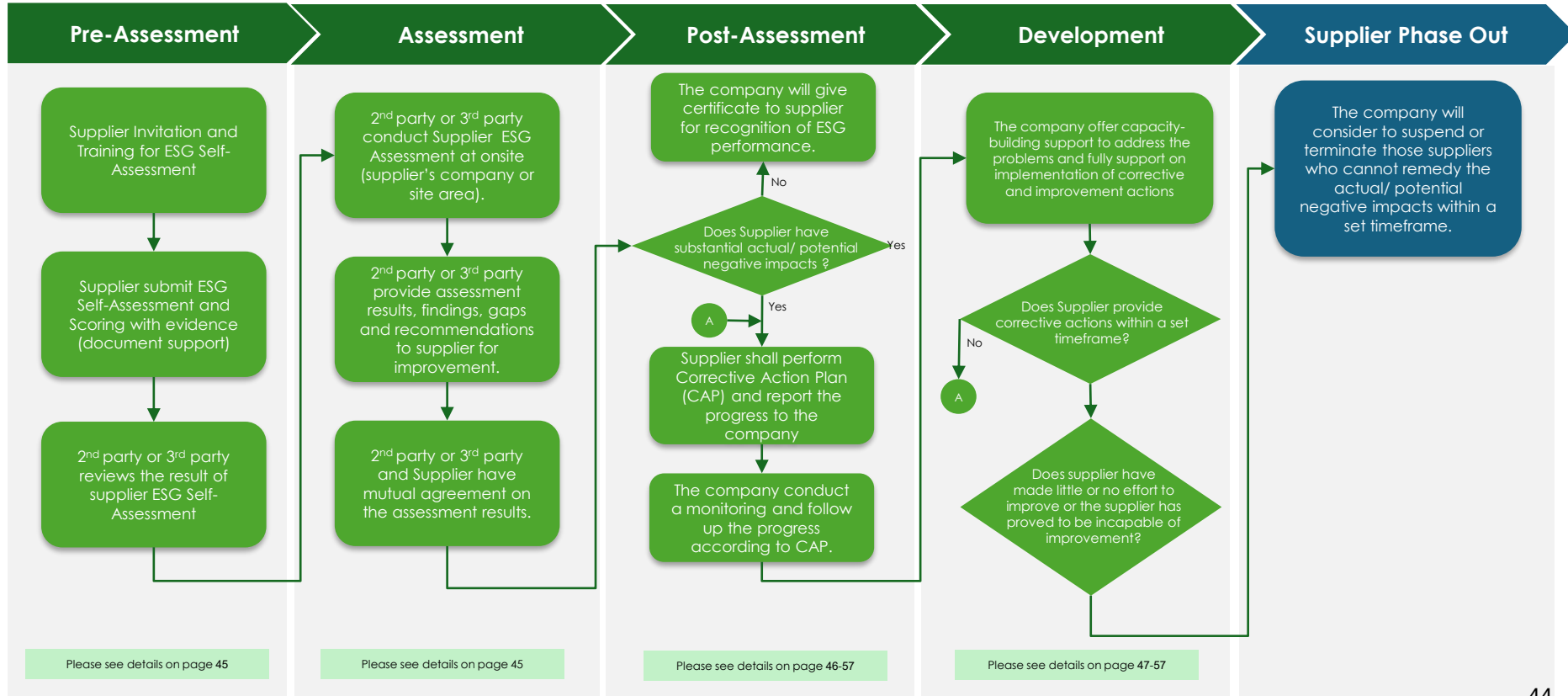
Please see details on page 45

Please see details on page 22-40

Supplier Onsite Assessment Process



The assessment is carried out by Thai Oil's employees or external consultants ("2nd party") and independent accredited auditing bodies ("3rd party") such as MASCI (Management System Certification Institute(Thailand)) who is an accredited auditor of ISO Standard.



Supplier Assessment

Upon reviewing the risk assessment results, the company will select Significant Suppliers with Strategic suppliers and high potential ESG risk suppliers to participate in the supplier ESG Program, to verify that the identified risks are being properly managed.

Supplier Desk Assessment

The company conducts supplier desk assessment with systematic verification of evidence by examining the certificates and assessment report issued by the Independent Accredited Auditing Body, including as follows:

- ISO Certification e.g., ISO14001, ISO50001, ISO45001, OHSAS18001, ISO9001, ISO17025, and ISO27001
- Green Industry Standard assessments by the Ministry of Industry
- Certifications from the Thai Private Sector Collective Action Against Corruption (CAC)
- Corporate Social Responsibility, and the Department of Industrial Work Award (CSR-DIW Award) by the Ministry of Industry.

2nd Party Supplier On-site Assessment

Supplier on-site assessments carried out by the company's employees or contracted consultant (2nd party assessment). For example; there are QSHE (Quality, Safety, Occupational Health, and Environment) assessments and waste assessments that are audited by the company at both Thaioil and Supplier Sites.

SSHE assessment



Waste assessment



3rd Party Supplier On-site Assessment

Supplier ESG on-site assessments carried out by the Management System Certification Institute (MASCI) as an independent accredited auditing body (3rd party assessment) to assess the Company's sustainable management practices of significant suppliers who have high potential ESG risks and/or strategic suppliers. These on-site assessments are conducted based on the criteria developed from ISO20400: Sustainable Procurement.



Supplier Assessment: Recognition Program



After the supplier ESG 3rd party onsite assessment is completely conducted, the Company has recognized the Suppliers for putting in high effort, creating more collaboration, and supporting our long-term sustainability in the supply chain.



Supplier Development Process



Supplier development programs is to ensure that suppliers will conduct the business to meet the company's requirements and to create value and opportunities together to improved and scalable impact in the supply chain ,

1

Supplier Information and/or Training

Providing the suppliers with information and training on the company's supplier ESG program. The examples are as follows:

- Annual Supplier Seminar. The content consists of Thaioil Group's Sustainability (ESG) Management e.g., Human Rights, SSHE, CG, SCOC, and Supplier ESG program.
- Supplier Training for ISO20400 Sustainable Procurement and Thaioil Group's Sustainable Procurement (e.g., SCOC, Sustainable Procurement Standards and Guidance).
- Supplier Training for ESG Background and ESG Assessment Scoring for ESG onsite Assessment
- Supplier Invitation for PTT CG Day, CAC Seminar, Supplier Experience Sharing Session for potential high-risk work and CSR Activities (e.g., Memorandum of Cooperation, etc.).

2

Supplier Access to ESG Benchmarks

The Company conducts Supplier ESG Benchmark Sharing Session to allow suppliers can access to information on how other suppliers are performing and performance information on ESG areas, best practices or case studies on how other suppliers achieved that level of performance.

3

Supplier Support (remote/onsite) on Implementation of corrective/improvement actions

The purchaser's and/or internal stakeholders provides guidance and support on the implementation of corrective and improvement actions through online meeting or onsite at Supplier site to fully support and encourage the suppliers to action and improve their ESG performance and enhance their ESG capacity.

4

In-depth technical support programs to build capacity and ESG performance in suppliers

The Company conducts comprehensive capacity-building programs to systematically improve supplier practices and performance on specific ESG topics through training, baseline assessments, collaborative system development, and progress measurement to enhance their capability for a more sustainable and resilient their businesses over the long term with systematic practices. The examples are as follows:

- Green Industry (GI): Training and hands-on workshop (Certified by the Department of Industrial Works of Thailand).
- All Safe White Green Program: Security, Safety, Occupational Health, and Environment (SSHE) Management Program.

Supplier Development

① Supplier Information and Training on the Purchasing Company's Supplier ESG Program

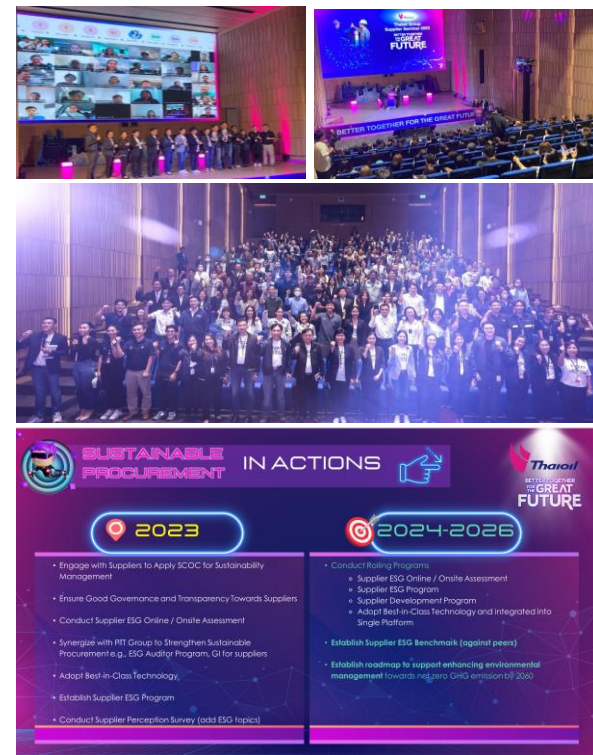
The Company has communicated supplier information and conducts the trainings on Supplier ESG program, process and requirements to our suppliers via various mediums such as supplier capacity-building programs and supplier engagement via training, workshops, meetings, conferences, and supplier newsletters via e-mails, etc.

The examples of Supplier Information and Training through various mediums are shown as follows :

Annual Supplier Seminar

The Company has continuously conducted annual supplier seminar to communicate multiple ESG topics e.g., corporate vision, procurement strategic direction, sustainable procurements (SCOC, Supplier ESG roadmap), corporate sustainability(ESG) management policy, Quality, Safety, Occupational Health, and Environment (QSHE), Human Rights in the Supply Chain and Corporate Governance (CG) to our suppliers, etc.

In 2023, The Company conducted an annual supplier seminar as a hybrid event (onsite and online). The Company provided information on sustainable procurement in actions including Supplier ESG Program and Supplier Assessment and Development. The Company allowed Suppliers to exchange knowledge, useful information, and feedback for more understanding and collaboration. This is a good opportunity to improve the Company's Operation and do business together with Suppliers in the future.



Example of Presentations that provide the information on Supplier ESG Program

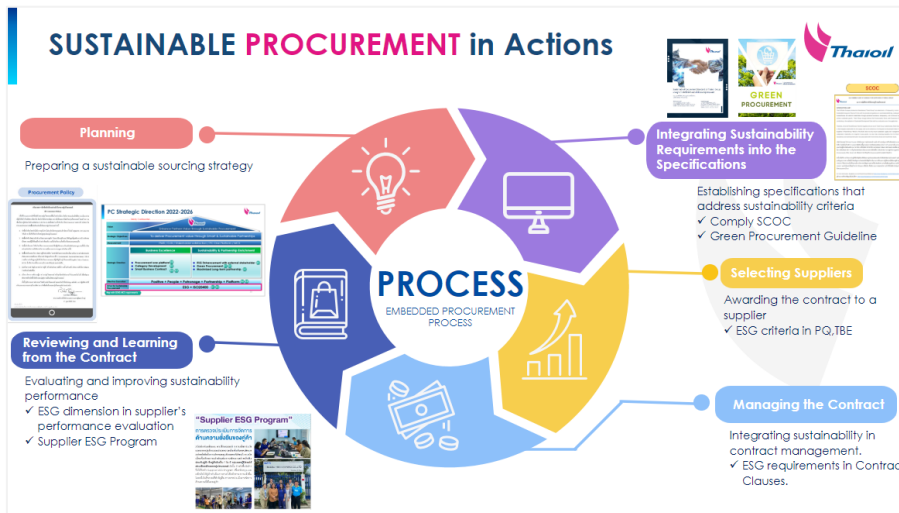
Supplier Development

① Supplier Information and Training on the Purchasing Company's Supplier ESG Program

The examples of Supplier Information and Training through various mediums are shown as follows :

Supplier Training

In 2023, the Company conducted Sustainable Procurement Training for Suppliers to ensure that the information of the Supplier ESG Program is deployed to Suppliers. The content consists of multiple ESG topics and best practices from Sustainable Procurement Guidance (ISO 20400), to information on the Supplier ESG Program which is already embedded into the End-To-End Procurement Process including the Company's assessment and development process.



Example of Training Documents that provide the information on Supplier ESG Program, process, and requirements

Supplier Development



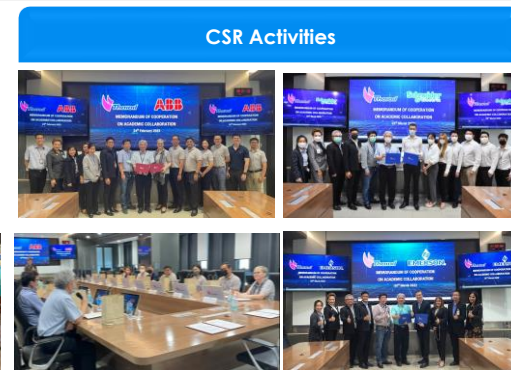
① Supplier Information and Training on the Purchasing Company's Supplier ESG Program

The examples of Supplier Information and Training through various mediums are shown as follows :

Supplier Activities e.g., Seminar, Sharing Session, Hands-on Workshop etc.

In 2023, the Company has embedded Supplier ESG Program into Supplier Activities. The Company invited all suppliers via E-mails to participate the events that related to ESG. The content consists of the specific ESG topic and best practices from expert sharing, to information on the Supplier ESG Program which Suppliers will apply accordingly.

For example, the Company invited suppliers to join PTT Group CG Group Day, CAC Seminar, and Supplier Experience Sharing Session for potential high-risk work and CSR Activities for potential high-risk work and CSR Activities (e.g., Memorandum of Cooperation: MOC).



Supplier Development

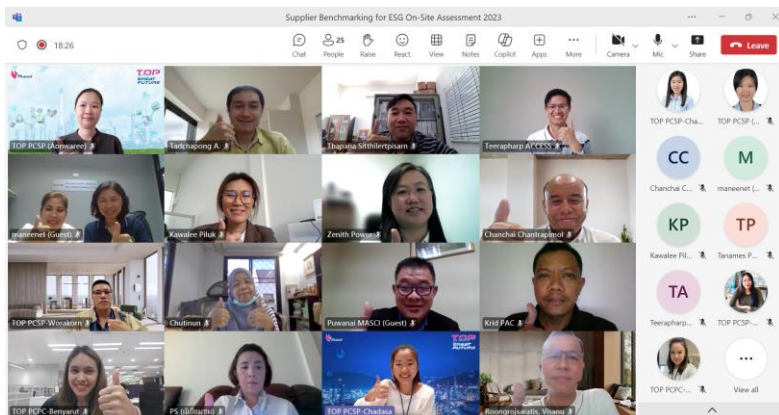


② Supplier Access to ESG Benchmarks against Peers

The Company conducted Supplier ESG Benchmark Sharing Session for all suppliers who participated ESG onsite assessment. The objective of this session is to improve and enhance better ESG performance by learning and capturing how other suppliers achieved that level of performance and the best practices from the supplier who received the highest score in each sustainability dimension which consists of ESG Policy, Business Integrity, Social, Occupational Health and Safety and Environment.

The Company allowed the Suppliers to access the information on how other suppliers were performing by asking questions in this session.

Moreover, the company is developing a knowledge management repository via a supplier portal platform for capturing and sharing supplier ESG knowledge and benchmarks among peers. Suppliers will have access to information on how other suppliers are performing and performance information on ESG areas, best practices, or case studies on how other suppliers achieved that level of performance.



Agenda		By
Opening Speech and Objective of Supplier Benchmarking		Thai Oil PLC.
Overview of ESG onsite Assessment Results 2023		Thai Oil PLC.
		MASCI
Sharing how to achieve the level of performance of each sustainability dimension from Supplier who received the highest score in each sustainability dimension.	A. Policy	Supplier A
	A. Policy B. Business Integrity C. Social	Supplier B
	D. Occupational Health and Safety	Supplier C
	E. Environment	Supplier D
Closing Speech		Thai Oil PLC.

③ Supplier support (remote/onsite) on implementation of corrective/improvement actions

From the result of supplier assessment, if any suppliers fail to pass or meet the assessment standards, the company will work with the suppliers through online (remote) and onsite meetings to help them develop their corrective actions and improvement plan and provide them with the **Corrective Action Plan ("CAP")** template so that each supplier can systematically solve the issues. The CAP will require suppliers to record the non-compliance issues, root causes, and proposed solutions while the expected deadline must be specified in the CAP and submit the CAP to the Company within a specific period. The Company will regularly organize meetings with suppliers to monitor the implementation progress and provide recommendations for further development and improvement.

For suppliers working at either the Company or the Supplier's Site, the Company has regular SSHE site audits and performance assessments to ensure that Suppliers comply with SCOC and Contracts. In case the issues were found, the company would immediately support our Suppliers in the implementation of corrective and improvement actions within the specific timeframe, which resulted in 100% CA (Corrective Action) closure and compliance with the Company's SCOC.

This supplier support (remote/on-site) on implementation of corrective/improvement actions not only mitigates potential ESG risks and promotes operational excellence, but also fosters sustainable development in alignment with the Company's business practices. As a result, this builds trust and strengthens business relationships between the Company and Suppliers.

Supplier Development



③ Supplier support (remote/onsite) on implementation of corrective/improvement actions

The examples of Supplier support on implementation of corrective/improvement actions.

Supplier Improvement Program [Redacted] ติดตามแผนการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน

Required [Redacted]
Optional [Redacted]

This meeting request was updated after this message was sent. You should open a later update or open the item on the calendar.

แนบการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน 27-12-23.xls 328 KB
รายงานการตรวจประเมินผลการดำเนินงาน 20231024.pdf 200 KB
รายงานการตรวจประเมินผลการดำเนินงาน 20231024.pdf 1 MB

Monday, 29 January, 2024 1:30 PM-2:30 PM Microsoft Teams Meeting

เรียน ทีมงาน ชัยสิทธิ์ [Redacted]

จากการตรวจประเมินความเสี่ยง ESG ภาคสนามประจำปี 2566 (ESG On-Site Assessment 2023) ในวันที่ 24 ตุลาคม พ.ศ.2566 ทางบริษัทฯ ขอแจ้งประเด็นที่ติดตามแผนการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน ในวันที่จันทร์ที่ 29 มกราคม พ.ศ. 2567 เวลา 13.30-14.30 น. ผ่านทางระบบ Ms.Team โดยที่ทำการดังนี้

9.00-9.45 น. คู่มือสนับสนุน ขั้นตอนแผนการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน และผลการดำเนินงานปี 2023
9.45-10.00 น. สอดตาม

Supplier [Redacted] #2/2567: ติดตามแผนการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน

Organizer TOP PCSF [Redacted] Sent Mon 29/1/2024 1:30 PM

Time Thursday, 16 May, 2024 9:00 AM-10:00 AM

Location Microsoft Teams Meeting

Respond

แนบการตรวจประเมินศักยภาพด้านความยั่งยืนของคู่ค้า กลุ่มปิโตรเคมี 382 KB
รายงานการตรวจประเมินผลการดำเนินงาน 261 KB
รายงานการตรวจประเมินผลการดำเนินงาน 574 KB

แนบการตรวจประเมินศักยภาพด้านความยั่งยืนของคู่ค้า กลุ่มปิโตรเคมี

เรียน [Redacted]

ในการประชุม การประชุมติดตามการดำเนินงานตามแผนการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน ในวันที่ 24 ตุลาคม พ.ศ. 2566 ทางบริษัทฯ ขอแจ้งประเด็นที่ติดตามแผนการแก้ไขและป้องกันข้อบกพร่องการตรวจประเมินศักยภาพด้านความยั่งยืน ในวันที่จันทร์ที่ 29 มกราคม พ.ศ. 2567 เวลา 13.30-14.30 น. ผ่านทางระบบ Ms.Team โดยที่ทำการดังนี้

ที่	รายละเอียด	วันที่	เวลา	ผู้รับผิดชอบ	สถานะ
001	การตรวจประเมินความเสี่ยง ESG	24.10.23	09.00-10.00	Personnel Manager	Completed
002	การตรวจประเมินความเสี่ยง ESG	24.10.23	10.00-11.00	Personnel Manager	Completed
003	การตรวจประเมินความเสี่ยง ESG	24.10.23	11.00-12.00	Personnel Manager	Completed
004	การตรวจประเมินความเสี่ยง ESG	24.10.23	13.00-14.00	Personnel Manager	Completed
005	การตรวจประเมินความเสี่ยง ESG	24.10.23	14.00-15.00	Personnel Manager	Completed
006	การตรวจประเมินความเสี่ยง ESG	24.10.23	15.00-16.00	Personnel Manager	Completed
007	การตรวจประเมินความเสี่ยง ESG	24.10.23	16.00-17.00	Personnel Manager	Completed
008	การตรวจประเมินความเสี่ยง ESG	24.10.23	17.00-18.00	Personnel Manager	Completed
009	การตรวจประเมินความเสี่ยง ESG	24.10.23	18.00-19.00	Personnel Manager	Completed
010	การตรวจประเมินความเสี่ยง ESG	24.10.23	19.00-20.00	Personnel Manager	Completed

Supplier Development

④ In-depth technical support programs to build capacity and ESG performance in suppliers

To systematically improve supplier practices and performance on specific ESG topics through training, baseline assessments, collaborative system development, and progress measurement to enhance their capability for a more sustainable and resilient their businesses in the long term with systematic practices.

The examples of In-depth technical support programs are as follows:

Green Industry Certification Program

Green Industry Certification program has been conducted annually in collaboration with the PTT Group since 2023 which usually takes about 1 year. The Company's encourages and supports suppliers to apply for Green Industry (GI) Level 2 Certification by collaborating with recognized institutions, including the Management System Certification Institute (MASCI), which is a network institute of the Ministry of Industry and operates under the Foundation for Industrial Development.

This program encompasses both theoretical online sessions and practical workshop sessions for the suppliers throughout the year. The aim is to support suppliers in continuous improvement and enhance the sustainable development of suppliers in adopting environmentally friendly business operations in the long term. The definition of GI Level 2 is Green Activities in compliance with policy, goals, and plans that have been set to reduce substantially environmental impacts as commitment states



Supplier Development

④ In-depth technical support programs to build capacity and ESG performance in suppliers

The examples of In-depth technical support programs are as follows:

All Safe White Green Program

Safe White Green Program is focused on **Security, Safety, Occupational Health, and Environment ("SSHE")** Management. This program is collaborative system development & progress measurement and has been systematically implemented since 2021. This program usually takes about 1 year. The development process is defined into 5 steps as follows (Coach, Up & Re-Skills, Control, Recognize, and Share) to strengthen the supplier competencies in all SSHE aspects.

- 1. Coach:** Management Commitment between the Company and Suppliers,
- 2. Up & Re-Skills:** Assesses Opportunities that the Company collaborates to enhance management system, knowledge, skills, improve the quality of life of workers, and conduct training and learning effectively.
- 3. Control:** To ensure compliance with laws, regulations, and standards, Suppliers are assessed by an independent 3rd party, and we monitor performance through Contractor Management System (CMS)
- 4. Recognize:** Give a reward to both Suppliers' company and workers.
- 5. Share:** Encourage supplier involvement and feedback and share lessons learned and best practices.



Supplier Development

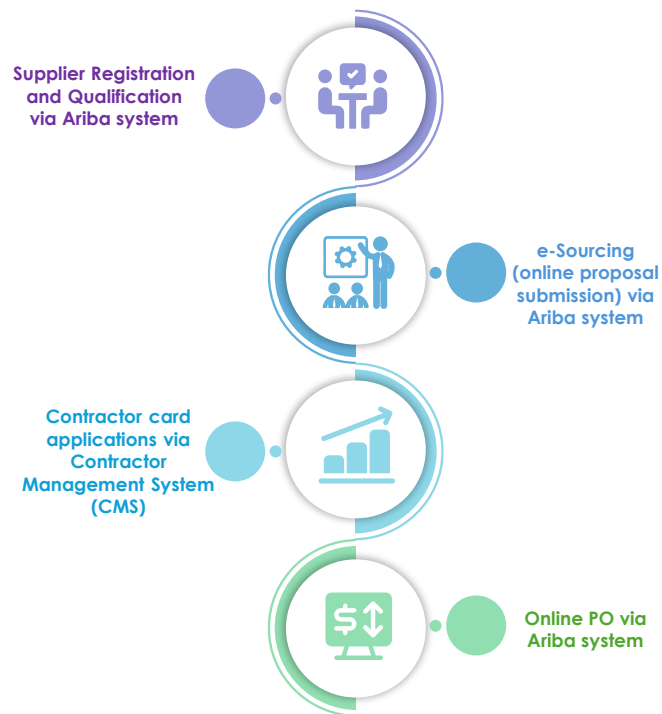
④ In-depth technical support programs to build capacity and ESG performance in suppliers

The examples of In-depth technical support programs are as follows:

E-Procurement Learning Path

In 2023, Thaioil Group consistently improved the E-Procurement system to ensure transparency, fairness, and professionalism in the Company's procurement processes. This led to higher supplier engagement and provided benefits for suppliers in terms of cost reduction and ESG performance, resulting in better supplier satisfaction. **Since the Company adopted reliable technologies in the procurement process to collaborate between the Company and Suppliers so that the Company has a system development program in place** such as

- Supplier Onboarding (Supplier Registration and Qualification) via the Ariba system to support new suppliers to complete within the agreed timeline
- E-sourcing (online proposal submission) via the Ariba system to conduct regular virtual hands-on training (exercise with the real system) and Suppliers can learn repeatedly by themselves via e-learning which published in Thaioil Website etc.
- Contractor Card Application via Contractor Management System (CMS), Suppliers are invited to attend the training course and can exercise with the real system.
- The Company has actively promoted the use of the Online Purchase Order (PO) system for suppliers via Ariba. This aims to simplify the working process and increase the convenience and speed of the procurement process for Suppliers.



Supplier Development

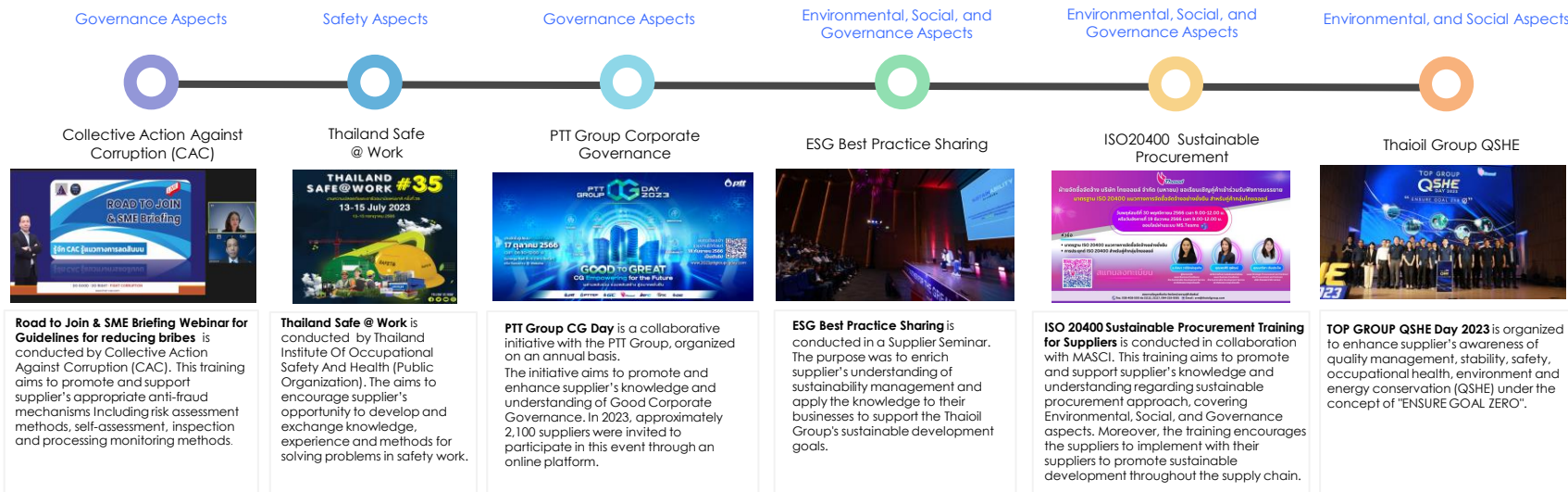


④ In-depth technical support programs to build capacity and ESG performance in suppliers

The examples of In-depth technical support programs are as follows:

Sustainability Development for Suppliers

Sustainability Development for Suppliers is conducted to promote and support supplier's knowledge and understanding regarding the Sustainability Development approach, covering Environmental, Social, and Governance aspects. Moreover, the Company encourages the Suppliers to implement with their suppliers to promote sustainable development throughout the supply chain. In 2023, the Company conducted and engaged the Suppliers to participate according to the annual development roadmap as follows.





KPIs for Supplier Screening

KPIs for Supplier Screening

The Company has analyzed by grouping all suppliers identified supplier screening by grouping the suppliers based on country, business sector, and commodity-specific – products, services, and activities. Then, screening suppliers to identify the potential sustainability (ESG) risk for each supplier group and will use spending as part of supplier screening for significant (Strategic/Critical) suppliers.

No.	Supplier Screening	Unit	FY2023*
1.1	Total number of Tier-1 suppliers	suppliers	1,015
1.2	Total number of significant suppliers in Tier-1	suppliers	37
1.3	% of total spend on significant suppliers in Tier-1	%	11%
1.4	Total number of significant suppliers in non Tier-1	suppliers	0
1.5	Total number of significant suppliers (Tier-1 and non Tier-1)	suppliers	37

*These performance data have been verified the accuracy and reliability by third party (LRQA). with the following assurance statement.

https://www.thaioilgroup.com/upload/media_file/202403071631_Thaioil_IR2023_EN_Final_20240307.pdf

KPIs for Supplier Assessment and Development

KPIs for Supplier Assessment and Development (1/2)



No.	Supplier Assessment	Unit	FY2023*	
			Performance	Target
1.1	Total number of suppliers assessed via desk assessments/on-site assessments (Tier 1 + Non Tier 1)	Significant supplier	32	
1.2	% of significant suppliers assessed	% of total significant supplier	86%	85%
1.3	Number of suppliers assessed with substantial actual/potential negative impacts	suppliers	0	
1.4	% of suppliers with substantial actual/potential negative impacts with agreed corrective action/improvement plan	% of total significant suppliers with impacts	100%	
1.5	Number of suppliers with substantial actual/potential negative impacts that were terminated	suppliers	0	

*These performance data have been verified the accuracy and reliability by third party (LRQA) with the following assurance statement.

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KPIs for Supplier Assessment and Development (2/2)



No.	Corrective action plan support	Unit	FY2023*	
			Performance	Target
2.1	Total number of suppliers supported in corrective action plan implementation	suppliers	0	
2.2	% of suppliers assessed with substantial actual/potential negative impacts supported in corrective action plan implementation	% of total significant supplier with negative impact	100%	100%

No.	Corrective action plan support	Unit	FY2023*	
			Performance	Target
3.1	Total number of suppliers in capacity building programs	significant supplier	30	
3.2	% of significant suppliers in capacity building programs	% of total supplier participated in capacity building program	81%	50%

*These performance data have been verified the accuracy and reliability by third party (LRQA). with the following assurance statement.

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Appendix

Glossary



BoD	the Company's Board of Directors
CA	Corrective Action
CAP	Corrective Action Plan
CEO	the Company's Chief Executive Officer
Company	Thai Oil Public Company Limited
MASCI	Stands for "Management System Certification Institute", which is a network institute of the Ministry of Industry and operates under the Foundation for Industrial Development.
SCOC	Stands for "Sustainable Code of Conduct for Suppliers of Thaioil Group" which is the Company's Supplier Code of Conduct
SSHE	Security, Safety, Occupational Health, and Environment
Suppliers	The Company's Suppliers include but are not limited to agents, brokers, consultants, contractors, distributors, and suppliers of products or services for the Company must be covered in Sustainable Supply Chain Management Process.



Empowering Human Life
Through Sustainable Energy and Chemicals

THANK YOU



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