

The Action Guide to ESG

Implementation for SMEs in ASEAN Supply Chains



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[Note]

This Guide discusses ESG management factors and summarizes its implementation plans and cases to help SMEs understand and implement corporate sustainability management. The primary users are SMEs that directly receive requests to respond ESG practices from various stakeholders such as clients and investors in the financial sector.

This Guide is not intended to diagnose or evaluate a company's ESG rating. Instead, the primary purpose is to present management skills that will help users to embed sustainability in their corporate strategy.

[Purpose and Composition]

- Although SMEs agree on the need to introduce ESG (Environmental, Social, Governance) management, many lack the ability to implement it due to various factors (e.g., limitation of scale and resources, lack of understanding of related details).
 - Discussions on the European Union(EU) Corporate Sustainability Due Diligence (March 2021) and strengthened disclosure requirements boosted demand for ESG management within the supply chain from various stakeholders (e.g., customers and investors). As a result, corporate sustainability management in SMEs (small and medium-sized businesses) gains rising attention.
- Thus, the 「Action Guide to ESG Implementation for SMEs」 was developed in 2021 to raise awareness of ESG among SMEs and present information necessary when promoting proactive ESG management..
 - This Guide identifies current tasks and issues from the perspective of SMEs' ESG management, establishes 'SMEs' ESG management factors' for the businesses to self-manage, and proposes implementation plans for each factor.
 - Several international and global ESG initiative standards were used as the references for ESG management factors when publishing ESG Guide and establishing ESG management factors. Therefore, it is applicable for Korean businesses entering ASEAN Member States as well as local businesses.
- Many businesses in ASEAN countries are obliged to reflect corporate sustainability strategies in their management due to the current reshaping of the global supply chain.
 - After experiencing supply chain disruptions through the U.S.-China trade dispute, the spread of COVID-19, and the Ukraine-Russia war, the world seeks stability with a risk diversification strategy deviating from the previous global value chain perspectives.
 - In response to rising labor costs in China, many businesses, including Korean businesses, are moving their manufacturing bases to ASEAN and India (Korea-ASEAN trade volume: USD 176.5 billion in 2021, up from USD 143.9 billion in 2020).
 - Most businesses in ASEAN Member States have a high foreign direct investment (FDI) ratio and therefore are demanded to pursue intense ESG management by global clients. In particular, many manufacturing industries significant to the global value chain are structured with SMEs.
- In 2022, this Guide has been expanded and developed ASEAN-wide to improve

competitiveness within the global supply chain of SMEs entering (or planning to enter) ASEAN Member States.

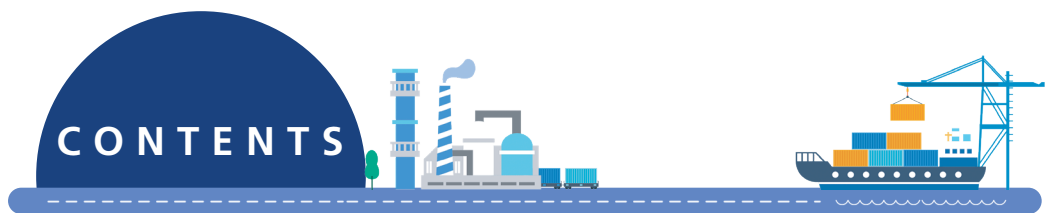
- ASEAN Member States face practical difficulties in adopting ESG management, such as energy saving due to poor infrastructure environment. In addition, SMEs have many potential risks in responding to their clients' demands on ESG factors due to their size and resource constraints.
- Therefore, this revised Guide was developed to be relevant for ASEAN countries across the board and improve the ESG response capabilities of SMEs in ASEAN from the perspective of responding to the global supply chain. This Guide is expected to be highly useful in practice, containing many best practices in related laws, implementation procedures, and supply chains centered on major ASEAN countries (e.g., Vietnam, Indonesia, Thailand).
- This Guide shall continue to develop additional contents specific to ASEM Member States in the future.

● Note Notes on using this guide

- The management factors and implementation plans and procedures for each factor presented in each guide may differ depending on businesses' organizational situations and value chain characteristics. Users are recommended to apply by modifying and supplementing details based on the business's circumstances.
- This Guide is designed for general use in ASEAN countries. Refer to the relevant laws and guidelines of the country concerned for more detailed implementation plans for each country for each management factor.

● Publisher ASEIC (ASEM SMEs Eco-Innovation Center)

- After being established in 2011, the ASEIC seeks to promote cooperation for the sustainable growth of SMEs in the Asia and Europe (Asia-Europe Meeting).
- The Center intends to use this project to promote ESG for SMEs in the global supply chain and stabilize the supply chain in the ASEM region.



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[I] ESG Trends

[1] ESG Policy Trends

1.1 ESG Legislation for Supply Chains

- The European Union (EU) has formulated a Carbon Border Adjustment Mechanism (CBAM) to prevent carbon leakage and Corporate Sustainability Due Diligence that focuses on strengthening workers' human rights and environmental protection and is preparing specific action plans. The United States is also actively promoting a carbon border tax.
- The applicable system and laws should affect suppliers in the sphere of influence of applicable laws, including global businesses with social responsibilities. In particular, ASEAN suppliers doing business with customers exporting to the EU and the U.S. have a growing need to prepare thoroughly and manage risks in advance.

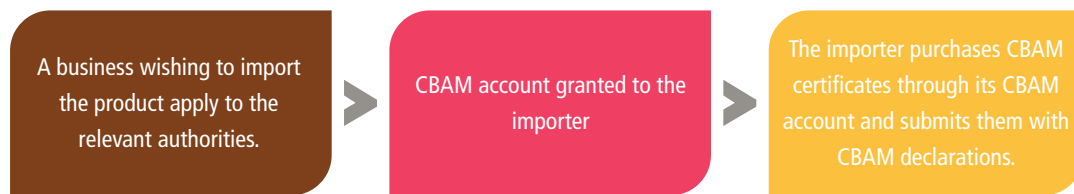
[Table 1] Key ESG Regulatory Trends

Key ESG regulatory trends	
European Union (EU)	<ul style="list-style-type: none"> • Announced the draft EU Commission Guidelines by pushing for a due diligence bill on the supply chain of enterprises (February 2022) • Announced a draft of the Carbon Border Adjustment Mechanism (CBAM) via Fit for 55 Package and the ban on sales of internal combustion engine vehicles from 2035 within the year (July 2021) <ul style="list-style-type: none"> - CBAM to proceed with final negotiations in the second half of the year after the European Parliament amendment vote (May 2022) • Announced a green battery regulation plan (December 2020) • Enforced the Sustainable Financial Disclosure Regulation (SDFR) for European financial institutions. (March 2021) <ul style="list-style-type: none"> - Requires financial institutions to disclose sustainability at the corporate level and non-financial information at the product level to investors • Established the criteria for determining businesses' green economy activities through the EU taxonomy regulations (2020) <ul style="list-style-type: none"> - Passed a mandate bill recognizing eco-friendly economic activities related to nuclear power and natural gas (July 2022) • Implemented the Corporate Sustainability Reporting Directive (2017) <ul style="list-style-type: none"> - Mandatory disclosure of social and environmental impacts of large businesses in the EU through non-financial statements * Proposed amendments to broaden the scope of application (April 2021)
United States (U.S.)	<ul style="list-style-type: none"> • The U.S. declared carbon neutrality by 2050 and accelerated the realization of climate pledges through executive orders (April 2021) <ul style="list-style-type: none"> - Cancellation of Keystone pipeline construction permits, suspension of new permits for oil and natural gas drilling, and suspension of direct federal government fossil fuel subsidies (February 2021, Executive Order) - 50% of new cars sold by 2030 to be zero-emission vehicles (ZEV) (August 2021, Executive Order) • Announced an official review plan for the introduction of CBAM (2021 USTR Trade Agenda) • The Securities and Exchange Commission (SEC) is preparing Climate-Disclosure Rules (currently voluntarily selected by businesses). • The Senate passed a ban on imports of Xinjiang products from China (July 2021). • Possible FTA modeled after USMCA with strengthened labor provisions • Nasdaq submitted a proposal to the SEC to mandate the diversity of directors of publicly listed companies (October 2020).

• EU, CBAM (Carbon Border Adjustment Mechanism)

- CBAM is one of the core laws of Fit For 55 prepared by the EU to prevent carbon leakage and qualify for a 55% reduction in greenhouse gas (GHG) emissions (base year: 1990, target year: 2030).
- Measures to collect carbon emissions included in products imported into the EU by imposing a carbon price linked to the EU Emissions Trading Scheme (EU-ETS) (announced the draft on July 4, 2021, adopted the amendment on June 22, 2022)
- To be fully introduced in 2027 after pilot application between 2023 and 2026. Regulated items include steel, aluminum, fertilizer, cement, electricity, organic chemicals, plastics, hydrogen, and ammonia
- When the Act takes effect, importers must purchase certificates (emission rights) according to the amount of carbon emitted when producing imported goods and submit them to the competent authorities.
 - Importers shall purchase CBAM certificates corresponding to products' carbon emissions through the CBAM register by May 31 every year and submit them with CBAM declarations.

[Table 2] CBAM Declarations Submission Process



- The product information that must be included in CBAM declarations and certificates is as follows and consists of both direct emissions (Scope 1) and indirect emissions (Scope 2). Furthermore, it is proposed to include the upstream products (raw materials and parts).

[Table 3] CBAM Report Details

	Report details
CBAM report	<ul style="list-style-type: none"> • Total amounts of each product for each factory that produces the product • Actual carbon emissions of each product • Indirect real carbon emissions of each product • Carbon price imposed at the country of origin of imported goods

1) A phenomenon in which businesses move from countries with stricter carbon emission regulations to countries with looser carbon emissions to lower related taxes and costs instead of reducing their carbon emissions

• EU Disclosed the Directive on Corporate Sustainability Due Diligence (February 23, 2022)

- The EU is promoting the Directive on Corporate Sustainability Due Diligence to internalize sustainable production methods into business activities.

[Table 4] Highlights of the EU Directive on Corporate Sustainability Due Diligence

Countries	Highlights
United Kingdom (UK)	<ul style="list-style-type: none"> • Disclose policies, due diligence processes, risk management procedures, effectiveness evaluation results, and employee training to prevent forced labor in the business and its supply chain.
France	<ul style="list-style-type: none"> • Monitor human rights within the supply chain and disclose methods to prevent human rights violations.
Netherlands	<ul style="list-style-type: none"> • Submit a statement on eliminating and preventing child labor in the business and its supply chain. In case of violation, a fine of up to 10% of global sales. Imprisonment of responsible directors for up to two years when fined for two or more violations within five years.
Germany	<ul style="list-style-type: none"> • Mandatory due diligence and reporting on the product supply chain. businesses that violate human rights or do not meet the environmental reporting standards in the supply chain are fined 2% of annual sales and excluded from public procurement.

- When this system is fully implemented, it will be mandatory to investigate any human rights and environmental violations of suppliers and partners connected to the supply chain of EU exporting businesses. In case of a problem, details shall be disclosed with corrective measures.
 - Small and medium-sized enterprises (SMEs) are excluded from applying the directive but are indirectly affected in the form of partners of large businesses. In addition, EU Member States can impose fines on businesses that do business with businesses that violate supply-chain due diligence guidelines.
 - At the corporate level, ESG supply-chain management is essential in preventing risks such as business stoppage due to non-compliance with environmental regulations, production disruption and supply disruption due to human rights and labor issues, and damage to corporate image. Thus, many large global businesses declare to strengthen ESG supply-chain management.
- Therefore, for SMEs, responsible supply chain management that values human rights and the environment is an essential task for sustainable business, and it is necessary to establish a business-wide transparent supply chain response strategy.

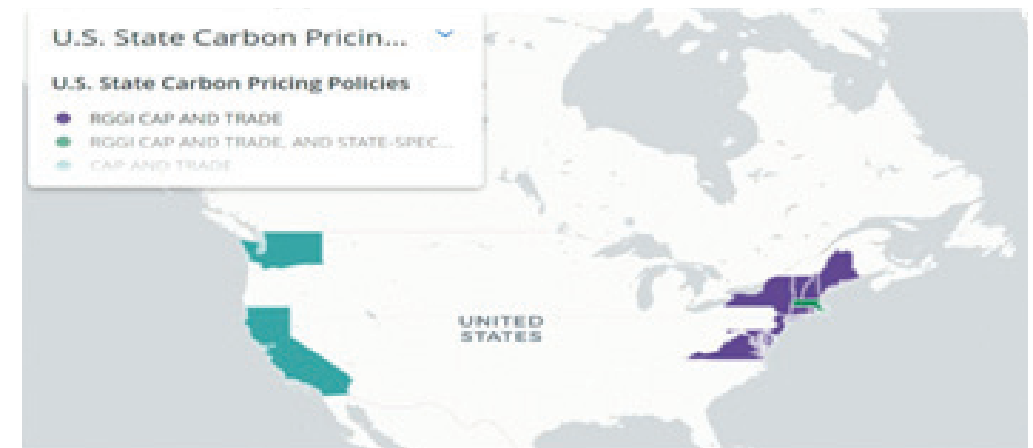
[Table 5] Acts on Supply Chain Due Diligence in Major Countries

Countries	Title of Act	Year of enforcement
European Union (E.U.)	Act on Corporate Governance and Supply Chain Due Diligence	2024
Germany	Act on Corporate Due Diligence	2023
United Kingdom (UK)	UK Modern Slavery Act	2015
France	Corporate Duty of Vigilance Law	2017
Netherlands	Child Labor Due Diligence	2022
United States (U.S.)	Slave-Free Business Certification Act	Proposed in 2020
California	California Transparency in Supply Chains Act	2012

The U.S. Reviews the Introduction of Carbon Border Taxes

- While the introduction of carbon border taxes is under consideration in the United States, President Joe Biden strongly supports introducing a carbon border tax, emphasizing renewable energy expansion and efficiency improvement.
- To date, there is no bill related to carbon border taxes at the federal level of the United States; only state-level legislation exists. California and Washington states operate a carbon emission trading system, and there is also a Regional Greenhouse Gas Initiative participated by 11 northeastern states.

[Figure 1] U.S. State Carbon Pricing Policies



Source: Center for Climate and Energy Solutions

- Many developed countries consider introducing a carbon border tax essential to protect domestic businesses from growing cost burdens due to carbon emission reductions. This move is expected to impact other countries directly, and the number of countries introducing carbon border tax should further expand in the future.

1.2 Mandatory Global ESG Disclosure

- The mandatory disclosure of ESG-related non-financial information is being legislated, especially in the EU. Recently, the United States also announced a public disclosure regulation related to climate.
 - The EU announced the draft 'EU Sustainability Reporting Standard (ESRS)', which is the core of the Corporate Sustainability Reporting Directive (CSRD) (April 2022).
 - The United States announced a new regulation, 'Regulation S-K and S-X', which expands climate change disclosures to all publicly listed companies (March 2022).

Both countries require Scope 3 management in line with the goals of managing suppliers' GHGs

- In other words, it suggests a need to establish a preemptive plan to respond to requests for disclosing GHG information from customers

[Table 6] Global State of Mandatory ESG Disclosures

Countries	Title of Act																													
European Union (EU) Corporate Sustainability Reporting Standard (ESRS)	<ul style="list-style-type: none"> (Applicable period) Phased mandatory application from 2024 Proposes two common standards and 11 sub-subject ESG standards Presents Scope 3 as a mandatory disclosure requirement <div style="text-align: center;"> <p>[Final ESRS Structure]</p> <table border="1"> <thead> <tr> <th rowspan="2">Common standards</th> <th colspan="3">Standards for each category</th> </tr> <tr> <th>Environmental (E)</th> <th>Social (S)</th> <th>Governance (G)</th> </tr> </thead> <tbody> <tr> <td>ESRS 1 General Principles</td> <td>ESRS E1 Climate Change</td> <td>ESRS S1 Own Workforce</td> <td>ESRS G1 Governance, Risk Management and Internal Control</td> </tr> <tr> <td>ESRS 2 Disclosure Requirements for General Strategy, Governance and Materiality Assessment</td> <td>ESRS E2 Pollution</td> <td>ESRS S2 Workers in the Value Chain</td> <td></td> </tr> <tr> <td></td> <td>ESRS E3 Water and Marine Resources</td> <td>ESRS S3 Affected Communities</td> <td></td> </tr> <tr> <td></td> <td>ESRS E4 Biodiversity and Ecosystems</td> <td>ESRS S4 Consumers and End-users</td> <td></td> </tr> <tr> <td></td> <td>ESRS E5 Resource Use and Circular Economy</td> <td></td> <td></td> </tr> </tbody> </table> <p>[Figure 2] Structure of the ESRS</p> </div>	Common standards	Standards for each category			Environmental (E)	Social (S)	Governance (G)	ESRS 1 General Principles	ESRS E1 Climate Change	ESRS S1 Own Workforce	ESRS G1 Governance, Risk Management and Internal Control	ESRS 2 Disclosure Requirements for General Strategy, Governance and Materiality Assessment	ESRS E2 Pollution	ESRS S2 Workers in the Value Chain			ESRS E3 Water and Marine Resources	ESRS S3 Affected Communities			ESRS E4 Biodiversity and Ecosystems	ESRS S4 Consumers and End-users			ESRS E5 Resource Use and Circular Economy				
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United States (U.S.) Regulation S-K and S-X, Climate Disclosure Rule Amendment	<ul style="list-style-type: none"> (Applicable period) Phased introduction for different business sizes from 2023 when finalized The primary objectives are investor protection and climate-focused (TCFD-based) disclosure The proposed rule includes GHG emissions from Scope 3* <p>* Where Scope 3 is included in or material to the reduction target</p> <table border="1"> <thead> <tr> <th rowspan="2">Type</th> <th colspan="2">Disclosure schedule</th> <th colspan="2">Timing of disclosure compliance for Scope 1 and Scope 2 GHGs</th> </tr> <tr> <th>Scope 1&2</th> <th>Scope 3</th> <th>Limited assurance</th> <th>Reasonable assurance</th> </tr> </thead> <tbody> <tr> <td>Listed large companies</td> <td>Information for fiscal year 2023 (Disclosure to be filed in 2024)</td> <td>Information for fiscal year 2024 (Disclosure to be filed in 2025)</td> <td>Information for fiscal year 2024 (Disclosure to be filed in 2025)</td> <td>Information for fiscal year 2026 (Disclosure to be filed in 2027)</td> </tr> <tr> <td>Listed medium-sized companies</td> <td>Information for fiscal year 2024 (Disclosure to be filed in 2025)</td> <td>Information for fiscal year 2025 (Disclosure to be filed in 2026)</td> <td>Information for fiscal year 2025 (Disclosure to be filed in 2026)</td> <td>Information for fiscal year 2027 (Disclosure to be filed in 2028)</td> </tr> <tr> <td>Listed small companies</td> <td>Information for fiscal year 2024 (Disclosure to be filed in 2025)</td> <td>Information for fiscal year 2025 (Disclosure to be filed in 2026)</td> <td>Exempted</td> <td>Exempted</td> </tr> <tr> <td>Smaller reporting companies</td> <td>Information for fiscal year 2025 (Disclosure to be filed in 2026)</td> <td>Exempted</td> <td>Exempted</td> <td>Exempted</td> </tr> </tbody> </table> <p>[Figure 3] Climate Disclosure Rule Amendments in the United States</p>	Type	Disclosure schedule		Timing of disclosure compliance for Scope 1 and Scope 2 GHGs		Scope 1&2	Scope 3	Limited assurance	Reasonable assurance	Listed large companies	Information for fiscal year 2023 (Disclosure to be filed in 2024)	Information for fiscal year 2024 (Disclosure to be filed in 2025)	Information for fiscal year 2024 (Disclosure to be filed in 2025)	Information for fiscal year 2026 (Disclosure to be filed in 2027)	Listed medium-sized companies	Information for fiscal year 2024 (Disclosure to be filed in 2025)	Information for fiscal year 2025 (Disclosure to be filed in 2026)	Information for fiscal year 2025 (Disclosure to be filed in 2026)	Information for fiscal year 2027 (Disclosure to be filed in 2028)	Listed small companies	Information for fiscal year 2024 (Disclosure to be filed in 2025)	Information for fiscal year 2025 (Disclosure to be filed in 2026)	Exempted	Exempted	Smaller reporting companies	Information for fiscal year 2025 (Disclosure to be filed in 2026)	Exempted	Exempted	Exempted
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(IFRS) Disclosure standards of the International Sustainability Standards Board (ISSB)	<ul style="list-style-type: none"> (Applicable period) To finalize the final draft at the end of 2022 with different timing of introduction for each country. Sustainability-related financial information is based on SASB Standards, and climate-related financial information is based on TCFD. 																													

[2] ESG Trends in ASEAN Countries

- Global customers are strengthening ESG standards for their suppliers to comply with the relevant laws and regulations, affecting the ESG activities of ASEAN businesses. In addition, consumers and employees are demanding more ESG action from businesses.
- ASEAN governments are preparing their systems such as establishing ESG standards or announcing growth strategies. Also, leading businesses build their in-house ESG management systems to respond to customers' needs.
- As a result of the 2021 analysis of the Carbon Disclosure Project (CDP), ESG disclosures in the Asia Pacific region increased by 20% compared to 2019. This result implies that businesses react sensitively to the external environment by reporting ESG issues in their business strategies, such as climate change.
- The table below summarizes ESG responses by major ASEAN countries

[Table 7] ESG Responses by Major ASEAN Countries

Countries	Highlights
Thailand	<ul style="list-style-type: none"> Counted as a leading country in corporate sustainability in South Asia region Increased responsibility for corporate environmental protection based on the revised Environmental Protection Act Publishes the Thailand Sustainable Investments (THSI) List* to encourage businesses to adopt corporate sustainability strategies <ul style="list-style-type: none"> * Listed businesses that have met ESG requirements The Thailand Stock Exchange prepares ESG-related systems in Thailand, which operate and evaluate indexes <ul style="list-style-type: none"> Publicly-listed companies that met ESG requirements (Thailand Sustainability Investment, THSI) to encourage businesses to adopt ESG (2015). The number of businesses registered for sustainability reports on the Thailand Stock Exchange increased every year (51 in 2015 → 124 in 2020 [69% of the market capitalization of publicly listed companies]) Reinforced tendency of consumers toward value consumption
Vietnam	<ul style="list-style-type: none"> The Environmental Protection Act (revised in 2022) lays the groundwork for a circular economy transition and increases corporate responsibility for environmental reporting. <ul style="list-style-type: none"> Clarifies and prepares detailed regulations for projects subject to Environmental Impact Assessment (EIA) based on the revised law. Specifies environmental protection regulations for production and manufacturing facilities and expands EPR (Extended Producer Responsibility) obligations. Manufacturing businesses need to establish an environmental management system that meets the regulations of TCVN ISO 14001 or international standard ISO 14001. Plans to respond to climate change and concrete national roadmap for carbon reduction <ul style="list-style-type: none"> Scale, level of resource use, environmental sensitivity, etc. For manufacturing businesses in six fields, including batteries, electric and electronic products, and automobiles








Countries	Highlights
Indonesia	<ul style="list-style-type: none"> • Pledged its commitment to carbon neutrality in April 2021 • Only allows electric vehicles to launch new vehicles to reduce carbon emissions. • Indonesia joins the IDX (Indonesia Stock Exchange) and the UN-led Sustainable Stock Exchange Initiative (SSE) <ul style="list-style-type: none"> - Development of ESG Leaders Index using the scores of the top 30 publicly listed companies as a result of ESG evaluation (stock exchange, 2020) - All listed companies are required to submit their sustainability reports from 2020. • Cooperation with Japan for hydrogen, ammonia, and CCS technology research for clean energy conversion <ul style="list-style-type: none"> - Involvement of most of Indonesia's major businesses in the financial, infrastructure, consumer goods, and industrial sectors
Malaysia	<ul style="list-style-type: none"> • Emphasizes ESG factors, including green growth through the 12th plan (2021-2025). • Plans to introduce carbon taxes and carbon pricing system to achieve carbon neutrality by 2050. • Prohibition of construction of coal-fired power plants and expansion of alternative energy (31% by 2025) • Establishes guidelines to manage economic, environmental and social (EES) risks and opportunities in business reports • Increased corporate responsibility for environmental protection based on the revised Environmental Protection Act <ul style="list-style-type: none"> - Carbon neutrality, expansion of energy sustainability, water sector reform, etc.
Singapore	<ul style="list-style-type: none"> • Announced 'Green Plan* 2030' as an agenda to respond to climate change and promote sustainable national development (2021) <ul style="list-style-type: none"> * Green Plan 2030: Aiming for sustainable growth while fulfilling the United Nations' Sustainable Development Goals (SDGs) and commitments to the Paris Climate Agreement • Moody's ESG assessment results include Singapore among Tier 1 (11) countries (2021)
Philippines	<ul style="list-style-type: none"> • Mandatory non-financial disclosures and sustainability reports through the Sustainability Reporting Guidelines for Publicly-Listed Companies (Securities and Exchange Commission, 2019) (penalties for incomplete reports)

[3] The Significance of ESG for Businesses

• Customers' Demand for ESG Management

- As an expectation level on corporate sustainability is increasing globally, customers tend to incorporating ESG management in various aspects. In this regard, the buyers in global supply chain today would like to manage and minimize any possible risks that may occur in their production.
- Some businesses set supply chain selection criteria and establish policies to limit transactions with suppliers who do not practice ESG management. (Some fall out of the supply chain because they do not meet ESG requirements)

[Table 8] Examples of Supply Chain ESG Requirements of Major Companies

Categories	Companies	Requirements
Environmental		<ul style="list-style-type: none"> • Requires supplied parts to be manufactured with renewable energy • Operates a clean energy program for suppliers
		<ul style="list-style-type: none"> • 100% through self-equipment and certificate purchase • Requires renewable power procurement
		<ul style="list-style-type: none"> • Requires suppliers to participate in eco-friendly business
Society		<ul style="list-style-type: none"> • Announced plans to develop cobalt-free batteries • Aims to be cobalt-free when making nickel batteries
		<ul style="list-style-type: none"> • Issued a human rights statement and requested suppliers to comply • Wage level, freedom of association, non-discrimination, and more
Governance		<ul style="list-style-type: none"> • Continues biennial diversity surveys until 2026 • Plans to invest USD 20 million annually in development funds to enhance diversity over the next five years
		<ul style="list-style-type: none"> • Increases the share of women and minorities in executive positions • Aligns diversity performance goals with executive bonuses
		<ul style="list-style-type: none"> • Sets targets for recruiting Afro-Americans and minorities • Links achievement of such targets with executive compensation

● Incorporation of ESG in Credit Rating

- Overseas credit rating agencies reflect ESG evaluation results in their credit ratings. The global practice of incorporating ESG factors into credit ratings is also affecting investors.
 - Fitch and Moody's Investors Service evaluate ESG ratings on a scale of one to five and S&P on a scale of 0 to 100.
- Investors have recently demanded to revisit ESG management of financial institutions and other businesses in business relationships instead of only focusing on internal ESG management.
 - DBS, Singapore: Suggests loan standards reflecting ESG requirements
 - ING: Considers ESG for loan approval. The more transactions with businesses that meet ESG standards, the lower the interest rate
- This social trend suggests that ESG management affects businesses beyond financial risk and even credit risk, indicating the increased significance of ESG management.

[II] Action Guide for Each ESG Management Factor

[1] ESG Management Factors

● Checklist for self-management of each ESG management factor of SMEs

- In the wave of ESG management, the number of organizations conducting consultation, verification, and rating sharply increases. Accordingly, the analysis indexes for ESG ratings have been diversified, resulting in a wide range of topics to be addressed concerning ESG management.

[Table 9] Major ESG Advisory/Verification/Rating Firms

Name of the firms
Bloomberg, Robeco, Sustainalytics Risk, Financial Times Stock Exchange Group (FTSE), Carbon Disclosure Project (CDP), Morgan Stanley Capital International (MSCI), Standard and Poor's (S&P), Sustainalytics, Refinitive, Institutional Shareholder Services (ISS), British Standards Institution (BSI), Det Norske Veritas (DNV), and more

Source: Money S News, https://m.moneys.mt.co.kr/article.html?no=2021081309138053977#_eniple, August 16, 2021

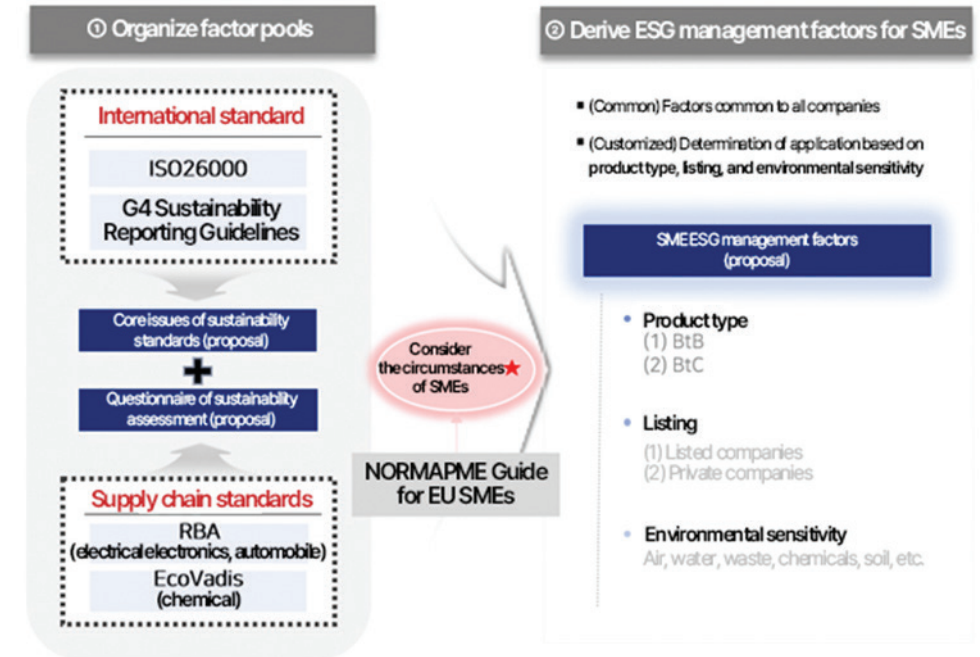
- Among these various indexes, before promoting ESG management, SMEs must identify their management situation and ESG execution capabilities for practical risk and opportunity management by area, identify stakeholder requirements, and set their own effective action plans.
- Accordingly, this Guide presents 'ESG management factors' as a scope to be considered in promoting ESG management so that ASEAN SMEs can identify their current status and independently set management factors.
- The ESG management factors were derived mainly through three steps: ① composition of index pools, ② derivation of ESG management factors for SMEs, and ③ comparison of ESG questionnaires from ESG rating institutes.

[Table 10] Three Steps to Derive ESG Management Factors

① Composition of index pools	<ul style="list-style-type: none"> • Define the scope of ESG management by establishing a pool based on ESG-related standards and supply chain initiatives for diagnosis and analysis index for ESG rating
② Derivation of ESG management factors for SMEs	<ul style="list-style-type: none"> • Among the factors pools, consider elements such as the size of SMEs to derive questionnaires of high importance or need for management.
③ Comparison of ESG questionnaires from ESG rating institutes	<ul style="list-style-type: none"> • Check and supplement the reality and application effectiveness by comparing the standards used by financial institutions, prime contractors, and third-party ESG rating institutes to evaluate SMEs.

- When considering SMEs conditions, this Guide referred to Normapme's Guide and the current status and feedback of businesses that conducted consulting in 2021 and 2022.
- The derived factors define the ESG management scope as the matters repeatedly mentioned in international standards and initiatives and analysis index for ESG ratings. In addition to the **factors commonly applied to all businesses**, the **applicability is decided based on the business's customer type, listing, and environmental sensitivity**.
- Therefore, each SME can adjust the management direction by factors through priorities according to business characteristics such as its business characteristics and current regulations.

[Figure 4] Approach Methodology for Deriving SME ESG Management Factors



- 'SME ESG management factors' consist of a total of 38 questionnaires, which are divided into 19 environmental, 10 social, and 9 governance categories for the three aspects of Environment (E), Society (S), and Governance (G). S (Society) and G (Governance) categories were minimized, considering **SMEs' characteristics and its management efficiency**.
 - (E) questionnaires are relatively subdivided (5 sub-categories, 19 factors) compared to other categories. Some factors do not apply depending on the type of pollutant medium emitted by industry or workplaces.
 - (S) questionnaires consist of four sub-categories and ten factors, and three sub-categories and nine factors for (G) questionnaires.
- Management factors are composed of **core factors (24 factors)** commonly required regardless of industry or size and **additional factors (14 factors)** that can be flexibly managed depending on each business's unique circumstances.
- Reflecting that management factors differ depending on product type, listing, and supply chain positioning, additional required factors (9 factors) for listed and BtoC companies are marked separately with *.
 - BtoC companies whose business targets are customers should additionally consider six factors related to consumers, such as product environment and consumer issues, in the environmental (E) and social (S) categories.
 - Listed businesses should additionally consider three factors of governance (G) categories: board operation, compliance management, and information disclosure.

[Table 11] Structure of 'SME ESG Management Factors'

Type	Mark	Definition
Core factors	●	<ul style="list-style-type: none"> Factors required by most international standards such as ISO, GRI, and EU Normapme and supply chain standards such as RBA and EcoVadis Essential and common factors to be managed regardless of industry and business size
Additional factors	○	<ul style="list-style-type: none"> Factors required by about 50% of international standards such as ISO, GRI, EU Normapme and supply chain standards such as RBA and EcoVadis Flexible management depending on the individual circumstances of the business, such as industry, business size, and conditions
Conditional factors	●* or ○*	<ul style="list-style-type: none"> Management factors applied depending on customer types (business model), listing, etc.

● SME ESG Management Factors

● core factors, ○ additional factors, *conditional factors (for BtoC, publicly listed companies, etc.)

Category	Sub-categories	Factors	Checklist	Type
Environmental	Environmental Management	Environmental Strategy	Does the business have environmental management goals and detailed implementation plans?	●
		Management System	Does the business promote an internal performance management program for environmental management?	○
		Certifications	Does the business secure or prepare for certifications regarding the workplace environmental management system (e.g., ISO 14001)?	○
		Compliance System	Does the business have a systematic management system for compliance with environmental laws and regulations?	●
	Pollution Prevention and Control	Air	Does the business manage air pollutants (e.g., NOx, SOx, dust), including identification and management of emissions and reduction programs?	●
		Water	Does the business manage water pollutants (identification and management of discharge such as BOD, COD/TOC, SS, T-P, and T-N, reduction programs)?	●
		Waste	Does the business manage waste within the workplace (e.g., general/designated/construction waste generation and landfill/incineration/recycling/other treatment, source reduction program, recycling promotion)?	●
		Chemical Substances	Does the business have chemical management (e.g., identification and management of emissions, reduction programs)?	●
		Other Environmental Aspects (Land, Ocean, Noise/Vibration, etc)	Does the business carry out activities to prevent and reduce other environmental pollution such as soil/groundwater, marine pollution, noise, and vibration?	○
	Resource Reduction	Accident Prevention	Does the business have a program to prevent environmental pollution accidents and an emergency response procedure in case of an accident?	●
		Raw Materials	Does the business carry out activities to manage and reduce the amount of raw materials (e.g., use of recycled materials)?	●
	Energy/ Greenhouse Gas	Water Resources	Does the business carry out activities to manage and reduce water usage (e.g., reuse) within the workplace?	●
		Energy Efficiency	Does the business carry out activities for energy consumption management (direct energy/indirect energy consumption) and reduction (high-efficiency facilities, energy management system)?	●

Category	Sub-categories	Factors	Checklist	Type	
		Renewable Energy	Does the business use (purchase or produce) renewable energy such as solar, wind, and geothermal energy within the workplace?	○	
		Greenhouse Gas	Does the business carry out GHG management (direct/indirect emission calculation, management, reporting) and reduction activities?	●	
	Production Innovation	Green Investment	Does the business make efforts to secure R&D investment and technology to secure the environmental competitiveness of its products?	○	
		Ecodesign	When designing a product, does the business consider the environmental impact of the entire production process, such as transportation, use, and disposal?	○*	
		Ecolabel/Eco-certification	Does the business secure or prepare for eco-friendly certification (eco-label, good recycling (GR), low-carbon certification, green technology, new environmental technology) for products/technology?	○*	
		Consumer Protection	Does the business prepare and implement measures (risk assessment, use of alternative substances, risk notification) for consumer health and safety protection when using the product?	○*	
	Environmental	Human Rights and Labor Practices	Labor Practices	Does the company encourage legal and reasonable working hours and provide industry-average welfare benefits (parental leave, expanded opportunities for self-development)?	●
			Bar on Any Forms of Forced or Child Labour	Does the company prohibit forced/child labor in the organization's employment practices?	●
Diversity and Equal Opportunities			Does the company provide equal opportunities to its employees in terms of employment, promotion, and job performance without discrimination based on gender, disability, or country of origin?	●	
Ban on Harassment in the Workplace			Does the company have in-business rules to prevent harassment, such as violence against workers, sexual violence, public shame, and verbal abuse, and are disciplinary actions taken in case of violation?	●	
Health & Safety		Accident Prevention in the Workplace	Does the company manage the annual accident rate and operate worker safety/health policies and programs (safety and health education, workplace risk assessment) to prevent industrial accidents?	●	
		Certifications	Does the company secure or prepare safety and health management certification (ISO 45001) for the workplace or products (technologies)?	○	
Consumer Policy		Protection of Personal Information	Does the company have in-house personal information security regulations and guidelines that comply with information security legal requirements for collection, storage, and processing?	●*	
		Product Quality and Safety	Does the company strictly comply with product safety and quality standards to protect consumer safety and rights?	●*	

Category	Sub-categories	Factors	Checklist	Type
	Social Responsibility	Voice of the Consumer	Does the company have a communication process to collect and provide consumer feedback?	○*
		Local Community Development and Engagement	Does the company officially support community contribution and development and carry out related activities (establishment of contribution policy, industry-university cooperation, start-up support)?	○
Governance	Management System	Executive Leadership	Does the company's executive management commit to practicing ESG management?	●
		Organizational Structure	Does the company have a dedicated organization and decision-making process for the business's ESG management implementation?	○
		Board of Directors	Does the company organize and regularly operate a board of directors that identifies and manages ESG opportunities and risk factors?	○*
		Compliance Management	Does the company have an organization and procedures to monitor ESG-related regulatory trends and manage risks?	●*
		Ethics Management	Does the company establish and implement ethical management policies such as anti-corruption and fair competition?	●
	Communication	Information Disclosure	Does the company have a systematic and consistent information disclosure system to respond to stakeholders' requests for ESG information disclosure?	●*
		Internal Communications	Does the company introduce regulations for confidentiality, grievance handling, and prohibition of discrimination and retaliation for internal employees when ESG-related issues arise?	○
	Supply Chain Management	Supply Chain Management > Environmental Side	Does the company establish supply chain environmental management and carry out related activities for management?	●
Supply Chain Management > Social Side		Does the company apply fair competition as a principle when selecting suppliers, and apply the protection of workers' human rights and application of ethical management as selection criteria?	●	

※ (Shaded in blue) Factors should be applied depending on the types of pollutants emitted depending on the characteristics of the business type and workplace.

[Table 12] Comparison of ESG-related International Standards/Initiatives and Analysis Indexes for ESG rating of SME ESG Management Factors

Category	Factors	ISO 26000	GRI	Normapme	RBA	EcoVadis
Environmental	Strategy	●	●	●	●	●
	System	●	●			●
	Certification					●
	Compliance		●		●	●
	Air	●	●	●	●	●
	Water Quality	●	●	●	●	●
	Waste	●	●	●	●	●
	Chemical Substances	●		●	●	●
	Others					●
	Accident Prevention	●	●		●	●
	Raw Materials	●	●	●	●	●
	Water Resources	●	●	●	●	●
	Energy Saving	●	●	●		●
	Renewable Energy	●	●	●	●	●
	Greenhouse Gas	●	●	●	●	●
	Technology Investment	●	●	●	●	●
	Eco-friendly Design	●	●		●	●
	Product/Technology Certification	●	●	●	●	●
Consumer Protection					●	
Social	Working Conditions	●	●	●	●	●
	Forced Labor / Child Labor	●	●	●		
	Diversity / Equal Opportunity	●		●	●	
	Prohibition of Harassment in the Workplace	●	●	●		
	Industrial Accident Prevention	●	●		●	●
	Certification	●	●		●	●
	Personal Information Protection		●		●	
	Product Safety and Quality	●	●	●	●	
	Collection of Consumer Opinions	●	●	●	●	●
Community Development and Engagement		●		●	●	
Governance	CEO's Commitment	●		●	●	
	Organization / System	●	●	●	●	●
	Board of Directors	●	●	●	●	●
	Compliance Management	●	●	●	●	
	Ethical Management	●	●	●	●	●
	Disclosure		●		●	●
	Internal Communication	●		●	●	
	Environment	●	●	●	●	●
Society	●	●	●	●	●	

[2] Action Guide for Each ESG Management Factor

I. Environmental

● Management factors for each category

● core factors, ○ additional factors, * Conditional factors (for BtoC, publicly listed companies, etc.)

Management factor	Checklist	Type
Environmental Strategy	Does the business have environmental management goals and detailed implementation plans?	●
Management System	Does the business promote an internal performance management program for environmental management?	○
Certifications	Does the business secure or prepare for certifications regarding the workplace environmental management system (e.g., ISO 14001)?	○
Compliance System	Does the business have a systematic management system for compliance with environmental laws and regulations?	●
Air	Does the business manage air pollutants (e.g., NOx, SOx, dust), including identification and management of emissions and reduction programs?	●
Water	Does the business manage water pollutants (identification and management of discharge such as BOD, COD/TOC, SS, T-P, and T-N, reduction programs)?	●
Waste	Does the business manage waste within the workplace (e.g., general/designated/construction waste generation and landfill/incineration/recycling/other treatment, source reduction program, recycling promotion)?	●
Chemical Substances	Does the business have chemical management (e.g., identification and management of emissions, reduction programs)?	●
Other Environmental Aspects (Land, Ocean, Noise/Vibration, etc)	Does the business carry out activities to prevent and reduce other environmental pollution such as soil/groundwater, marine pollution, noise, and vibration?	○
Accident Prevention	Does the business have a program to prevent environmental pollution accidents and an emergency response procedure in case of an accident?	●
Raw Materials	Does the business carry out activities to manage and reduce the amount of raw materials (e.g., use of recycled materials)?	●
Water Resources	Does the business carry out activities to manage and reduce water usage (e.g., reuse) within the workplace?	●
Energy Efficiency	Does the business carry out activities for energy consumption management (direct energy/indirect energy consumption) and reduction (high-efficiency facilities, energy management system)?	●
Renewable Energy	Does the business use (purchase or produce) renewable energy such as solar, wind, and geothermal energy within the workplace?	○
Greenhouse Gas	Does the business carry out GHG management (direct/indirect emission calculation, management, reporting) and reduction activities?	●

Management factor	Checklist	Type
Green Investment	Does the business make efforts to secure R&D investment and technology to secure the environmental competitiveness of its products?	○
Ecodesign	When designing a product, does the business consider the environmental impact of the entire production process, such as transportation, use, and disposal?	○*
Ecolabel/ Eco-Certification	Does the business secure or prepare for eco-friendly certification (eco-label, good recycling (GR), low-carbon certification, green technology, new environmental technology) for products/technology?	○*
Consumer Protection	Does the business prepare and implement measures (risk assessment, use of alternative substances, risk notification) for consumer health and safety protection when using the product?	○*

*Items shaded in blue are applied only to the types of pollutants emitted depending on the characteristics of the business type and workplace (e.g., type of business).

- Since the COVID-19 pandemic, the importance of environmental, health, and safety management has been greatly highlighted, and **interest in the environment has grown** worldwide as the impact of ecosystem destruction caused by climate change is witnessed in real life.
 - The 2020 Global Risk Report released by the World Economic Forum (WEF) listed environmental issues as the top five factors that will threaten the world over the next ten years. Accordingly, environmental issues should be addressed first and foremost.
- The Federation of Korean Industries surveyed the importance of ESG in the global market targeting the heads of research centers of 15 securities businesses that respond most quickly to business direction and performance. As a result, the response that the environment is the most important was the highest at 60%.
 - Among the environmental fields, **climate change and carbon emissions** (26.7%) are the most important topics. As carbon neutrality is considered one of the solutions to climate change, the pressure for low-carbon and decarbonization intensifies.
 - In April 2021, at the Climate Summit attended by 40 countries, each country, including the United States, announced plans to strengthen GHGs reduction. As a result, Korea also significantly raised its 2030 reduction target to 40% compared to 2018.
- In the future, as **environmental regulations and stakeholder demands for SMEs will continue to be strengthened**, environmental management is no longer an option but a necessity, and businesses will have to establish environmental management strategies to survive.

E -1 Environmental Management ▶ Environmental Strategy

Management factor	Does the business have environmental management goals and detailed implementation plans?	Factor type
	▶ Set targets for implementing environmental management, and manage detailed action plans to achieve the goals.	●

Significance

∴ **Environmental management goals are milestones that indicate the actions a business should take. A detailed implementation plan is a specific means of execution to achieve the goal, and businesses should set clear targets and plans to maximize the efficiency of environmental management.**

- The implementation plan is a detailed specification of the matters specified in the environmental management policy and provides specific plans for the direction of action to be implemented to achieve the goal, guiding the organization to take action.
- As ESG disclosure is emerging as an essential element among ASEAN countries, it is vital to set specific targets and directions for ESG implementation.
 - The Securities and Exchange Commission of Thailand published the 'Corporate Governance Regulations' in 2017, suggesting that "business should ensure sustainability reporting using a framework that conforms to domestic and international disclosure standards"
 - Also, in 2019, the Securities and Exchange Commission of the Philippines published the 'Sustainability Reporting Guidelines for Publicly-Listed Companies' and made it mandatory for all listed companies to submit both a sustainability report and an annual report. In particular, fines are imposed for incomplete reports
- Specific goals and detailed initiatives enable development in a consistent direction and help businesses implement efficient ESG management

Implementation

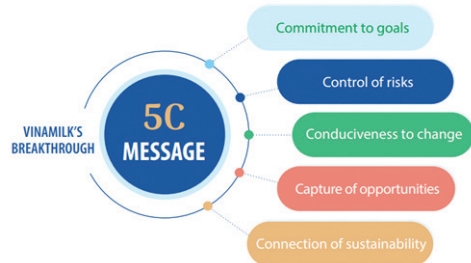
∴ **Identify risk and opportunity factors that affect the environment and set quantitative and qualitative targets in connection with detailed action plans.**

- Clearly recognize the business's current status when setting goals and set priorities to promote environmental management that considers mid- to long-term sustainability and economic, social, and environmental aspects.
 - Analyze environmental management-related laws and major issues (e.g., key environmental aspects of the business, technological feasibility, economic feasibility, changes in business requirements and market environment, stakeholder demands) in each country and set targets based on materiality assessment.
- Align detailed initiatives with business-wide environmental goals. Present specific action plans that include an organization-wide action plan, such as a workforce plan, facility investment plan, and financing plan for environmental improvements.
 - All detailed initiatives should include SMART elements, which means they should be Specific, Measurable, Agreed upon by members of the business, Reasonable, and Time-bound.

- Document the environmental management goals and detailed implementation plans and publicize them throughout the organization. Then, disclose them along with the implementation results through the website.

Case 1 | Vietnam Vinamilk Sustainable Development Report

[Figure 5] 5C Messages by Vinamilk



[Figure 6] Core Values by Vinamilk



[Figure 7] Sustainable Development Strategy by Vinamilk



Source: 2021 Sustainable Development Report of Vinamilk

Note (source)

- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

E-2 Environmental Management ▶ Management System

Management factor	Does the business promote an internal performance management program for environmental management?	Factor type	
	▶ Develop a management system that can continuously monitor the environmental performance, set an environmental performance analysis index for ESG rating (KPI, key performance index), and manage it systematically.		○

Significance

- Performance management effectively and systematically manages various resources to achieve organizational performance goals. Its feasibility should be improved through linkage with the management strategy.
- Performance management develops individual and organizational capabilities. And it implements business-wide strategies by identifying how individual work influences the organization, team performance, the difference between expected and actual levels.
- The environmental performance management system is an essential tool for efficiently managing various relevant management activities of a business. This system is required in proportion to the level of environmental management.
- Most SMEs within the ASEAN region are evaluated as having weaker managerial skills and less efficient organizational practices than large firms.

Implementation

- Establish environmental performance analysis indexes for ESG rating (KPI) that meets the purpose by reflecting the environmental strategy and the characteristics and circumstances of the business, and evaluate performance regularly, such as the level of environmental management implementation, roles and responsibilities of members, and compliance with environmental laws and regulations.
- Select suitable environmental performance indexes for ESG rating based on its Key Performance Indicators (KPIs) for environmental performance through continuous interaction with the strategy establishment process. Then, revise them by reflecting corporate conditions and domestic or global related issues.
 - The performance management and strategy formulation processes are a series of processes. Tasks such as selecting indexes and setting goals for performance management should be carried out simultaneously by establishing strategies and mutually exchanging necessary information.
- Improve strategy execution through in-house communication and make balanced decisions considering performance improvement in non-financial areas. The result can be evaluated through a performance management program that considers the needs of various stakeholders.
- Determine the process of introducing a performance management system in line with the organization's level of maturity, as the system is based on accumulated knowledge and experience and cannot be built over a short period. Excessive application from the beginning may cause side effects.

Case 1 | Essential green management performance indexes (in Key Performance Indicator, KPI)

- Organizations should select green management performance indexes to measure and evaluate the degree of effective implementation of the green management system and establish, implement and maintain procedures to utilize them.

- Consider '① business characteristics that significantly impact external demands, ② compliance with domestic and international standards, and ③ effective implementation, measurement, and necessity for improvement' when selecting green management performance indexes.
- Depending on the intention and purpose of the organization, additional indexes may be considered in addition to the essential green management performance indexes.

[Table 13] Essential Performance Indexes for Green Management

Management performance indexes (MPI)	Operational performance indexes (OPI)
Ratio of setting green management goals	Energy consumption
Ratio of achieving green management goals	Energy consumption intensity
Ratio of green purchasing for MRO products	Direct GHG emissions
Ratio of green purchasing for raw materials	Direct GHG emission intensity
Ratio of green product investments	Indirect GHG emissions
Ratio of green products	Direct GHG emission intensity
Sales ratio of green products	Water consumption
Training period	Water consumption intensity
Comments and objections	Improvement rate of raw material consumption Intensity
Violation of workplace-related laws	Waste generation intensity
Violation of laws and regulations related to product supply	Waste recycling rate
Cycle of performance disclosure for green management	Air pollutant emission intensity
Ratio of green investment process	Water pollutant emission intensity
	Hazardous chemical usage intensity

Source: International Standard Management Consulting

Case 1 | Vietnam Vinamilk Sustainable Development Report

- List sustainable development issues related to Delta Thailand's sustainable development in ESG aspects according to GRI Standard

[Table 14] Sustainable Development Issues Related to Delta Thailand

WEF(World Economic Forum)'s Global Risks	Organizational level KPI (Key Performance Indicator)
<ul style="list-style-type: none"> • Climate action failure • Extreme weather events • Human-made environmental damage • Biodiversity loss and ecosystem collapse 	<ul style="list-style-type: none"> • GHG(Greenhouse Gas) intensity reduction • Renewable energy mix increment • Reduce HZ(Hazardous) waste from design stage • Hours of STEM(Science, Technology, Engineering, and Mathematics) education for both employee and community • Number of environmental violation case of recycled input material use

WEF(World Economic Forum)'s Global Risks	Organizational level KPI (Key Performance Indicator)
<ul style="list-style-type: none"> • Debt crises in large economics • Fracture of interstate relations • Collapse of a systematically industry important • Prolonged economic stagnation 	<ul style="list-style-type: none"> • Green revenue/total revenue • Customer satisfaction rate of new customer in local areas • Gain/loss in Fx rate Supplier localization
<ul style="list-style-type: none"> • Infectious disease 	<ul style="list-style-type: none"> • Number of vaccination in surrounded community, and at workplace • Number of COVID-19 fatality at workplace
<ul style="list-style-type: none"> • Severe commodity shocks Geopolitization of resources 	<ul style="list-style-type: none"> • Supplier localization • Recycled input material • Hours of OHS education for both employee and community
<ul style="list-style-type: none"> • Digital inequality failure of technology governance 	<ul style="list-style-type: none"> • Hours of STEM Education for both employee and community • Number of information breach case
<ul style="list-style-type: none"> • Collapse or lack of social security systems • Erosion of social cohesion 	<ul style="list-style-type: none"> • Direct economic value generated and distributed • Hours of innovation dissemination and volunteers
<ul style="list-style-type: none"> • Employment and livelihood crises 	<ul style="list-style-type: none"> • Employee engagement rate • Employee turnover rate • Hiring cost • Training cost

Source: 'A Better Tomorrow' Sustainable Development Report 2022 of Thailand Delta Electronics PCL.

Note (source)

- ISO 26000
- GRI G4 Standards
- EcoVadis Sustainability Assessments

E-3 Environmental Management ▶ Certifications

Management factor	Does the business secure or prepare for certifications regarding the workplace environmental management system (e.g., ISO 14001)?	Factor type	○
	▶ Ensure objectivity and reliability in corporate environmental management through domestic and international certification for eco-friendly management and systems.		

Significance

Businesses can improve environmental performance and create economic profits by systematically identifying, evaluating, and managing environmental aspects through an environmental management system.

- Certification for developing an environmental management system is an indicator that can objectively judge a business's environmental management promotion plan, environmental performance, and CEO commitment. In addition, it relieves customers or consumers of uncertainty about the business's environment.
- Certification for the environmental management system acts as a positive factor from the ESG point of view, considering that the environmental management process of the business is established in the process of preparing for acquisition.

- Third-party certification, where an independent certification body audits your practices against the requirements of the standard, gives a strong signal to your buyers, customers, suppliers and other stakeholders that you have implemented the standard properly. It also helps organizations to demonstrate that their system complies with regulatory and contractual requirements.

- In Vietnam, the amended Environmental Protection Act (Law No.72/2020/QH14), which came into force on January 1, 2022, requires manufacturing businesses to develop an environmental management system in line with the provisions of TCVN ISO 14001 or international standard ISO 14001

Implementation

Acquire environmental management system certification for the workplace, such as ISO 14001 and ISO 50001, and publicize the fact externally by posting it on the homepage.

- In addition to certification, the certification system that can objectively prove the strengthening of eco-friendly innovation capabilities applicable to all industrial fields and activities related to *eco-friendliness*, *green*, *ECO*, and *low-carbon* is equally effective.
- Businesses can use the acquired certification as objective evidence, such as commitment to environmental management and management performance, and disclose it to external stakeholders through various communication channels, such as sustainability reports and websites.

Case 1 | TH Group's quality certificates, Vietnam: Quality certificates are specified in the sustainability report.

[Figure 8] TH Group's Quality Certificates (1)

	THMF	NASU	TSM	THH	FVF	DLM	MAY	THW
ISO 9001:2015	✓	✓	✓				✓	✓
ISO 14001:2015	✓	✓	✓				✓	
ISO 17025:2005			✓					
ISO 17025:2017	✓						✓	
TCVN ISO 22000:2018	✓			✓	✓	✓		
TCVN 4158:2001	✓							
TCVN 7168:2008	✓							
TCVN 4161:2001	✓							
ISO 45001:2018	✓		✓				✓	
Organic Viet Nam	✓		✓		✓			
Hazal Certified	✓						✓	
HOP Quy	✓						✓	
FSSC 22K	✓		✓				✓	
BRC	✓							
USDA-NOP Organic	✓		✓					
EU Organic (EC No 853/2007 & EC No 897/2008)	✓		✓	✓				
Certificate of exemplary units in implementing the nationwide fire prevention and fighting movement in 2020	✓							

[Figure 9] TH Group's Quality Certificates (2)

	THMF	NASU	TSM	THH	FVF	DLM	MAY	THW
HACCP codes alimentarius	✓							
Vietgap	✓							
Global GAP IFA	✓							
Global GAP CFM	✓							
"QCVN 01-186/2017" BNNPTNT on Declaration of conformity of raw milk	✓							
"QCVN 151/2017" BNNPTNT on Declaration of conformity of mixing facilities	✓							
"Decree No. 103/2016/ND-CP on Self-declaration of safe-H1 biological safety"	✓							
Certificate of agricultural enterprise applying high technologies	✓							
CARB- P2 (Costoria Air Resources Board)	✓							
EPA	✓							
Certificate of exemplary model in food safety in 2020	✓							

Source: TH Sustainability Report 2020

Case 2 | Certificates of PT Astra International Tbk, Indonesia: Quality certificates are specified in the sustainability report

[Figure 10] Quality Certificates of PT Astra International Tbk

Sertifikasi & Akreditasi Certification & Accreditation	Institusi Institution	Berlaku Hingga Valid until
ISO 14001 ▶ Sistem Manajemen Lingkungan Environmental Management System	AJA Registrasi Singapore, BSI, LRQA, SAI Global, SGS, TÜV Rheinland, URS	2021-2024
ISO 45001 ▶ Sistem Manajemen Kesehatan dan Keselamatan Kerja Occupational Health and Safety Management System	SGS, TÜV SÜD, SUCOFINDO, SCS, BSI, LRQA, BVI, TÜV Rheinland, AJA Registrasi	2021-2025
OHSAS 18001 ▶ Sistem Manajemen Kesehatan dan Keselamatan Kerja Occupational Health and Safety Management System	AJA Europe, BSI, Globus Certification, SGS, Sucofindo, SAI Global	2021-2022
ISO 50001 ▶ Sistem Manajemen Energi Energy Management System	DNV-GL, LRQA, TÜV SÜD	2021-2023
SMK3 ▶ Sistem Manajemen Kesehatan dan Keselamatan Kerja Occupational Health and Safety Management System	Kemakac, Sucofindo, SGS	2021-2024
IATF 16949 ▶ Sistem Manajemen Mutu Industri Otomotif Quality Management System for the Automotive Industry	TÜV Rheinland, TÜV SÜD, SGS SAI Global	2021-2024
ISPO ▶ Perkebunan Kelapa Sawit Berkelanjutan Indonesia Sustainable Palm Oil Plantation	Mutuaugung Lestari (MALL), BVI, TÜV Rheinland, SGS, AJA, BSI, Mutu Higial, MIB	2021-2026
ISO 9001 ▶ Sistem Manajemen Mutu Quality Management System	AJA Registrasi Singapore, BSI, EAS, Globus Certification, LRQA, SGS, TÜV Rheinland, URS, BVI, SCS SAI Global	2021-2024
Green Mark Platinum Design Building ▶ Green Building	BCA Singapore	2021
ISO 27001 ▶ Standardisasi Manajemen Keamanan Informasi Information security management Standardization	BSI, BVI	2021-2024
SNI CAC/RCP 1 ▶ Standar Higienitas Pangan Food Hygiene Standard	TÜV Rheinland	2021-2022
Authorized Economic Operator (AEO) ▶ Rantai Pasok Global Global Supply Chain	DFI Jen Bea Cukai, BSI	2021-2022

Source: PT Astra Int ernational Tbk 2021 Sustainability Report

Note (source)

- EcoVadis Sustainability Assessments
- TUV SUD ISO 14001:2015-Environmental Management Systems
- EZ Economy

E-4 Environmental Management ▶ Compliance System

Management factor	Does the business have a systematic management system for compliance with environmental laws and regulations?	Factor type	
	▶ Continuously monitor environmental law trends and amendments for manufacturing workplaces with high environmental sensitivity, such as air, water quality, and waste, and develop a compliance monitoring and internal control system for each environmental medium.		●

Significance

:: Compliance is a preventive management activity for environmental pollution, accidents, and disputes, as well as compliance with laws and regulations, and serves as an essential factor in a business's long-term economic activities.

- If a business does not meet various environmental laws and regulations regarding all activities, such as product manufacturing, there is a possibility of economic loss and liability costs such as liability, fines, administrative measures, and damage to the business's reputation.
- As the importance of environmental protection increases, environmental regulations in ASEAN countries are gradually strengthening.
 - The Vietnamese government is focusing more on expanding regulations, such as imposing fines on individuals and industries, to strengthen environmental regulation and enforcement.
- Remedies after an accident or dispute are costly to compensate for losses. Therefore, businesses should voluntarily pay attention to compliance in advance and systematically manage possible risks.
 - At the end of 2020, the Malaysian administration introduced a bill to the National Assembly to strengthen penalties for environmental violations such as water pollution. Discussions on amendments to the bill will take place in early 2021.
 - The large-scale water pollution in the state of Selangor recently motivated the Malaysian government to reinforce its civil and criminal penalties against environmental crimes. This case exemplifies how businesses are held accountable for the steady increase in water pollution cases.

Implementation

:: Identify the regulations applied during corporate operation, and develop a series of compliance systems for effective internal control and legal compliance, such as monitoring and sharing related legislation, amendments, and self-diagnosis.

- Designate personnel or responsible organizations for compliance monitoring and internal management for each environmental medium. For efficient monitoring, identify major laws that may apply to the business in advance and organize regulations within the legal system to clarify targets to be managed.
- In addition, include plans for follow-up measures such as fulfilling social responsibility for environmental problems and management activities to prevent recurrence in the system.
- Utilizing government support policies is also a good option. In addition, overseas exporters should consider the various environmental guidelines of the exporting country as well as various domestic environmental laws and guidelines.

Case 1 | Environmental laws and regulations of major ASEAN countries

Countries	Laws	Source
Indonesia	Regulations on Social Forestry by the Minister of Environment and Forestry, No.83 of 2016	2021 Guidebook for Promising Environmental Markets in Indonesian (Ministry of Environment, Korea Environmental Industry Association)
	Presidential Decree on Suspension and Evaluation of Permits for Palm Oil Plantations and Increase in Productivity of Palm Oil Plantations, No.8 of 2018	
	Presidential Decree on Termination of New Permits and Improvement of Operation of Primary Natural Forests and Peatlands, No.5 of 2019	
	Civil Law Enforcement and Execution of Decisions on Illegal Logging of Forests and Land	
	Reduced Deforestation Rates	
Thailand	ENHANCEMENT AND CONSERVATION OF THE NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (1992)	World Laws Information Center
	ACT ON THE PROMOTION OF MARINE AND COASTAL RESOURCES MANAGEMENT, B.E. 2559 (2015)	
	ENERGY CONSERVATION PROMOTION ACT, B.E. 2535 (1992)	
	HAZARDOUS SUBSTANCE ACT B.E. 2535 (1992)	
Malaysia	Environmental Quality Act 1974	www.doe.gov.my
	Fisheries Act 1985	www.moa.gov.my
	Land Conservation Act 1960	www.jkptg.gov.my
	Local Government Act 1979	www.jkt.gov.my
	Merchant Shipping (Oil Pollution) Act 1994	www.marine.gov.my
	National Forestry Act 1984	www.forestry.gov.my
	Natioanl Park Act 1980	www.gov.my
	Plant Quarantine Act 1976	www.moa.gov.my
	Pesticides Act 1974	www.oma.gov.my
Philippines	REPUBLIC ACT NO.8749 AN ACT PROVIDING FOR A COMPREHENSIVE AIR POLLUTION CONTROL POLICY AND FOR OTHER PURPOSES	World Laws Information Center
	REPUBLIC ACT NO.9275 AN ACT PROVIDING FOR A COMPREHENSIVE WATER QUALITY MANAGEMENT AND FOR OTHER PURPOSES	
	REPUBLIC ACT NO. 9513 AN ACT PROMOTING THE DEVELOPMENT, UTILIZATION AND COMMERCIALIZATION OF RENEWABLE ENERGY RESOURCES AND FOR OTHER PURPOSES	
Vietnam	LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13	World Laws Information Center
	Order No.15/2012/L-CTN of July 2,2021,on the promulgation of law-The Law on Water Resources	
	MANAGEMENT OF HAZARDOUS WASTES-No.36/2015/TT-BTNMT	
	LAW ON CHEMICALS – No.06/2007/QH12	
	NATURAL RESOURCES AND ENVIRONMENT OF SEAN AND ISLANDS - Law No.82/2015/QH13	
Singapore	LAW ON ECONOMICAL AND EFFICIENT USE OF ENERGY, Number: 50/2010/QH12	World Laws Information Center
	Environmental Protection and Management Act 1999	



Note (source)

- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Korea Environmental Industry Association

E-5 Pollution Prevention and Control ▶ Air

Management factor	Does the business manage air pollutants (e.g., NOx, SOx, dust), including identification and management of emissions and reduction programs?	Factor type
	▶ Conduct activities to reduce pollutants by identifying and regularly monitoring the types of air pollutants and emissions generated from air emission facilities in the process.	●

Significance

∴ The environment has emerged as the core of corporate competitiveness. Pollutant emission management and reduction activities for each environmental medium to prevent environmental pollution are the most basic and essential elements in practicing ESG management.

- The World Air Quality Report (AirVisual, 2018) suggests severe air pollution in the ASEAN region: the city with the most air pollution in Asia is Jakarta, Indonesia (10th), followed by Vietnam (12th)
- The ASEAN region intensifies relevant laws and regulations for each country to resolve air quality issues and establishes and applies carbon emission reduction and energy policies
- The strengthening of the importance of the atmospheric sector may burden the industry but simultaneously create possible opportunity factors, such as securing environmental performance and competitiveness of businesses in the country. Therefore, it is necessary to respond to the management and reduction of air pollutants.

Implementation

∴ Set air pollution reduction targets considering the workplace conditions in the country and comply with air pollutant emission standards. In addition, quantify and systematically manage air pollutant emissions and implement various air pollutant reduction programs.

[Table 15] Air Pollutant Management Procedure

Steps	Details
① Development of legal management systems for air pollution	• Manage and continuously monitor emission standards of each emission facility for the legal management of air pollutant emission facilities.
② Calculation of air pollutant emissions	• Key management data: nitrogen oxide (NOx) emissions (tons), sulfur oxides (SOx) emissions (tons), dust (TSP) emissions (tons), air pollutant emissions (NOx, SOx, TSP), etc. • Key management data may differ by country.
③ Setting air pollution reduction targets	• Set specific reduction targets based on pollutant emission performance and financial/accounting decision-making.
④ Implementation of air pollution reduction activities	• Introduce pollutant reduction technology, install major prevention facilities, and improve aging facilities and processes.
⑤ Information disclosure	• Disclose related information such as emissions, reduction targets, and reduction activity performance.

▷ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

- ① (Development of legal management systems for air pollution) Identify emission facilities and outlets in the workplace and the air pollutant emitted, document the management targets, monitor the emission standards under relevant laws, and ensure that the emission standards are not exceeded.
- ② (Calculation of air pollutant emissions) Identify and record the overall pollutant emissions in the workplace by periodically measuring and calculating the number of air pollutants emitted.

[Table 16] Calculation of Annual Air Pollutant Emissions

Methods	Details
Telemonitoring system (TMS)	• Check the real-time emission concentration by workplace and annual/regional emissions through CleanSYS. - Sulfur oxides (SOx), nitrogen oxides (NOx), dust, etc.
Actual measurement	• NOx emissions (kg) = $\sum \{ \text{Self-measured concentration (ppm)} \times \text{Exhaust gas flow rate (Sm}^3\text{/hr)} \times \text{Annual operating hours} \times 10^{-6} \times 46 \div 22.4 \} / \text{Number of self-measurements}$ • SOx emissions (kg) = $\sum \{ \text{Self-measured concentration (ppm)} \times \text{Exhaust gas flow rate (Sm}^3\text{/hr)} \times \text{Annual operating hours} \times 10^{-6} \times 64 \div 22.4 \} / \text{Number of self-measurements}$ • Dust emissions (kg) = $\sum \{ \text{Self-measured concentration (mg/Sm}^3\text{)} \times \text{Exhaust gas flow rate (Sm}^3\text{/hr)} \times \text{Annual operating hours} \times 10^{-6} \} / \text{Number of self-measurements}$

- ③ (Setting air pollution reduction targets) Set quantitative and specific air pollutant reduction targets based on overall air pollutant emission performance (e.g., 00% reduction compared to YYYY emissions by YYYY).
 - Be realistic by considering the business's financial and accounting factors (e.g., air pollution reduction and system response budget, investment costs) without overlooking the side effects (e.g., decreased productivity, process inefficiency) caused by pollutant reduction.
- ④ (Implementation of air pollution reduction activities) Identify ways to minimize air pollutant emissions to achieve the targets and implement reduction activities by considering the business's current status, such as installing central prevention facilities and improving old facilities and processes.
- ⑤ (Information disclosure) Disclose qualitative and quantitative information such as air pollutant emissions, environmental goals, performance data, and reduction program result analysis to allow stakeholders to recognize the business's efforts and achievements for environmental improvement.

Case 1 | The Indonesian Court ruled that President Joko Widodo and others clean up air pollution.

- **[Lawsuit filed]** In July 2019, 32 citizens of the Jakarta metropolitan area filed air pollution liability against President Joko Widodo, the Minister of Environment, the Minister of Home Affairs, the Minister of Health, the Governor of Jakarta, the Governor of West Java, and the Governor of Banten Province.
- **[Judgment]** On the 16th, the Indonesian Court sided with the citizens in the air pollution lawsuit filed against President Joko Widodo and Jakarta Governor Anies Baswedan and issued an 'Improvement Order' (September 16, 2021)
 - The Court judged that President Joko Widodo and others neglected their efforts for clean air quality and stated, "The government must take significant measures based on science and technology to ensure the right to health of citizens in the Jakarta metropolitan area and protect the environment and ecosystem by strengthening air quality regulations."
 - The Court ordered President Joko Widodo to establish new national air quality standards, the Minister of Environment to supervise the preparation of air pollutant emissions inventories in three states, including Jakarta, and the Minister of Home Affairs to oversee the control of air pollution by the Governor of Jakarta.

Source: Seoul Economic Daily

Case 2 | Thailand strengthens air emission standards in each industry.

- On December 23, 2021, the Thai government established emission permitting and management standards for each industry based on air quality and noise laws and standards. In addition, the government is strengthening the standards through enactment and revision, such as expanding and strengthening pollutants and emission standards.

[Table 17] Thailand Air Emission Standards by Industry

No.	Pollutant	Source	Emission Standard	
			Production Process Without Fuel Combustion	Production Process With Fuel Combustion
1.	Particulate matter	Boiler or Heat Generating source	-	240mg/Nm ³
		- Heavy oil as fuel	-	320mg/Nm ³
		- Coal as fuel	-	320mg/Nm ³
		- Biomass as fuel	-	320mg/Nm ³
		- Other fuel	-	320mg/Nm ³
Aluminium manufacture Production process	300mg/Nm ³	240mg/Nm ³		
	400mg/Nm ³	320mg/Nm ³		
2.	Sulfur dioxide	Boiler or Heat generating source	-	-
		- Heavy oil as fuel	-	-
		- Coal as fuel	-	-
		- Biomass as fuel	-	-
		- Other fuel	-	-
Production process	500ppm	-		

No.	Pollutant	Source	Emission Standard	
			Production Process Without Fuel Combustion	Production Process With Fuel Combustion
3.	Oxides of nitrogen (as nitrogen dioxide)	Boiler or Heat generating source - Heavy oil as fuel - Coal as fuel - Biomass as fuel - Other fuel	- - - -	200ppm 400ppm 200ppm 200ppm
4.	Carbon monoxide	Production process	870ppm	690ppm
5.	Hydrogen sulfide	Production process	100ppm	80ppm
6.	Hydrogen chloride	Production process	200mg/Nm ³	160mg/Nm ³
7.	Sulfuric acid	Production process	25ppm	-
8.	Xylene	Production process	200ppm	-
9.	Cresol	Production process	5ppm	-
10.	Antimony	Production process	20mg/Nm ³	16mg/Nm ³
11.	Arsenic	Production process	20mg/Nm ³	16mg/Nm ³
12.	Copper	Production process	30mg/Nm ³	24mg/Nm ³
13.	Lead	Production process	30mg/Nm ³	24mg/Nm ³
14.	Chlorine	Production process	30mg/Nm ³	24mg/Nm ³
15.	Mercury	Production process	3mg/Nm ³	2.4mg/Nm ³

Source: Pollution Control Department (PCD) website of Thailand's Ministry of Natural Resources and Environment

Case 3 | Air pollution and regulations in Vietnam

- (Current air pollution in Vietnam) Air pollution causes economic losses of about USD 1.4 billion (2018), 60,000 deaths per year (2019)
 - Vietnam, a country centered on the secondary industry, has a deep level of air pollution. A study by the National Economics University in Hanoi estimates Vietnam's economic loss from air pollution at around USD 1.1-1.4 billion in 2018.
 - According to the World Health Organization (WHO) data in 2019, more than 60,000 people died annually in Vietnam due to air pollution.
- (Air pollution regulation in Vietnam) Generous air quality standards and low regulatory compliance rates
 - The Vietnamese government prepared the 'Technical Regulations on Outdoor Air Quality' in 2013 and has been monitoring air quality since 2014. The air quality and environmental standards are relatively lenient compared to those in the world, with a lack of concrete legal sanctions for violations.

[Figure 11] Maximum Atmospheric Concentration Limit (recommended) Standard in Vietnam

Region	Concentration parameters mg/Nm ³						
	SO ₂ (24h)	CO(8h)	NO ₂ (1yr)	TSP(1yr)	PM ₁₀ (24h)	PM _{2.5} (24h)	Pb(1yr)
Recommendation in Vietnam	125	10,000	40	200	150	50	0.5
Recommendation in Korea	50	9,000	30	-	100	35	0.5
Recommendation by WHO	20	-	40	-	50	25	-

Source: Vietnam Environment Agency (VEA), Korea Legal Information System, WHO

- Programs to improve air quality in major cities in Vietnam
 - Major local governments, including Ho Chi Minh City and Hanoi, implement sanctions and improvement programs based on current data for each primary pollution source to improve air quality.
 - Ho Chi Minh City: The local government is implementing a program to reduce the use of aging vehicles and expand public transport. To this end, it monitored the emission levels of vehicles in operation in January 2020 and planned to establish future emission standards to sanction the operation of vehicles that do not comply with the standards.
 - Hanoi City: The local government has announced plans to ban conventional stoves, which adversely affect air quality. Under the project, it will completely ban using conventional stoves in Hanoi by 2021. In 2020, about 30,000 conventional stoves were collected and disposed of. The city is also implementing projects such as limiting the operation of aging vehicles and improving infrastructure for a transition to greener public transport.

Source: Korea Environmental Industry Association



Laws and regulations related to air quality of major ASEAN countries

Countries	Laws	Source
Indonesia	Ordinance on the Prevention of Air Pollution (Ordinance No. 41 of 1999)	KONETIC
	Emission Standards from Fixed Sources (Ordinance of the Minister of the Environment No. 13 of 1995)	
	Blue Sky Program (Ordinance of the Minister of the Environment No. 15 of 1996)	
	Air Pollution Indexes (Ordinance of the Minister of the Environment No. 45 of 1997)	
	Air Pollution Prevention (Ordinance No. 41 of 1999)	
Thailand	ENHANCEMENT AND CONSERVATION OF THE NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (1992) , CHAPTER 4 Part 4 Air and Noise Pollution	World Laws Information Center
Malaysia	Environmental Law	KONETIC
	Environmental Quality (Clean Air) Regulations	
	Air Quality Indexes	
	Environmental Directives on Slash and Burn	
Philippines	REPUBLIC ACT NO.8749 AN ANCT PROVIDING FOR A COMPREHENSIVE AIR POLLUTION CONTROL POLICY AND FOR OTHER PURPOSES	World Laws Information Center
Vietnam	LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 6 Section 4. PROTECTION OF AIR ENVIRONMENT	World Laws Information Center
Singapore	Environmental Protection and Management Act 1999 PART 4 AIR POLLUTION CONTROL	World Laws Information Center



Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- World Air Quality Report (Air Visual, 2018)
- Overseas Environment Integrated Information System
- Pollution Control Department (PCD) website of Thailand's Ministry of Natural Resources and Environment
- K-CGS ESG Best Practices

E-6 Pollution Prevention and Control ▶ Water Quality

Management factor	Does the business manage water pollutants (identification and management of discharge such as BOD, COD/TOC, SS, T-P, and T-N, reduction programs)?	Factor type	●
▶ Conduct reduction activities by regularly monitoring wastewater discharge facilities in the production process and identifying and systematically managing the types and amounts of water pollutants discharged.			

Significance

:: The environment has emerged as the core of corporate competitiveness. Pollutant emission management and reduction activities for each medium to prevent environmental pollution are the most basic and essential elements in practicing ESG management.

- Industrial wastewater contains many difficult-to-decompose substances that require advanced treatment, such as various heavy metals and high-concentration organic substances, so comprehensive management and treatment at the workplace are needed.
- Reduction of wastewater discharge is a means to reduce GHG emissions as well as protect the water environment.
- Due to rapid and ongoing urbanization and industrialization, Vietnam urgently needs improved urban and industrial wastewater treatment.
 - Due to rapid industrialization, contamination of underground water and river downstream is severe, and the untreated wastewater rate is high, with a wastewater treatment rate of only 15%. In addition, some treatment plants are not operating at the initially designed throughput due to improper operation and insufficient maintenance.
- The Philippines' wastewater generation is estimated at 2.2 million tonnes per year, with domestic, agricultural, and livestock wastewater accounting for a high proportion.
 - The BOD pollution load from nonpoint sources is estimated to be about 435,000MT per year, and agricultural runoff has the most significant impact.

Implementation

:: Observe the discharge standards for water pollutants and systematically manage discharge. In addition, set water pollutant reduction targets considering the workplace and implement water pollutant reduction programs to achieve the targets.

[Table 18] Water Pollutant Management Procedure

Steps	Details
① Development of legal management systems for water pollution	• Manage and continuously monitor discharge standards for the legal management of water pollutant discharge facilities.
② Calculation of water pollutant discharge	• Key management data: biochemical oxygen demand (BOD) (tons), total organic carbon (TOC) (tons) or chemical oxygen demand (COD) (tons), suspended solids (SS) discharge (tons), total phosphorus (TP) discharge (tons), total nitrogen (T-N) discharge (tons), water pollutant discharge, etc.
③ Setting water pollutant reduction targets	• Set specific reduction targets based on pollutant discharge performance and financial/accounting decision-making
④ Implementation of water pollutant reduction activities	• Introduce pollutant reduction technology, install major prevention facilities, and improve aging facilities and processes.
⑤ Information disclosure	• Disclose related information such as discharge, reduction targets, and reduction activity performance.

▷ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

- ① **(Development of legal management systems for water pollution)** Identify discharge facilities within the workplace and water pollutants discharged, document management targets, monitor the discharge standards under relevant laws, and ensure that discharge standards are not exceeded.
- ② **(Calculation of water pollutant discharge)** Identify and record the overall pollutant discharge in the workplace by periodically measuring and calculating the number of water pollutants discharged.
 - Calculate the discharge concentration through a direct (field) measurement method and determine the average concentration when measuring several times. Discharge is calculated in the following way: concentrations after water treatment, discharge, and the number of working days per year.

[Table 19] Calculation of Annual Water Pollutant Discharge

$$\text{Discharge (g/yr)} = \text{Concentration after water treatment (mg/L)} \times \text{wastewater discharge (m}^3\text{/day)} \times \text{annual operating days (days/yr)} \times 1,000\text{L/m}^3 \times 1\text{kg}/1,000,000\text{mg}$$

- ③ **(Setting water pollutant reduction targets)** Set quantitative and specific water pollutant reduction targets based on overall water pollutant discharge performance (e.g., 00% reduction compared to YYYY discharge by YYYY).
 - A target should be set realistically by considering the business's financial and accounting factors (e.g., water pollution reduction and system response budget, investment costs) without overlooking the side effects (e.g., decreased productivity, process inefficiency) caused by pollutant reduction.
- ④ **(Implementation of water pollutant reduction activities)** Identify ways to minimize water pollutant discharge to achieve the targets and implement reduction activities by considering the business's current status, such as installing central prevention facilities and improving old facilities and processes.
- ⑤ **(Information disclosure)** Disclose qualitative and quantitative information such as pollutant discharge, environmental goals, performance data, and reduction program result analysis to allow stakeholders to recognize the business's efforts and achievements for environmental improvement.

Case 1 | Water pollution control regulations in Indonesia

- According to the water quality monitoring results in Indonesia, more than 50% of parameters such as Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and the number of fecal coliforms and total coliform do not meet the drinking water standards.
- The leading causes of water pollution are domestic and industrial waste, and heavy metals and other chemical substances contaminate about 80% of the generated industrial waste.
 - Factories are generally located in river basins, and wastes are often directly dumped into rivers without separate treatment.

[Figure 12] Water Quality Standards in Indonesia

Variable	Unit	Classes			
		I	II	III	IV
pH	-	6-9	6-9	6-9	5-9
Biological Oxygen Demand (BOD)	m/l ⁽¹⁾	2	3	6	12
Chemical Oxygen Demand (COD)	m/l	10	25	50	100
Dissolved Oxygen (DO)	m/l	6	4	3	0
Arsenic	m/l	1	1	1	1

Source: Government Regulation No. 82/2001

[Figure 13] Water Quality Standards in Indonesia

Cobalt	m/l	0.2	0.2	0.2	0.2
Barium	m/l	1	(-)	(-)	(-)
Boron	m/l	1	1	1	1
Selenium	m/l	0.01	0.05	0.05	0.05
Cadmium	m/l	0.01	0.01	0.01	0.01
Chrome	m/l	0.05	0.05	0.05	1
Copper	m/l	0.02	0.02	0.02	0.2
Steel	m/l	0.3	(-)	(-)	(-)
Lead	m/l	0.03	0.03	0.03	1
Manganese	m/l	0.1	(-)	(-)	(-)
Mercury	m/l	0.001	0.002	0.002	0.005
Zinc	m/l	0.05	0.05	0.05	2
Chloride	m/l	600	(-)	(-)	(-)
Cyanide	m/l	0.02	0.02	0.02	(-)
Fluoride	m/l	0.5	1.5	1.5	(-)
Sodium nitrite	m/l	0.06	0.06	0.06	(-)
Sulfate	m/l	400	(-)	(-)	(-)
Free chlorine	m/l	0.03	0.03	0.03	(-)
Methoxychlor	ug/l	35	(-)	(-)	(-)
Endrin	ug/l	1	4	4	(-)
DDT	ug/l	2	2	2	2
Chlordane	ug/l	3	(-)	(-)	(-)

Source: Government Regulation No. 82/2001

Source: Government Regulation No. 82/2001

Source: Korea Environmental Industry Association

- The Indonesian government regulates water into four classes according to its use through Government Regulation No.82/2001, Management of Water Quality and Water Pollution Control.
- The standards are uniformly applied to all regions of Indonesia, but the state and local governments may adjust or set new standards under their jurisdiction. It also provides water quality criteria for each class.

[Figure 14] Water Quality Classes in Indonesia

Water Quality Classes	
1Class	• Water available for drinking or other purposes requiring water quality equivalent to drinking water
2Class	• Water available for recreational purposes, freshwater fish farming, irrigation for agriculture and plantation, or other uses requiring equivalent water quality
3Class	• Water available for freshwater fish farming, animal husbandry, irrigation for agriculture and plantation, or other uses requiring equivalent standards
4Class	• Water available for irrigation for plantation agriculture or other uses requiring equivalent standards

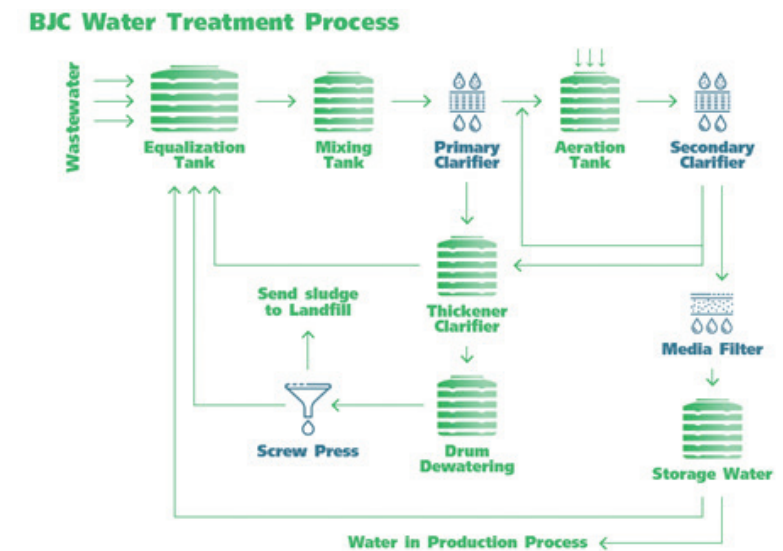
Source: Government Regulation No. 82/2001

Source: Korea Environmental Industry Association

Case 2 | Water quality management by BJC Group (Berli Jucker Public Company Limited) in Thailand

- The corporate recognizes the importance of water quality management in Thailand and within the enterprise and has a unique water treatment process. Assessments in production and manufacturing activities within the workplace such as TCI, TMG, and RIL, are conducted in accordance with applicable international standards, such as ISO 14001:2015, while other operations such as headquarter and office-based operations are assessed by Group internal audit department, in accordance with internal standards, which are developed based on ISO 14001 criteria.

[Figure 15] BJC Water Treatment Process

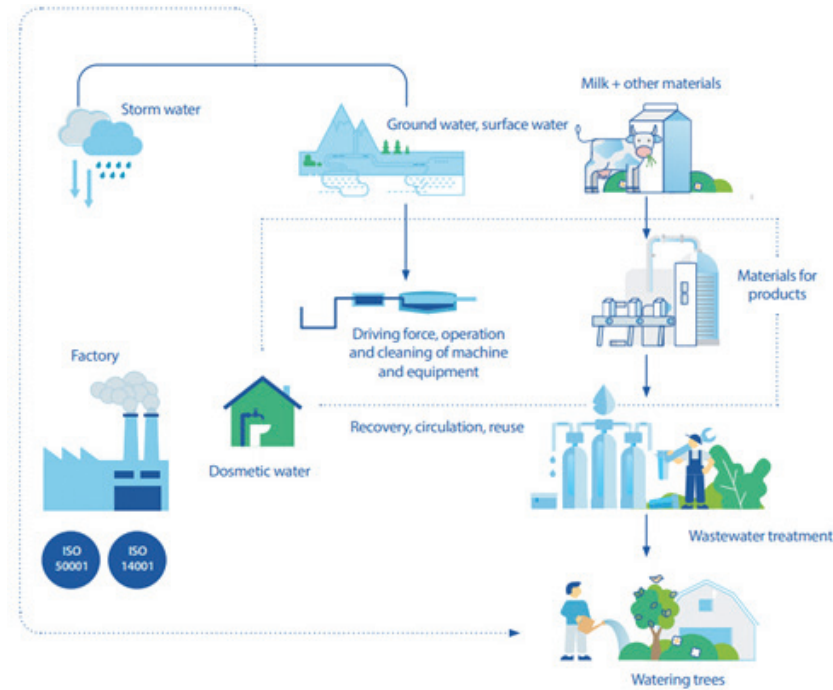


Source: BJC Group's 2021 Sustainability Report

Case 3 | Standards met by Vinamilk in Vietnam

- 100% of wastewater from operations at Vinamilk’s units is treated to satisfy standards before being discharged into the environment. Water from livestock activities is completely treated and reused for irrigation and ensures no effect on the surrounding environment.

[Figure 16] Waste Cycle in Production Activities



Source: Vinamilk’s 2021 Sustainability Report

Laws and regulations related to water quality of major ASEAN countries

Countries	Laws	Source
Thailand	ENHANCEMENT AND CONSERVATION OF THE NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (1992) , CHAPTER 4 Part 5 Water Pollution	World Laws Information Center
Malaysia	Act 127 ENVIRONMENTAL QUALITY ACT 1974 PART 4 25. Restrictions on pollution of inland waters	World Laws Information Center
Philippines	Philippine Clean Water Act of 2004(RA 9275) Clean Water Act, 2004	Korea Environmental Industry and Technology Institute
Vietnam	Order No.15/2012/L-CTN of July 2,2021,on the promulgation of law-The Law on Water Resources LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 6 Section 1. ENVIRONMENTAL PROTECTION FOR RIVER WATER, Section 2. ENVIRONMENTAL PROTECTION FOR OTHER SOURCES OF WATER	World Laws Information Center
Singapore	Environmental Protection and Management Act 1999 PART 5 WATER POLLUTION CONTROL	World Laws Information Center

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Korea Environmental Industry Association
- Korea Environmental Industry and Technology Institute

E-7 Pollution Prevention and Control ▶ Waste

Management factor	Does the business manage waste within the workplace (e.g., general/designated/construction waste generation and landfill/incineration/recycling/other treatment, source reduction program, recycling promotion)?	Factor type	●
▶ Conduct activities to reduce waste generation and increase recycling by identifying the type and amount of waste generated throughout the workplace and managing proper waste treatment.			

Significance

∴ The environment has emerged as the core of corporate competitiveness. Pollutant emission management and reduction activities for each medium to prevent environmental pollution are the most basic and essential elements in practicing ESG management.

■ The need for waste management emerged as the importance of industrial waste increased, and the type, nature, and scope of waste discharged from workplaces diversified along with the paradigm shift to a circular economy.

■ Reducing waste generation increases production yield, which is effective for cost reduction and productivity, and improves long-term corporate profits by exerting effects such as reducing waste treatment costs and GHGs.

■ In 2017, Indonesia's municipal solid waste (MSW) amounted to 65.2 million tons, ranking 5th in the world after the United States, China, India, and Brazil.

- The solid wastes from around the world have descended upon Indonesia as China banned importing solid waste in 2018. As of 2018, the amount of waste imported into Indonesia increased 3.5 times from the previous year to an average of 35,000 tons per month.

- As of 2019, Indonesia generates about 190,000 tons of waste per day

■ In Vietnam, the amended Environmental Protection Act (Law No.72/2020/QH14), which came into force on January 1, 2022, requires manufacturing businesses to develop an environmental management system in line with the provisions of TCVN ISO 14001 or international standard ISO 14001

Implementation

∴ Comply with the waste treatment procedures that are regulated by its related law and systematically manage the amount of waste generated and treated. Also, minimize waste generation and encourage recycling of generated waste through various programs.

[Table 20] Waste Management Procedures

Steps	Details
① Development of legal management systems for workplace waste	• Identify the types of workplace waste and treatment methods for legal waste management.
② Aggregation of waste generation and throughput	• Key management data: general/workplace/designated/construction waste generation (tons), workplace waste generation, waste landfill (tons), waste incineration (tons), waste recycling (tons), other waste treatment (tons), etc. * Classify all data into general, designated, and (if applicable) construction waste and manage them by type.
③ Setting waste reduction and recycling targets	• Set specific reduction targets based on waste emission performance and financial/accounting decisions.
④ Implementation of activities to reduce waste and increase recycling	• Introduction of waste recycling technology, removal of sources of contamination, process control, etc.
⑤ Information disclosure	• Disclose related information such as waste generation, reduction target, and reduction activity performance.

▷ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

① (Building legal management systems for workplace waste) Identify the nature and type of workplace waste, document management targets, and monitor legal waste treatment and storage standards under relevant laws such as the 『Waste Management Act』.

- In general, workplace waste is categorized into general, designated, and construction waste, among which general and designated waste require intensive management at the workplace.

[Table 21] Waste Classification System

Type	Criteria	
Living waste	• Household living waste (waste other than workplace waste) • Workplace living waste	
General waste	General waste	• Waste from the workplace
	Designated waste	• Waste oil, waste organic solvents, waste paint, etc. • Medical waste (waste with a risk of infection generated from medical institutions, testing and inspection institutions, etc.)
	Construction waste	• Waste generated from construction work

- [Related examples] General industrial waste management principles in Vietnam

• General industrial waste is categorized into 1) waste that is reused and recycled as a raw material for production, 2) waste that meets the standards and technical standards for the production of building materials and base materials, and 3) waste that needs to be treated.

• Businesses or organizations that discharge general industrial waste must classify the waste at the source, and unclassified waste is treated and managed as waste. Classified general industrial waste must be separately stored in a storage facility that meets the Minister of Resources and Environment standards.

• General industrial waste must be transported in a separate tank or facility. businesses or organizations that emit

waste must either reuse, recycle, recover, or treat wastes themselves or transfer them to a business with a consignment contract.

- General industrial waste containing hazardous waste must be managed per hazardous waste management regulations.

② **(Aggregation of waste generation and throughput)** When handling waste, identify and record the current status of total waste discharge by summing and managing the amount of waste generated and discharged from the workplace by the same type.

③ **(Setting waste reduction and recycling targets)** Setting quantitative and specific targets for reduction and recycling based on waste emission and recycling performance. (e.g., 00% reduction compared to YYYY emissions by YYYY)

- Be realistic by considering the business's financial and accounting factors (e.g., budget and investment costs related to corporate waste generation and system response) without overlooking the side effects (e.g., decreased productivity, process inefficiency) caused by waste reduction.

④ **(Implementation of activities to reduce waste and increase recycling)** Minimize the amount of waste generated fundamentally or seek ways to recycle generated waste to the extent possible before disposing of it by incineration or landfill.

⑤ **(Information disclosure)** Disclose qualitative and quantitative information such as waste generation, environmental performance data, environmental goals, reduction, and result analysis of recycling improvement programs to allow stakeholders to recognize the business's efforts and achievements for environmental improvement.

- When selecting a consignment business, select an appropriate business for the treatment method by considering the types and characteristics of workplace waste.

Case 1 | Waste management and disposal plan in Malaysia

- According to the World Bank, Malaysia's average waste generation per person per day in 2016 was 1.21kg, 0.47kg higher than the global average and 0.65kg higher than the average in East Asia and the Pacific.
- Malaysia has established a green technology master plan and the 12th Malaysia plan for waste disposal.

[Table 22] Waste Management and Disposal Plan in Malaysia

Waste management and disposal plan		
Green Technology Master Plan Malaysia (2017-2030)	Establishment of landfill and WtE-related plans to reduce increasing waste	
	Details	
	Landfill sanitation and background	- Landfilling is the most common treatment method for municipal solid waste (MSW) in Malaysia. - Landfilling of MSW generates GHGs and requires a large area of land. However, electricity can be produced by using emitted gas.
	Waste to energy (WtE)	- The land area required for landfilling can be reduced by reducing the waste volume. Currently, the Malaysian government is reviewing the feasibility of a WtE thermal power plant capable of addressing 1,000 tonnes of waste per day. - The government plans to establish one thermal power plant by 2020 and three by 2030.
Green technology growth strategy	- Provides a public access portal where consumers and producers can access tools and information to calculate the carbon footprint of the products they choose in their daily lives. - Provides detailed information on labeling and certification.	

Source: Korea Environmental Industry Association

Case 2 | PT Pertamina waste management in Indonesia

- Waste management is carried out with an approach to compliance with applicable regulations, the application of ISO 14001:2015 Waste Environmental Management System, and SUPREME.
- The accountability of waste management is the responsibility of the functions that generate waste, while the HSE Function acts as an assurance body to ensure that waste is managed properly.
- The performance of waste management is evaluated by the Board of Directors through a periodic reporting assessment and the achievement of KPIs.
- The results of the 2021 evaluation, showed that the waste management had been conducted properly, thus so sanctions were imposed by the authorities.

Source: PT Pertamina 2021 Sustainability Report.
Retrieved from <https://www.pertamina.com/en/dokumen/laporan-keberlanjutan>

[Figure 17] PT Pertamina Waste Management

Limbah B3 Dihasilkan dan Pengelolaannya [306-4][206-5][306-6]
Hazardous Waste Generated and Management

Limbah B3 Hazardous Waste	Satuan Unit	2021	2020	2019
Limbah dihasilkan Waste generated		72,998.20	77,572.34	76,509.32
Pengurangan limbah non-B3 Waste reduced		209.39	395.04	343.36
Limbah digunakan kembali & didaur ulang Waste reused & recycled	Ton	1,641.94	1,399.10	3,192.10
Limbah dikelola oleh pihak ketiga, di dalam & di luar lokasi Waste managed by third party, in-site & off-site		68,004.71	76,933.19	73,182.81

[Figure 18] PT Pertamina Waste Management

Limbah Non-B3 Dhasilkan dan Pengelolaannya [306-3] [306-4] [306-5] Non-hazardous Waste Generated and Management				
Limbah non-B3 Non Hazardous waste	Satuan Unit	2021	2020	2019
Limbah dihasilkan Waste generated	Ton	21,436.64	17,668.08	16,718.75
Pengurangan limbah Waste reduced	Ton	1,848.87	175.39	395.67
Limbah digunakan kembali & didaur ulang Waste reused & recycled	Ton	3,533.83	1,418.40	1,444.82
Limbah dikelola oleh pihak ketiga, di dalam & di luar lokasi Waste managed by third party, in-site & off-site	Ton	19,842.77	15,883.55	14,786.48

Keterangan: Total timbulan limbah pada Segmen Refinery & Petrochemical termasuk hidrokarbon
Note: Total waste generation at Refinery & Petrochemical Segment including hydrocarbons

Source: PT Pertamina's 2021 Sustainability Report

Case 3 | Efforts to reduce waste in the beauty industry by Indonesia's Sociolla

[Figure 19] Sociolla's Waste Down Beauty Up



- Indonesia's Sociolla presents a 'Waste Down Beauty Up' plan to reduce beauty industry waste and create a sustainable beauty culture.
- 'Waste Down Beauty Up' consists of four initiatives promoting smart buying behavior for beauty products: Look Up Trusted Reviews, Try Tester in Sociolla Stores before Buying, Buy Mini/Small Sizes before Full Sizes, and Gift with Less Waste.
- In addition, the business switched to eco-friendly shipping packaging with no bubble wrap.
 - Switching from bubble wrap to recycled paper could reduce plastic use by about 250,000 per year.- Sociolla is Indonesia's first major e-commerce business to implement a zero bubble wrap policy.
- Crisanti Indiana, Co-Founder/CMO: "We will continue to strive to integrate a green approach into our entire business operations and innovate to ensure a lasting impact on consumers in Indonesia and society at large."

Source: Sociolla website, COS'IN

Laws and regulations related to waste of major ASEAN countries

Countries	Laws	Source
Indonesia	LAW 32/2009 Environmental Protection and Management	Korea Environmental Industry and Technology Institute
	LAW 32/2009 Environmental Protection and Management	
	2012 Government Regulation No.81/2012 concerning Household Waste Management	
	2017 Presidential Regulation No.97/2017 on National Policy and Strategy on management of household waste and household-type waste	
Thailand	ENHANCEMENT AND CONSERVATION OF THE NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (1992) , CHAPTER 4 Part 7 Inspection and Control	World Laws Information Center
Malaysia	Act 127 ENVIRONMENTAL QUALITY ACT 1974 PART 4A 34B. Prohibition against placing, deposit, etc., of scheduled wastes	World Laws Information Center
Vietnam	MANAGEMENT OF HAZARDOUS WASTES-No.36/2015/TT-BTNMT	World Laws Information Center
	LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 9 WASTE MANAGEMENT	World Laws Information Center

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Korea Environmental Industry Association
- Overseas Environment Integrated Information System

E-8 Pollution Prevention and Control ▶ Chemical Substances

Management factor	Does the business have chemical management (e.g., identification and management of emissions, reduction programs)?	Factor type	●
▶ Regularly monitor chemical handling facilities in the production process to systematically manage the type and amount of hazardous chemical substances and implement activities to reduce the use of hazardous chemical substances.			

Significance

:: The environment has emerged as the core of corporate competitiveness. Pollutant emission management and reduction activities for each medium to prevent environmental pollution are the most basic and essential elements in practicing ESG management.

- In particular, chemical substances occupy a central position in environmental policies as they can be environmental and health risk factors throughout the entire process of product production, including manufacturing, transportation, use, sale, and disposal.
- As the EU Chemical Substances Control Act spreads to each country, the level of corporate response to the regulation must be improved in line with the strengthened standards.

Implementation

:: Comply with the chemical handling standards, aggregate and systematically manage chemicals emissions and usage, set chemical reduction targets considering workplace conditions, and implement various chemical emission and hazardous chemical usage reduction programs.

[Table 23] Chemical Management Process

Steps	Details
① Development of legal management systems for chemical substances	<ul style="list-style-type: none"> • Establish a chemical database by identifying the number of chemical substances handled in the workplace, incoming and outgoing items list, departments of use and purpose, and risks. • Manage and continuously monitor handling standards by facility/specific regulations.
② Aggregation of chemical substance emissions and usage	<ul style="list-style-type: none"> • Manage quantitative environmental data such as the amount of usage, emission, and movement of handling chemical substances in connection with the management system. • Key management data: types of chemical substances, amount of chemicals used/emitted* (tons), amount of chemicals movement (wastewater and waste movement volume) (tons), etc. <p>* Emissions data should be managed in detail by each medium (air, water system, soil).</p>

Steps	Details
③ Setting chemical substance reduction targets	<ul style="list-style-type: none"> • Set quantitative and specific chemical use and emission reduction targets for each sector (air, water system, soil) based on the chemical emission performance of the entire workplace (e.g., 00% reduction compared to YYYY emissions by YYYY). → Set specific reduction targets based on chemical use/emission performance and financial/accounting decisions. ※ Be realistic by considering financial and accounting factors (e.g., budget and investment costs related to corporate chemical emission reduction and institutional responses) without overlooking the side effects (e.g., decreased productivity, process inefficiency) caused by chemical emission reduction.
④ Implementation of activities to reduce chemical use and emission	<ul style="list-style-type: none"> • Identify ways to minimize chemical use/emissions to achieve the targets. • Plan reduction programs (i.e., replacement of hazardous chemicals and process improvement), such as using substitute substances for chemicals and process improvement by considering the business's current status.
⑤ Information disclosure	<ul style="list-style-type: none"> • Disclose qualitative and quantitative information such as chemical emissions, performance data, environmental goals, and analysis of reduction program results to allow stakeholders to recognize the business's efforts and achievements in environmental improvement.

▷ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

- Among chemical substances, consider restricting the use of restricted substances stipulated in domestic laws and international treaties or replacing them with low-toxic raw materials
- Assess storage and storage methods by considering the properties (i.e., solid, liquid, gas), hazards, and toxicity of chemical substances.

[Table 24] Business-wide Roadmap for Removing and Replacing Hazardous Chemicals

Steps	Details
Step 1	<ul style="list-style-type: none"> • Organizing: a business-wide team for removing hazardous chemical substances <ul style="list-style-type: none"> - Include existing teams, taskforces, production or development departments and utilize external experts. - Seek explicit recognition from top management where possible. - Carry out in advance with the CEO's instructions. However, it can also be carried out concurrently with Step 2.
Step 2	<ul style="list-style-type: none"> • Development of logic and persuasion for removing harmful chemical substances <ul style="list-style-type: none"> - Develop a logic that will convince management, managers, and workers. - Benchmark national and international movements, strengthened laws and regulations, recent accidents, workers' interests, social changes, and peer industries. - Pursue larger logic in other aspects when finding no logic regarding economic gain and competitiveness enhancement.
Step 3	<ul style="list-style-type: none"> • Elimination of hazardous substances among currently used ones <ul style="list-style-type: none"> - Build an inventory of existing substances. - Hazard classification: seek experts' help if necessary. - Short and long-term planning: identify substances that can be removed immediately or require long-term assessment

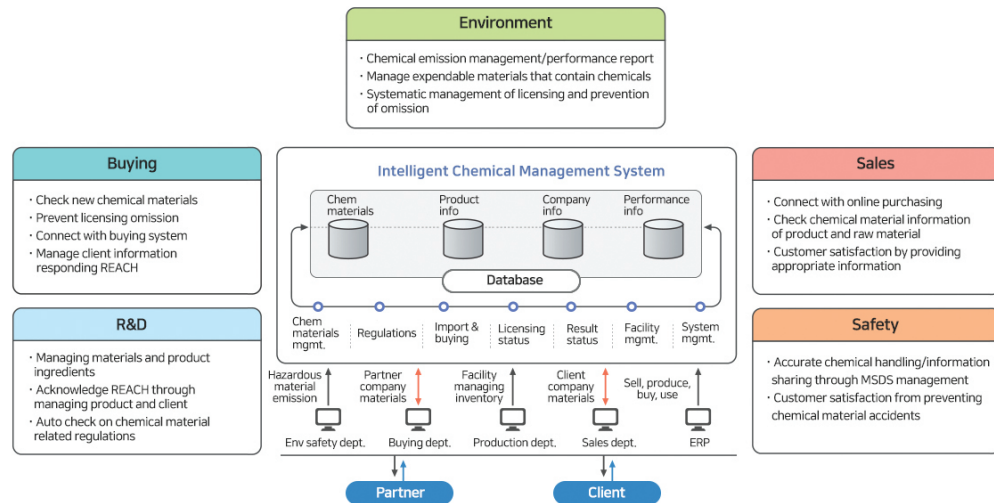
Steps	Details
Step 4	<ul style="list-style-type: none"> Development of verification systems when introducing new substances <ul style="list-style-type: none"> Allow the competent team to review.
Step 5	<ul style="list-style-type: none"> Internal and external announcements and business-wide implementation of the policy on the non-use of hazardous substances <ul style="list-style-type: none"> To be publicized by the CEO as business policies Large businesses: internal and external announcements Small businesses: substantial initiatives
Step 6	<ul style="list-style-type: none"> Periodic review and assessment <ul style="list-style-type: none"> Performance announcement

Source: https://kiha21.or.kr/monthly/2016/10/SOBGBO_2016_s342_37.pdf

Case 1 | Use of chemical management system (CMS)

- A chemical management system (CMS) efficiently manages information from the perspective of the entire life cycle, from manufacturing and purchasing to disposal of various chemical substances, and responds to domestic and foreign regulations.
- This system applies to most businesses that directly produce or distribute chemical substances and produce other products using such chemical substances.

[Figure 20] Diagram of CMS(Chemical Management System)



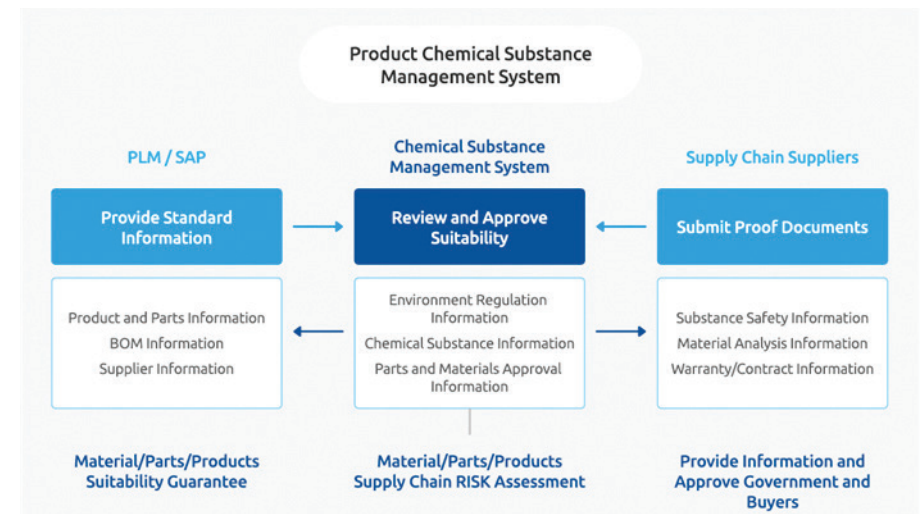
Source: WeZON Co., Ltd., Retrieved from <https://www.yullin.com/Gems/CMS>

Case 2 | A chemical management system by Coway in Thailand and Malaysia

- The business Coway has adopted a strict policy of managing chemical materials in their products by developing a systematic chemical management system based on the environmental management system in order to avoid related risks.
- Coway created a global chemical-control monitoring system, developed a chemical management system and information technology, and built a chemical management system in the mass-production process for zero-chemical pollution. In addition, they also respond proactively to chemical-related regulations such as EU RoHS II.

- In 2021, Coway developed a mattress chemical management system, strengthened the verification of hazardous/chemical substances, and established and verified the European biocide management system.

[Figure 21] Product Chemical Substance Management System



Source: Coway Sustainability 2022
Retrieved from <http://sustainability.coway.co.kr/archived>

Laws and regulations related to air quality of major ASEAN countries

Countries	Laws	Source
Indonesia	LAW OF THE REPUBLIC OF INDONESIA NO.9 YEAR OF 2008 ON THE USE OF CHEMICAL MATERIALS AND THE PROHIBITION OF CHEMICAL MATERIALS AS CHEMICAL WEAPONS	World Laws Information Center
Philippines	ENR Administrative Order No.35 of 1990, Revised Effluent Regulations of 1990	Report on Mid- to Long-term Strategization to Promote Overseas Expansion of the Environmental Industry
Vietnam	LAW ON CHEMICALS – No.06/2007/QH12	World Laws Information Center

Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

E-9 Pollution Prevention and Control ▶ Other Environmental Aspects
(Land, Ocean, Noise/Vibration, etc)

Management factor	Does the business carry out activities to prevent and reduce other environmental pollution such as soil/groundwater, marine pollution, noise, and vibration?	Factor type	○
▶ Regularly monitor the production process to identify pollution sources in soil/groundwater, ocean, noise/vibration, and other environmental areas, and implement pollutant reduction activities.			

Significance

∴ The environment has emerged as the core of corporate competitiveness. Pollutant emission management and reduction activities for each medium to prevent environmental pollution are basic and essential elements in practicing ESG management.

- *Soil pollution* is hard to be spotted with the naked eye. In many cases, when contamination is discovered, a large amount of contaminants has already leaked and spread to the surrounding environment. Preventive measures are crucial because a purification process requires a significant amount of time and money when contaminants have been adsorbed and remained in the soil for a long time
- *Marine pollution* does not happen too often. However, preemptive actions are critical as damage tends to be extensive in case of an incident and takes considerable time to be restored.
- Businesses should also pay attention to preventing and reducing other environmental pollution such as noise, vibration, soil and groundwater, and the sea as people strive to improve the quality of life and recognize the essence of "conservation of the living environments".

Implementation

∴ Observe the regulations stipulated by the respective country's laws for each medium, periodically check for and monitor contamination, and implement removal and reduction activities for pollution sources.

Case 1 | Noise and vibration monitoring by Hoa Phat Group in Vietnam

- Hoa Phat Dung Quat has installed 14 automatic and continuous monitoring stations for emissions and transmitted data to the Department of Natural Resources and Environmental of Quang Ngai province to monitor the environmental indicators during operation.
- From the results of environmental monitoring samples in the field as well as analytical results in the laboratory in 2021, the Center for Environmental Technology in Da Nang – Institute of Environmental Technology – Vietnam Academy of Science and Technology has the following summary tables:
- It is easy to see the air environmental parameters, around Hoa Phat Dung Quat Steel Integrated Complex such as TSP, SO₂, NO₂, CO, noise (Led), vibration in 2021 are all much lower than the permissible limits according to the National Technical Regulations on ambient air quality, noise and vibration.

[Table 25] Environmental Monitoring Samples in 2021, the Center for Environmental Technology in Da Nang

No.	Parameter	Unit	Location of monitoring				QCVN
			1208/HPDQ/KK1	1208/HPDQ/KK2	1208/HPDQ/KK3	1208/HPDQ/KK4	
I	Air						QCVN 05:2013/BTN-MT (1h)
1	SO ₂	µg/m ³	61.7	70.8	62.5	64.2	350
2	NO ₂	µg/m ³	44.7	53	56.7	36.7	200
3	CO	µg/m ³	5.700	5.300	6.400	4.800	30000
4	TSP	µg/m ³	125	115	132	122	300
II	Sound Level						QCVN 26:2010/BTN-MT (6h-21h)
1	Leq	dBA	53.9	64.7	63.1	54.1	70
2	Lmax	dBA	55.6	65.8	63.6	55.3	-
III	Vibration						QCVN 27:2010/BTN-MT (6h-21h)
1	Lva (X)	dB	36	40	41	38	75
2	Lva (Y)	dB	37	39	40	39	75
3	Lva (Z)	dB	37	39	39	37	75

Source: 2021 Annual Report by Hoa Phat Group

Case 2 | Construction pollution prevention by LPN Development Group in Thailand

- The environmental and social impact management in LPN construction process takes place before the construction till the end of construction
- During the process, each construction activity has undergone environmental impact monitoring and assessment according to pollution prevention measures of those projects. LPN measures four aspects of environmental quality as follows:

[Table 26] Environmental Quality Measurements by LPN Development Group

Air Quality	The monitoring of air quality has been done on the following parameters: Total Suspended Particulate (TSP), PM-10, Sulfur Dioxide (SO ₂), Nitrogen Oxide (NO ₂), Carbon Monoxide (CO) and Hydrocarbon (THC).
Noise Level	The monitoring of noise level has been done on the following parameters: average noise level over a 24-hour period (Leq 24 hours), maximum noise level (Lmax) and noise nuisance.
Vibration	The monitoring of the level of vibration has been done vertically, transversely and longitudinally.
Quality of treated water	The quality of treated water has been monitored on the following parameters: pH balance (pH), Suspended Solids (SS), Total Dissolved Solids (TDS), Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Oil & Grease (O&G), Total Kjeldahl Nitrogen (TKN), Sulfide and Fecal Coliform Bacteria (FCB).

Source: 2021 Sustainability Report by LPN Development Group

Other laws and regulations of major ASEAN countries

Countries	Laws	Source
Thailand	(Marine) ACT ON THE PROMOTION OF MARINE AND COASTAL RESOURCES MANAGEMENT, B.E. 2558 (2015), CHAPTER 3 THE PROTECTION OF MARINE AND COASTAL RESOURCES	World Laws Information Center
	(Noise, Vibration) ENHANCEMENT AND CONSERVATION OF THE NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (1992) , CHAPTER 4 Part 4 Air and Noise Pollution	
Malaysia	(Soil) Act 127 ENVIRONMENTAL QUALITY ACT 1974 PART 4 24. Restrictions on pollution of the soil	
	(Noise, Vibration) Act 127 ENVIRONMENTAL QUALITY ACT 1974 PART 4 23. Restrictions on noise pollution	
Vietnam	(Soil) LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 6 Section 3. PROTECTION OF LAND ENVIRONMENT	
	(Groundwater) LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 6 Section 2 Article 58. Environmental protection for underground water	
	(Marine) NATURAL RESOURCES AND ENVIRONMENT OF SEA AND ISLANDS - Law No.82/2015/QH13, Chapter 6 CONTROL OF POLLUTION, COPING WITH SPILL OF OIL, TOXIC CHEMICAL AND SEA DUMPING	
	(Marine) LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 5 PROTECTION OF MARINE AND ISLAND ENVIRONMENT	
Singapore	(Noise, Vibration) LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/ QH13 Chapter 9 Section 5. MANAGEMENT AND CONTROL OF DUST, EXHAUST GASES, NOISE, VIBRATION, LIGHT AND RADIATION	
	(Soil) Environmental Protection and Management Act 1999 PART 6 LAND POLLUTION CONTROL	
	(Noise, Vibration) Environmental Protection and Management Act 1999 PART 8 NOISE CONTROL	

Note (source)

- EcoVadis Sustainability Assessments

E-10 Pollution Prevention and Control ▶ Accident Prevention

Management factor	Does the business have a program to prevent environmental pollution accidents and an emergency response procedure in case of an accident?	Factor type	
	▶ Establish and implement prevention and response procedures considering the possibility of potential environmental pollution accidents.		●

Significance

Businesses can minimize the impact on capital costs by preemptively responding to environmental pollution accidents and reducing the possibility of pollution accidents caused by business activities.

- In the case of environmental pollution accidents, businesses may be exposed to direct financial losses, such as compensation for physical and property damage, cleanup of contaminated areas and prevention of recurrence, and suspension of workplace facilities, as well as indirect damages, including loss of trust from stakeholders and damage to corporate reputation.
- Therefore, it is necessary to prevent environmental pollution accidents in advance by inducing changes in the behavior of stakeholders, such as employers and workers, related to the level of environment and safety of industry-specific workplaces.

Implementation

Prepare a prevention program considering potential environmental pollution accident scenarios through periodic workplace inspections, develop an emergency response system for pollution accidents, and conduct regular education and training.

- Develop an integrated environmental management system that can prevent accidents and respond immediately by monitoring possible environmental pollution accidents at industrial sites using the environmental safety monitoring system.
 - Environmental safety monitoring systems: CCTV, video management systems, and video surveillance verified in various fields, such as security, control, and disaster, for monitoring environmental accidents
 - Conduct frequent and regular inspections of the workplace and external facilities, record the results in the facility inspection management ledger, and make them available within the workplace to inform all employees of the facility's conditions.
 - The management should regularly access the ledger to implement measures (e.g., investments in the facilities), receive reports on the results of inspecting and repairing facilities and equipment, take supplementary measures, and continuously operate programs to keep the best workplace maintenance.

■ In addition, establish accident response plans or scenarios by type and stage, share them with the business and nearby residents, and conduct sufficient training to evacuate safely and orderly in the event of an accident.

- In preparation for the case of environmental pollution to the outside, install and regularly inspect blocking facilities and develop a system to respond to environmental pollution accidents with proper control equipment and tools at all times.
- The workplace may need more than its own response plan because environmental pollution accidents often affect a large area. Hence, prepare an emergency contact network to request help from external organizations by preparing measures, including selecting and consulting with environmental restoration businesses.

Case 1 | Environmental safety guidelines and training by Bakrie & Brothers Group in Indonesia

① Guidelines: The guidelines for creating a safe work environment at BNBR (Bakrie & Brothers) are implemented in an effort to achieve ideal safety indicators, namely:

[Table 27] Environmental Safety Guidelines by BNBR

- Prevention of workplace accidents, injuries, and illness at work as well as pollution.
- Reduction of waste and energy consumption.
- Ensure control on unsafe conditions and behaviors that may cause accidents or injuries at work.
- Continuous improvements in Environmental Safety implementation.

② Training: BNBR carries out training and socialization related to ISO (International Organization for Standardization) and OHSAS (Occupational, Health, and Safety Assessment Series) criteria to reduce accidents in their workplace. The programs implemented include:

[Table 28] Environmental Safety Training by BNBR

- Use of PPE and safety working at height
- Increasing Environmental Alert and Control, Hazardous Material Handling, MSDS Implementation & Spill Response
- Load safety
- Hazard identification and safety behavior
- Firefighting
- Electrical safety

Source: 2020 Sustainability Report by Bakrie & Brothers



Laws and regulations related to accident prevention of major ASEAN countries

Countries	Laws	Source
Indonesia	LAW OF THE REPUBLIC OF INDONESIA NUMBER 32 YEAR 2008 CONCERNING PROTECTION AND MANAGEMENT OF ENVIRONMENT, CHAPTER 5 CONTROL Part Two Prevention	World Laws Information Center
Vietnam	LAW ON ENVIRONMENTAL PROTECTION-No.55/2014/QH13 Chapter 10 Section 3. Preventing and responding to environmental emergencies	
Singapore	Environmental Protection and Management Act 1999 PART 10 ENVIRONMENTAL POLLUTION CONTROL MEASURES	



Note (source)

- ISO 26000
- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

E-11 Resource Reduction ▶ Raw Materials

Management factor	Does the business carry out activities to manage and reduce the amount of raw materials (e.g., use of recycled materials)?	Factor type	●
▶ Reduce the use of raw materials by using eco-friendly materials such as recycled materials and materials containing recycled materials.			

Significance

:: Sustainable use of raw materials leads to economic benefits by maximizing resource use efficiency and reducing environmental pollution, waste disposal expenses, and costs

- It is necessary to introduce a system that disposes and returns the generated waste to the cycle of economic activities while minimizing the use of resources by suppressing waste generation in the process of producing, distributing, and consuming.

- The pursuit of a circular economy is linked to environmental aspects and cost reduction, helping to improve long-term profitability and competitiveness.

- The World Bank's 2021 report ranked Vietnam as the 4th largest producer of plastic waste worldwide. According to the report, as of 2019, the country generates about 2.62 million tonnes of plastic waste annually, accounting for 6% of global marine plastic waste emissions.

- Vietnam's Deputy Prime Minister Le Minh Khai approved the Scheme on Development of Circular Economy in Vietnam (Circular No.687/QD-TTg) dated June 7, 2022.

Implementation

:: Substitute non-recyclable raw materials with sustainable ones.

- When selecting an alternative material, it is necessary to analyze various factors such as lifespan, durability, and price of products or services to maintain their function and reliability even for an extended period.

- If businesses have ensured economic and environmental feasibility, they can analyze improvements in all production processes of products and services and review actions to improve the process.

Case 1 | Sustainable packaging by Wilmar International in Singapore

- Wilmar is committed to working with the wider industry and R&D teams to develop packaging solutions that minimise the use of materials and can be reused/recycled by the end-user.

- Target: Improve material efficiency for plastic types including PET, HDPE and PP to reduce plastic consumption by 3,000 tonnes per year

- Performance(2021): 31% of the group's packaging is made by renewable materials.

[Table 29] Sustainable Packaging Solutions by Wilmar International

Strategy	Description
Identifying the most widely used types of plastics	<ul style="list-style-type: none"> • The three main types of plastics used include polyethylene terephthalate, high-density polyethylene and polypropylene, which together comprise about 80% of the total plastic consumption.
Increasing material efficiency in priority countries and business units	<ul style="list-style-type: none"> • While consumption was highest in China, India and Vietnam, material efficiency for these countries was relatively high. • Wilmar puts efforts to increase material efficiency in countries where the figure is low, in order to reduce overall plastic consumption. <ol style="list-style-type: none"> 1. Material use: Using less material in packaging and from more sustainable sources 2. Intelligent design: Achieving the best functionality with the least impact 3. 100% of packaging to be reusable, recyclable or compostable 4. 50% average recycled content across all packaging 5. Phase out problematic and unnecessary single-use plastic packaging 6. Adoption of Australasian Recycling Label (ARL) across all retail packaging

[Table 30] Success Stories for Sustainable Packaging by Wilmar International

Plastic	<ul style="list-style-type: none"> • New Zealand uses 30% recycled HDPE plastic to make milk bottles. Two hundred fifty tonnes of recycled plastic could be used instead of non-renewable plastic, so the country eliminated the white resin coloring and made clear milk bottles. The bottle is made of recycled HDPE grade to be repurposed into a new bottle. • Australia uses 100% Australian recycled PET mayonnaise jars and bottles. All bottles, jars, and lids are recyclable, saving 380 tonnes of non-renewable plastic. • Australia and New Zealand switched all bread product tags from polystyrene plastic to hardboard, saving 300 million plastic products each year and 120 tonnes of polystyrene plastic.
Paper	<ul style="list-style-type: none"> • Corrugated cardboard for shipping boxes is now made from more than 80% recycle contents.

Source: 2021 Sustainability Report by Wilmar International

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- KOTRA's Overseas Market News

E-12 Resource Reduction ▶ Water Resources

Management factor	Does the business carry out activities to manage and reduce water usage (e.g., reuse) within the workplace?	Factor type	●
	▶ Quantify and systematically manage the amount of water used for product production and implement water reduction activities.		

Significance

:: Good water-resource management reduces costs and water treatment expenses, leading to economic benefits for the business in the workplace.

- As many parts of the world experience frequent droughts due to climate change, water shortage is highly likely to intensify and needs to be thoroughly managed. In addition, water is an essential element in the manufacturing process of semiconductors, food, automobiles, chemicals, and steel. Therefore, water resource management is critical because these businesses are susceptible to water shortage.
- In Vietnam, water demand rises while water sources are increasingly polluted and degraded, raising the risk of possible water depletion. Likewise, water pollution also causes substantial threats in the Philippines.
 - Water use efficiency remains low while exploitation and use of sustainable water resources lead to resource decline.
 - Developing agricultural irrigation reservoirs and hydroelectric power generation poses many challenges to water supply throughout the watershed and maintenance of downstream environmental flows.
- In Vietnam, the amended Environmental Protection Act (Law No.72/2020/QH14), which came into force on January 1, 2022, requires manufacturing businesses to develop an environmental management system in line with the provisions of TCVN ISO 14001 or international standard ISO 14001

Implementation

:: Quantify and systematically manage water intake, consumption, and reuse in the workplace, and implement various water use reduction programs (e.g., process improvement, new facilities, clean production technologies).

[Table 31] Water Use Management Data in the Workplace

◆ **Key management data:** water intake* (tons), water consumption** (tons), water consumption, water reuse (tons), water reuse rate (%)

*Categorize water intake data by intake sources, such as water supply, groundwater, and river water, and manage them by type.

**Water consumption = Water intake – Water/wastewater discharge

※ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

- The reuse rate indicates the efficient use of water resources since an increase in the amount of water reuse leads to a decrease in the amount of water intake and wastewater discharged and overall costs.
- Set quantitative targets to reduce water consumption or expand reuse (e.g., 00% reduction compared to water consumption in YYYY by YYYY) based on the workplace's total water consumption and reuse performance. Plan a reduction program that accounts for each workplace's characteristics, such as process improvement and introduction of reuse facilities.
 - Businesses can reduce water consumption in two main ways: ① reducing water used as a raw material for products, ② improving the water circulation structure by investing in facilities and reducing the amount of water discharged as wastewater.
 - Businesses may face a limitation in minimizing the use of water resources in production, as various water processes are involved, such as where water is fed as a raw material for a product, needed in the production process, or used in a cooling process.

Case 1 | Reuse of rainwater by Juyoung Business in Vietnam

- Rainwater collected through the factory roof is stored in an artificial pond created for an industrial water storage tank and firefighting water
- Stored rainwater is used not only as industrial water but also in various places where purified water is not required (e.g., toilets)
- A large swimming pool is installed outdoors. It provides refreshing space for employees during breaks and firefighting water immediately accessible in the event of a fire.

[Figure 22] An Outdoor Swimming Pool as Storage for Firefighting Water

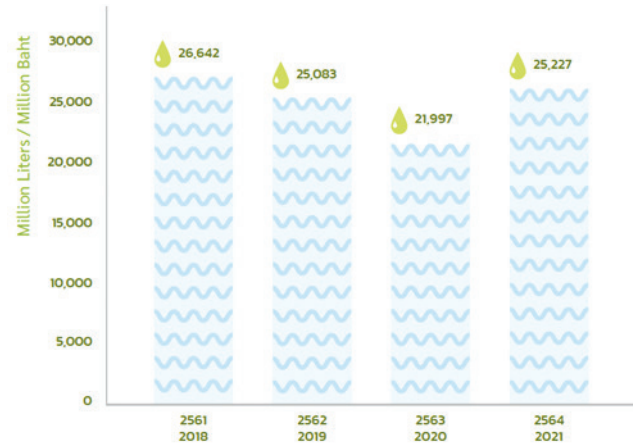


Source: EMERICs

Case 2 | Water management by Mitr Phol Group in Thailand

- Water resource is a vital factor in the processes throughout Mitr Phol Group's supply chain.
- The effective water management is important in supporting work and target accomplishment, and it also indicates the water consumption with responsibility to society and environment.

[Figure 23] Water Withdrawal of Mitr Phol Group



- The corporate assures efficient use of water by adhering to the 4Rs: Resource, Reduce, Reuse, and Recycle.

[Table 32] Management of Raw Water – Consumption Water

Resource	Search for surface water and groundwater as an alternative water resource
Reduce	Reduce water consumption in production process and in general
Reuse	Circulate condensate water in production process
Recycle	Return hot water to raw water pond during sugarcane crushing season and circulate the treated water to the raw water pond

- The business has prepared the waterway to collect, store rainwater and floodwater into the raw water ponds, to replace pumping raw water from public water resources by 20%.

Source: 2021 Sustainability Report by Mitr Phol Group

Case 3 | Water management by Asia Symbol in Indonesia

- The business continues to innovate and tap the potential, and the pulp washing effect and filtrate recycling are strengthened in the pulping production line. The full-load production can save more than 10 million tons of fresh water annually.
 - The paperboard production line adopts the advanced white water recovery system for water recycling to continuously reduce the water consumption per unit product.
 - In addition, the business has built an advanced reclaimed water reuse system, adopting the “ultrafiltration + reverse osmosis membrane” treatment process, and re-deeply treating the sewage treated by the municipal sewage treatment factory for boiler water replenishment and other sections in the production process.

[Figure 24] Water Management Charts by Asia Symbol



Source: 2020-2021 Sustainability Report by Asia Symbol

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Korea Environmental Industry Association

E-13 Energy/Greenhouse Gas ▶ Energy Efficiency

Management factor	Does the business carry out activities for energy consumption management (direct energy/indirect energy consumption) and reduction (high-efficiency facilities, energy management system)?	Factor type	●
▶ Systematically manage direct and indirect energy consumption throughout the workplace and reduce consumption through energy efficiency.			

Significance

∴ With the launch of a new climate response system, energy categories emitting a high level of GHGs must undergo innovation. In this regard, businesses should continuously improve energy efficiency to enhance competitiveness and achieve carbon neutrality.

- According to the global GHG emissions by category organized by Our World in Data based on Climate Watch and the World Resources Institute, GHGs from energy sectors account for an overwhelming portion of 73.2% of the total.
 - Among them, 24.2%, which accounts for the largest amount, is GHGs generated from the energy used in producing, distributing, and servicing products at the workplace. This result shows the significance of energy consumption reduction activities in industrial processes.
 - Energy-saving activities are directly related to increasing the business's profit, as energy costs account for a large part of a business's operating costs.
- In Malaysia, there is a great demand for energy saving in the near future under the Green Technology Master Plan (GTMP).
 - The country projects to reduce its electricity consumption by 10% by 2025 and 15% by 2030.

Implementation

∴ Classify energy used in the entire workplace into direct and indirect categories, quantify and systematically manage the amount of each use, and reduce energy consumption by improving the energy efficiency of existing facilities, replacing high-efficiency facilities, and improving fuel efficiency.

[Table 33] Workplace Energy Management Data

◆ **Key management data:** energy consumption (GJ) by fuel (e.g., oil, coal, gas, electricity)
 ※ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

- Energy consumption is divided into direct and indirect energy in the same way as the GHG emission source standard. Direct energy refers to energy used by emission sources directly owned or managed by the workplace, and indirect energy refers to energy generated from the use of power, heat, and steam purchased by the workplace.

- Calculate the energy consumption (GJ) using the amount of fuel used and the total calorific value of each power, and based on the result, set quantitative reduction targets (e.g., 00% reduction compared to YYYY by YYYY) in the energy field.

[Table 34] Energy Consumption Calculation

◆ (Direct) Energy consumption (GJ)= Fuel consumption (Nm³, L) × Total calorific value of fuel (MJ/Nm³, MJ/L) ÷ 1,000
 ◆ (Indirect) Energy consumption (GJ)= Electricity consumption (kWh)* × Total calorific value of fuel (MJ/kWh) ÷ 1,000
 *Based on consumption

- Implement activities to achieve energy reduction targets by actively utilizing rational and efficient energy use measures, such as improving the energy efficiency of existing facilities, installing high-efficiency facilities, reinforcing workplace insulation, and improving facility fuel efficiency.
- In addition, it is necessary to publicly disclose the amount of energy reduction, environmental performance data, and analysis of energy-saving program results to allow stakeholders to fully recognize the business's efforts and achievements in environmental improvement.

Case 1 | Energy saving by Masan Group in Vietnam

① Masan Consumer

- Masan Consumer business launched the "Energy Saving Ideas" by optimizing its production process; reducing energy uses by such as taking advantage of the heat lost from frying and product sterilization, avoiding any heat-modifying processes and adopting energy-saving technologies.
- The business provides training programs to their workers on the benefits of energy saving habits by regular cleaning of machines and tools for best-quality products.
- The business adopted biogas production from rice husks and sawdust waste to generate energy for their factories.
- In 2021, the business used more than 297 million tons of steam, including steam from diesel oil or biomass (sawdust, rice husk, etc.)

② Masan MEATLife

- Masan Meat Life business improved their boiler and grinder's efficiency and switched to using LED lamps to save energy and also for efficient lighting.
- MML Farm Nghe An high-tech pig farm produces biogas from its operations and generate enough electricity to be self-sufficient.
- Machinery and equipment in their meat processing complexes are imported from Europe; meeting health safety standards and delivering high and energy-efficient performance with advanced inverter technologies.

③ Masan High-Tech Materials

- Masan High-Tech Materials' Goslar plant has ISO 50001(Energy Management Systems) which demonstrates its commitment to continuous improvement in energy-related performance.

Source: 2021 Sustainability Report by Masan Group

Case 2 | Energy saving by Masan Group in Vietnam

- The main energy consumption for the group's operational activities is electric and fuel for their vehicles. The fuel data is calculated from fuel purchases, while the electrics is from electricity cost to kWh conversion.

[Figure 25] Energy Consumption and Energy Intensity

Sumber Energi Energy Source	Satuan Units	2020	2019	2018
BBM Fuel	liter	4.879.838	4.951.588	5.093.821
Listrik Electricity	kWh	798.588.367	780.305.831	727.342.734
Total luasan seluruh gerai Total stores areas	m2	5.672.000	5.326.641	5.137.341
Intensitas penggunaan energi listrik Electricity energy use intensity	kWh/m ²	141	146	142

- In 2020, the group recorded the electricity use for business's operational is 798,588,367 kWh, higher by 2% than 2019. While the energy intensity used in 2020 is 141 kWh/, lower by 4% than 2019. In this regard, the energy intensity decrease shows the lower of energy use per meter square () of store's area.
- Throughout the process, the group continuously puts efforts to reduce the electrical power consumption by the following efforts:

[Table 35] Efforts to Reduce Power Consumption by Alpha Mart

- Replacing the fluorescent lamps with LED lamps;
- Using natural lighting from the transparent ceiling in warehouses during the daytime provides benefits not to utilize any lamps;
- Utilizing timers on all air conditioning (AC) units to automatically switch off at 5 pm, at the headquarter office and other 32 branch offices.

Source: 2020 Sustainability Report by PT Sumber Alfaria Trijaya Tbk

Laws and regulations related to energy saving of major ASEAN countries

Countries	Laws	Source
Thailand	ENERGY CONSERVATION PROMOTION ACT, B.E. 2535 (1992)	World Laws Information Center
Philippines	REPUBLIC ACT NO. 11285 AN ACT INSTITUTIONALIZING ENERGY EFFICIENCY AND CONSERVATION, ENHANCING THE EFFICIENT USE OF ENERGY, AND GRANTING INCENTIVES TO ENERGY EFFICIENCY AND CONSERVATION PROJECTS	
Vietnam	LAW ON ECONOMICAL AND EFFICIENT USE OF ENERGY, Number: 50/2010/QH12	

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- KONETIC

E-14 Energy/Greenhouse Gas ▶ Renewable Energy

Management factor	Does the business use (purchase or produce) renewable energy such as solar, wind, and geothermal energy within the workplace?	Factor type	○
▶ Expand renewable energy to replace fossil energy (e.g., coal, oil) and respond to climate change.			

Significance

∴ The international community recognizes the seriousness of climate change and accelerates the transition to a carbon-neutral society. Therefore, renewable energy increasingly gains attention among investors, parent businesses, and suppliers.

- Many countries, including the EU and the United States, are reinforcing the requirement to submit data on carbon emissions during production, and therefore, after 2027, products with GHG emissions above the standard will be subject to export restrictions. As a result, businesses will be financially responsible for their carbon emissions.
- (Renewable energy in Vietnam) The country plans to increase the share of renewable energy by 42% of the total energy generated by 2045 to upgrade the power supply instability and low energy efficiency along with economic growth.
 - Vietnam boosts its investments led by the government, and an increasing number of various projects (e.g., solar and wind power) are on their way.
- (Renewable energy in Indonesia) Indonesia is the world's 5th largest GHG emitter.
 - The country aims to replace 23% of its total electricity production with renewable energy by 2025 and 31% by 2050. For reference, hydropower is currently the largest renewable energy source in Indonesia.

Implementation

∴ Use means of implementation, such as producing renewable energy directly (installing a power generation facility in the workplace) or purchasing electricity generated by renewable energy.

- Verify whether the energy in concern is recognized as renewable before implementation; some types of energy may not be classified as renewable by different standards due to the wide range of renewable resources.
 - Although eco-friendly, hydrogen energy, fuel cell energy, and coal gasification/fuel conversion energy do not belong to renewable energy because they are not "renewable" but use existing fuels in new ways or use chemical reactions.
- When installing renewable energy power generation facilities, consider the characteristics of the workplace, such as location and site availability, and the pros and cons of renewable energy. Then, after installing suitable energy facilities through internal reviews, manage the generated energy quantitatively.

[Table 36] Key Management Data in Renewable Energy

◆ **Key management data:** renewable energy production (kWh), renewable energy consumption (kWh), renewable energy replacement ratio (%)

※ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

Case 1 | Installation and use of solar power facilities by CJ Logistics in Vietnam

- CJ Gemadep, a Vietnamese subsidiary, installs a 4.8MWh photovoltaic facility on the rooftop of a refrigeration distribution center in the Mekong Delta region, reducing 4,840 tons of CO₂ per year.
- It is the largest area in Vietnam (25,000m²) for solar power generation facilities installed on rooftops.
- The facility can produce 7,066MWh of renewable energy annually and saves about 25% of electricity bills annually.

Source: KOTRA

Case 2 | Green Electricity Program at the Indonesia Unilever

- Graha Unilever in Indonesia runs the Green Electricity Program. As a part of the program, they have installed 199.7kWp(kilowatt peak) solar panels located their rooftop since 2019.
- This solar panel initiative has received several awards and certificates related to the requirements of a sustainable Green Office Building.



Source: 2021 Sustainability Report by PT Unilever Indonesia Tbk

Laws and regulations related to renewable energy of major ASEAN countries

Countries	Laws	Source
Malaysia	LAW OF MALAYSIA Act 725 RENEWABLE ENERGY Act 2011	World Laws Information Center
Philippines	REPUBLIC ACT NO. 9513 AN ACT PROMOTING THE DEVELOPMENT, UTILIZATION AND COMMERCIALIZATION OF RENEWABLE ENERGY RESOURCES AND FOR OTHER PURPOSES	

Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- Korea Environmental Industry Association

E-15 Energy/Greenhouse Gas ▶ Greenhouse Gas

Management factor	Does the business carry out GHG management (direct/indirect emission calculation, management, reporting) and reduction activities?	Factor type	●
	▶ Identify the direct/indirect sources of GHG emissions in the production process, determine the management scope, and implement reduction activities by systematically managing primary GHG emissions by establishing a GHG inventory.		

Significance

- ∴ Major customers demand stricter GHG management by presenting GHG emission reduction targets while participating in initiatives (i.e., CDP Supply Chain, SBTi).
- Countries around the globe develop their GHG emission reduction targets per the Convention on Climate Change with appropriate implementation measures. GHG reduction may determine corporate competitiveness and performance.
- Major large businesses implement activities such as setting reduction targets for Scope 3, including suppliers and developing a supply chain management system. This movement triggers higher demand for GHG reduction and management of their suppliers, generally SMEs.
- The ASEAN region is one of the most susceptible regions to climate change, with three of its countries—Myanmar, the Philippines, and Thailand—among those that have suffered the greatest fatalities and economic losses because of climate-related disasters.

Implementation

- ∴ Determine the management scope by categorizing the GHG emission sources of the entire workplace directly and indirectly, and seek ways to reduce GHGs by establishing an inventory and systematically managing related data.

[Table 37] Key GHG Management Data

◆ **Key management data:** direct GHG emissions (Scope 1) (ton CO₂eq), indirect GHG emissions (Scope 2) (ton CO₂eq)
 ※ Note: standardized units of measurement should be applied to the environmental data for its management efficiency.

- Internationally, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), nitrogen trifluoride (NF₃) are subject to GHG management. Each workplace should be aware of the type of material emitted and the location of the source.

[Table 38] Types and Characteristics of GHGs

GHG	Global warming potential*	Contribution to warming**	Lifetime (yr)	Emission sources
CO ₂	1	55	100~250	Fuel use, industrial processes
CH ₄	21	15	12	Waste, agriculture, livestock
N ₂ O	310	6	120	Industrial processes, fertilizer use, waste
HFCs	140~11,700	24	70~550	Refrigerants, solvents, releasing agents, cleaning agents
PFCs	6,500~11,700			Refrigerator, fire extinguisher, detergent
SF ₆	23,900			

*Relative measure of the impact of CO₂ on global warming, **Percentage of contribution to warming by GHGs in terms of concentrations in the atmosphere

Source: <https://www.koreascience.or.kr/article/JAKO200828073326405.pdf>

■ Determine GHG management scopes of workplaces, and install GHG management systems by preparing a GHG inventory*.

- For SMEs, the management scope is appropriate up to Scope 2 since the major GHG emissions in the workplace are made in Scopes 1 and 2, although GHG emissions are generally divided into direct emissions (Scope 1), indirect emissions (Scope 2), and other indirect emissions (Scope 3), depending on emission sources.

- Businesses should expand the scope to Scope 3 to manage GHG emissions throughout the entire supply chain if they ensure economic feasibility and environmental characteristics or are requested by customers or external stakeholders.

※ GHG inventory: list of emission sources by investigating and building emission data for each GHG emission source

[Table 39] Primary GHG Emission Sources in the Workplace

Scopes	Primary GHG emission sources	
Direct emissions (Scope 1)	Stationary combustion emissions	Emissions from production facilities or processes directly owned and managed by the workplace, i.e., boilers, burners, turbines, heaters, incinerators, engines
	Mobile combustion emissions	Emissions from burning fuels used in transportation, i.e., buses, trucks, passenger cars
	Fugitive emissions	Intentional or unintentional emissions from fuel use, storage, transport, production and processing, and other substances, i.e., such as fire extinguishers, air conditioners, refrigerators, water purifiers
Indirect emissions (Scope 2)	Emissions from the production process, i.e., purchased electricity, steam (heat), water, power	
Other indirect emissions (Scope 3)	Emissions from the extraction and production of purchased materials, the transportation of purchased fuels, and the use of products and services	

Source: Method of GHG(Greenhouse Gas) Calculation Retrieved from <https://www.koreascience.or.kr/article/JAKO200828073326405.pdf>

■ Prepare tools for calculating GHG emissions considering the current workplace situation, and set quantitative GHGs reduction targets by calculating direct/indirect GHG emissions and total emissions for emission sources within the Scope (e.g. 00% reduction compared to YYYY emissions by YYYY).

- See Carbon Emission Management Guidelines for SMEs published by ASEIC for calculating GHG emissions.

■ Identify sources where GHG emissions can be reduced to achieve the reduction target and plan and execute various GHG reduction activities, including investment, budget, and human resources.

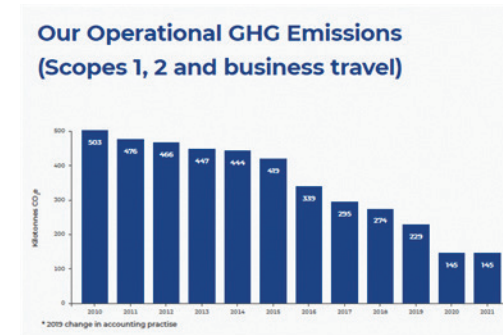
- Using GHG reduction mechanisms such as the GHG Emissions Trading Scheme and the Clean Development Mechanism (CDM) of the United Nations Framework Convention on Climate Change can also be one of the means of reduction.

■ In addition, it is necessary to disclose GHG emissions (including intensity), environmental performance data, and analysis of reduction program results to allow stakeholders to fully recognize the business's efforts and achievements for environmental improvement.

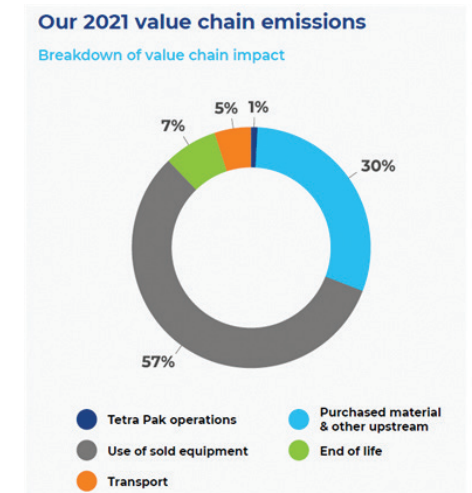
Case 1 | Supply chain access and decarbonization by Tetra Pak in Vietnam

- Since 1999, the business has been actively engaged in responsible activities for reducing GHG. As a result, it has been the first in the food industry to join the Science-Based Targets Initiative (SBTi) to respond to carbon emission reduction (12 million tons of GHG emissions reduced over ten years from 2010 to 2020).
- Four thousand tonnes of GHG emissions are reduced by recovering or recycling 65% of waste generated annually.
- Reduction target: To reduce GHG emissions by 40% by 2030 and 58% by 2040 from 2015 levels to reach net zero by 2050
- Action plan: improve energy efficiency, install photovoltaic power generation systems at production sites, reduce carbon emissions by purchasing renewable energy, etc.
- Strategy: (1) Sourcing and transportation of its raw materials, (2) its operations, (3) the equipment used in food and beverage manufacturers' operations, and (4) the end-of-life management of its packages

[Figure 26] GHG Emission Scope 1,2



[Figure 27] Value Chain Emissions

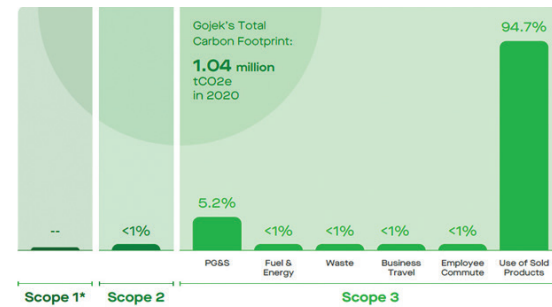


Source: 2022 Sustainability Report by Tetra Pak

Case 2 | Scope 3 GHG emission management by PT Gojek in Indonesia

- To manage the environmental impact of the transportation activities on its platform, the business follows a data-driven approach and has measured its carbon footprint between January 2020 and December 2020.
- Beyond its efforts to reduce its direct emissions, the business also continues to measure and provide support to their suppliers in order to accelerate the ecosystem's transition to a low-carbon economy.

[Figure 28] GHG Emissions by Gojek



[Table 40] Managing Emissions Strategy

Reduce	It aims to reduce emissions by improving operational efficiency through smarter allocation of drivers, and the establishment of the relevant policies and support to accelerate EV(Electric Vehicle) adoption for their driver suppliers.
Offset	For the emissions it cannot avoid or reduce, the business is going to offset as it continues to reduce and avoid more emissions.
Strategy	① Accelerating the Transition to Electric Vehicles
	② Expanding Its Platform to Provide Greener Products
	③ Ensuring that Its Vehicles Meet Standards in Protecting Air Quality

Source: 2020 Sustainability Report of PT Gojek Indonesia

Note (source)

- ISO 26000
- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Multidisciplinary Digital Publishing Institute

E-16 Product Innovation ▶ Green Investment

Management factor	Does the business make efforts to secure R&D investment and technology to secure the environmental competitiveness of its products?	Factor type	
	▶ Facilitate excellent technology R&D and investments that enhance the environmental quality of products (or services).		○

Significance

As the movement to improve environmental performance throughout the production process is spreading internationally, technology R&D is essential for efficient compliance with environmental regulations and enhancement of industrial competitiveness.

- Demand for eco-friendly products (or services) increases as environmental laws or related regulations in countries around the world become stricter, and consumers consider social and environmental factors when purchasing products (or services).
 - This trend can act as a crisis factor, such as weakening businesses' price competitiveness and market shrinkage. However, it can also act as a new opportunity factor due to the reorganization of the new environment market due to environmental technology research and development.
- Businesses must research and develop environmental technologies to dramatically improve environmental performance while maintaining the performance and price of products (or services).

Implementation

Acquire environmental improvement technologies applicable to products (or services) through voluntary R&D and external investment.

- For businesses that find it challenging to research and develop technology on their own due to problems such as economic feasibility and lack of human resources, it may be a good idea to collaborate through open innovation and utilize government agencies or support projects to develop technologies.
 - However, when collaborating, problems such as leakage of business-specific technology or ideas or disadvantages in profit distribution may occur, which need to be identified and clarified in advance.

[Table 41] Types of Open Innovations

Type	Highlights
Outside-in	Acquisition of knowledge or ideas from external businesses, research institutes, or universities during research, development, and commercialization
Inside-out	Commercialization through other business models by exporting the knowledge or ideas to the outside world

Case 1 | R&D for sustainable cigarette filter manufacturing by Philip Morris Altria Group in Indonesia

- The group has been actively investing in R&D for many years to explore and assess the viability of alternative cigarette filter materials that have a lower environmental impact than cellulose acetate (CA).
- It evaluated alternative filter materials via extensive analytical testing, machinability trials, biodegradation evaluations, and prototype testing among consumers to understand their acceptability.
- Any new filter material or design must satisfy stringent criteria.

[Table 42] Characteristics of Sustainable Cigarette Filters by Philip Morris

- Comparable filtration efficiency and performance consistent with CA filters
- Acceptable taste characteristics and experience for consumers
- Similar or reduced material carbon footprint compared with CA filters
- Substantial improvement in marine, aquatic, and soil biodegradation compared with CA filters or a significant reduction in the plastic content of the filter
- Conduciveness to industrialization at scale

- In 2022, the group plans to continue their exploration and use consumer research to better understand and validate consumer acceptance of alternative non-plastic filters.

Source: 2021 Integrated Report by Philip Morris International

Note (source)

- ISO 26000

E-17 Product Innovation ▶ Ecodesign

Management factor	When designing a product, does the business consider the environmental impact of the entire production process, such as transportation, use, and disposal?	Factor type	○*
	▶ Continuously monitor environmental law trends and amendments for manufacturing workplaces with high environmental sensitivity, such as air, water quality, and waste, and develop a compliance monitoring and internal control system for each environmental medium.		

*Applicable to BtoC companies only

Significance

∴ Internationally, as the movement to improve environmental performance throughout the entire product lifecycle spreads and awareness of eco-friendly consumption increases, eco-friendly products have become competitive for businesses to preoccupy the market.

- The goal is to develop and design eco-friendly products to minimize the environmental load by considering the environment throughout production while maintaining the primary level in product price, function, safety, and design.

Implementation

∴ Be sure to review the necessity and feasibility of the business's current situation and implement detailed activities related to the six strategies significant for developing eco-friendly products.

- A specific function within an organization cannot complete the eco-friendly design. Cooperation from various departments related to product development and support from external stakeholders (i.e., suppliers, distributors, and waste treatment businesses) are required.
- The six strategies include all environmental issues occurring in the entire process: ① reduction of harmful substances, ② improvement of recyclability, ③ improvement of energy efficiency, ④ reduction of material use, ⑤ reduction of environmental pollutants, and ⑥ optimization of service life.

[Table 43] Six Strategies for Eco-friendly Design

Strategies	Implementation	Key industries
Reduction of harmful substances	<ul style="list-style-type: none"> • Minimize the amount of hazardous substances used or discharged from the point of manufacture, use, and disposal of raw materials, parts, and products. • Select a supplier of parts less affected by hazardous substances when manufacturing a product by assembling parts. 	<ul style="list-style-type: none"> • Processing and assembly industries such as automobiles, electrical electronics, and machinery • Steel, chemistry, paper, etc.
Improvement of recyclability	<ul style="list-style-type: none"> • Consider the economic and technical aspects of product recycling when designing a product. • Recollect resources through product recovery and effective recycling. 	<ul style="list-style-type: none"> • Processing and assembly industries such as automobiles, electrical electronics, and machinery
Improvement of energy efficiency	<ul style="list-style-type: none"> • Connect major environmental issues in the manufacturing process and use stage (for electrical and electronic products) with the economic burden of consumers, such as production and maintenance costs. • Introduce energy efficiency facilities and recovery systems. 	<ul style="list-style-type: none"> • Most manufacturing process • Electrical and electronics

Steps	Implementation	Key industries
Reduction of material use	<ul style="list-style-type: none"> Minimize the consumption of resources required to manufacture the product. Reduction of product weight or volume, yield improvement, use of recycled materials, etc. 	<ul style="list-style-type: none"> Most manufacturing process
Reduction of environmental pollutants	<ul style="list-style-type: none"> Reduce environmental pollutant emissions during the entire process. Identify major substances that affect the environment and evaluate their environmental impact. 	<ul style="list-style-type: none"> Most manufacturing process
Optimization of service life	<ul style="list-style-type: none"> Prevent premature disposal due to failure and performance degradation. Improve the modularization of parts and the ease of parts replacement (to be considered in the design stage). Provide information such as product use, diagnosis of abnormal conditions, and solutions. 	<ul style="list-style-type: none"> Processing and assembly industries such as automobiles, electrical electronics, and machinery

Case 1 | Vietnam Vinamilk Sustainable Development Report

- Nestle MILO began using paper straws for their MILO breakfast product in March 2020.
- Nestle MILO uses more than about 16 million paper straws, equivalent to reducing 6.7 tons of plastic waste.
- In addition, other brands such as NESVITA and Nestle milk have also researched and developed paper straws for use, with the aim of having towards 100% of the instant drink products now using paper straws.

[Figure 29] Paper Straws by Nestle



Source: Nestle in Vietnam Brochure 2020

Case 2 | Rinso's eco-design by PT Unilever Tbk in Indonesia

- The Powder Non-Soap Detergent(NSD) factory that produces Rinso has started using biomass energy from renewable palm shells since 2019 (This biomass has replaced the use of natural gas as fuel in the powder detergent drying process).
- The palm kernel shell was chosen by the business because of its abundant supply in Indonesia, relative weather-resistant during storage, and low ash content.
- Rinso has unveiled the 200 ml recycled plastic packaging that uses Post-consumer Recycled Resin (PCR) 5% as the first flexible pouch with a unique packaging texture in Indonesia.
- Rinso has tried new, more efficient packaging innovations by utilizing the Creasolv concept, which is the technology recycles plastic packaging waste (pouches and sachets) into materials that can later be used to make new packaging.

[Figure 30] Eco-design by Unilever



Source: PT Unilever Indonesia Tbk 2021 Sustainability Report

Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- EcoVadis Sustainability Assessments

E-18 Product Innovation ▶ Ecolabel/Eco-certification

Management factor	Does the business secure or prepare for eco-friendly certification (eco-label, good recycling (GR), low-carbon certification, green technology, new environmental technology) for products/technology?	Factor type	○*
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▶ Ensure objectivity and reliability for businesses and products through eco-friendly certification for manufactured products and technologies. It can be selectively applied if BtoB items can be applied in the corresponding certification system.

*Applicable to BtoC companies only

Significance




- Environmental excellence can be objectively demonstrated through eco-friendly certifications of manufactured products.
- Eco-friendly certifications for products and technology can relieve consumers' uncertainty about the environmental properties of the business's management system, products, and services.

Implementation

- Acquire product and technology certifications such as low-carbon certification and carbon footprint, and announce them externally through a website.
- They exert a similar effect as objective proof of eco-friendly innovation capabilities, such as R&D and intellectual property rights and patents related to eco-friendly, green, ECO, low-carbon, etc.
 - Select the appropriate certification among various eco-friendly product and technology certifications depending on the business's business characteristics plans.
- Acquired eco-friendly certification is an objective basis for a business's commitment and efforts for environmental management. Disclose them to external stakeholders through communication channels such as sustainability reports and websites.

[Table 44] International and ASEAN's Eco-friendly Product and Technology Certifications

Type	Major eco-friendly certifications	Details
International	<p>Carbon Footprint</p>	<ul style="list-style-type: none"> Awarded when certain criteria are met by measuring the amount of carbon emissions generated in the entire life cycle of a product Consists of carbon measurement, carbon reduction, carbon reduction packaging, carbon neutrality, carbon neutral packaging, low carbon, and 100% renewable energy based on product types and standards

Type	Major eco-friendly certifications	Details
International		<ul style="list-style-type: none"> Indicates that the product is made from raw materials from sustainable forests and not from illegal logging FSC 100%: Verified by an independent third-party certification body that all raw materials come from forests managed per FSC's strict social and environmental standards FSC RECYCLED: Made from 100% recycled material (post-consumer or pre-consumer recovered material) FSC MIX: Made from a blend of raw materials from FSC-certified forests, recycled materials, and/or FSC-managed wood materials.
ASEAN		<ul style="list-style-type: none"> Malaysia's official green recognition scheme endorsed by the Government of Malaysia, bringing together certified products and services that meet local and international environmental standards under one single mark.
		<ul style="list-style-type: none"> An environmental labeling system introduced and operated by the Thailand Environmental Institute (TEI), a private organization, in 1994 with the support of the Ministry of Industry This certification mainly focuses on paint, fluorescent lamps, and office equipment items.

Note (source)

- GRI G4 Standards
- FSC
- Myhijau
- Korea Environmental Industry and Technology Institute

E-19 Product Innovation ▶ Consumer Protection

Management factor	Does the business prepare and implement measures (risk assessment, use of alternative substances, risk notification) for consumer health and safety protection when using the product?	Factor type	○*
<p>▶ Regularly identify product issues possibly affecting consumer safety and implement risk remediation activities. BtoB businesses that can affect the eco-friendliness of final products can apply this factor to material selection and parts design.</p>			

*Applicable to BtoC companies only

Significance

- ∴ Consumers face a significant threat to their safety because it is difficult for them to determine the cause themselves despite an increasing number of damage cases due to harmful substances and toxic substances in products.
- Consumers are vulnerable to product harm and damage as they use a business's products unilaterally. Businesses must protect the safety and health of consumers in providing products and services.

Implementation

- ∴ Periodically check related laws and conduct product test analysis to identify factors that may harm consumers' health and safety (e.g., harmfulness and risk of products to humans).
- Check the obligations described in the relevant laws and regulations, and identify the risks of the product by conducting a test analysis to confirm the product's safety (take possible measures such as a ban on product sales and import upon finding harm).
- Conduct risk assessments for chemicals that may harm human health and the environment when exposed. When selecting a product to be evaluated, consider the properties of the ingredients it contains along with the physical properties of the product.
- Businesses should comply with legal requirements to allow consumers to be aware of the harmfulness and risks of products during the purchase and use and preemptively respond to potential damages due to consumer misunderstanding or information asymmetry.

Case 1 | Recall order for Vietnam's instant noodle Hao Hao after detecting carcinogenic ingredients in Ireland

- In 2021, the Food Safety Authority of Ireland (FSAI) ordered a recall of all two types of noodles imported from Vietnam (with an expiration date of September 24, 2022).
 - Hao Hao and Good brands with rib flavor popular among Vietnamese people

[Figure 31] Vietnam's Hao Hao



- As the Food Safety Authority of Ireland pointed out, ethylene oxide, which is only found in disinfectants or pesticides, was detected in these products.
 - Ethylene oxide is a first-class carcinogen that must not be detected in all foods sold in the European Union (EU).
- The Ministry of Industry and Trade of Vietnam requested Ace Cook Vietnam Corporation to report on the production process and clarify the differences between domestic and exported products.
 - Accordingly, ACE Cook, the manufacturer, made a list of all products distributed throughout Vietnam and started to review the production process for any additional violations.

Source: Korea Economy TV

Laws and regulations related to consumer protection of major ASEAN countries

Countries	Laws	Source
Indonesia	LAW OF THE REPUBLIC OF INDONESIA NUMBER 32 YEAR 2008 CONCERNING PROTECTION AND MANAGEMENT OF ENVIRONMENT, CHAPTER 7 MANAGEMENT OF HAZARDOUS AND TOXIC (B3) SUBSTANCES AND WASTES	World Laws Information Center
Thailand	HAZARDOUS SUBSTANCE ACT B.E. 2535 (1992)	
Philippines	REPUBLIC ACT NO. 7394-THE CONSUMER ACT OF THE PHILIPPINES TITLE 2 CHAPTER 3 Hazardous Substance	
Singapore	Environmental Protection and Management Act 1999 PART 7 HAZARDOUS SUBSTANCE CONTROL, Second Schedule - Control of hazardous substances	

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- EcoVadis Sustainability Assessments

II. Social

Management factors for each category

● core factors, ○ additional factors, * Conditional factors (for BtoC, publicly listed companies, etc.)

Management factor	Checklist	Type
Labor Practices	Does the business encourage legal and reasonable working hours and provide industry-average welfare benefits (parental leave, expanded opportunities for self-development)?	●
Ban on Any Forms of Forced or Child Labour	Does the business prohibit forced/child labor in the organization's employment practices?	●
Diversity and Equal Opportunities	Does the business provide equal opportunities to its employees in terms of employment, promotion, and job performance without discrimination based on gender, disability, or country of origin?	●
Ban on Harassment in the Workplace	Does the business have in-business rules to prevent harassment, such as violence against workers, sexual violence, public shame, and verbal abuse, and are disciplinary actions taken in case of violation?	●
Accident Prevention in the Workplace	Does the business manage the annual accident rate and operate worker safety/health policies and programs (safety and health education, workplace risk assessment) to prevent industrial accidents?	●
Certifications	Does the business secure or prepare safety and health management certification (ISO 45001) for the workplace or products (technologies)?	○
Protection of Personal Information	Does the business have in-house personal information security regulations and guidelines that comply with information security legal requirements for collection, storage, and processing?	●*
Product Quality and Safety	Does the business strictly comply with product safety and quality standards to protect consumer safety and rights?	●*
Voice of the Consumer	Does the business have a communication process to collect and provide consumer feedback?	○*
Local Community Development and Engagement	Does the business officially support community contribution and development and carry out related activities (establishment of contribution policy, industry-university cooperation, start-up support)?	○

- The rapid change in consumption trends and the ease of forming and developing opinions in social media gradually expands the importance of the S (social) factors toward to future.
 - There are many cases in which corporate social responsibility issues, such as management's morality and inhumane treatment of workers, led to boycotts and a decline in brand value. This phenomenon shows that the evaluation of businesses beyond products has become the consumption standard.
 - Consumers use their consumption behavior to express their values or ideologies. Therefore, boycott campaigns and consumption promotion campaigns based on consumers' political orientation are social consumption in a broad sense.
- In addition, as related indices such as ISO 26000 and Socially Responsible Investment (SRI) become more evident, investment activities based on them are expected to flourish. Therefore, the S (social) factor is recognized as an indispensable element in enhancing corporate value.
- Therefore, businesses should actively utilize social responsibility in corporate management through preemptive and active understanding and efforts rather than using social responsibility only to enhance corporate reputation or publicity.

S-1 Human Rights and Labor Practices ▶ Labor Practices

Management factor	Does the company encourage legal and reasonable working hours and provide industry-average welfare benefits (parental leave, expanded opportunities for self-development)?	Factor type	●
▶ Companies must comply with laws and regulations, such as working hours, specified in local labor-related laws of each country, and design and operate welfare systems to improve workers' work-life balance and quality of life.			

Significance

:: The concept of capitalism has been transformed into stakeholder capitalism as various social situations, such as COVID-19 and a shift in perception of the quality of life, are intertwined. As a result, workers are viewed as stakeholders from simple employees.

- The transition to stakeholder capitalism requires material changes in industrial relations as well. The need to change and recognize the importance of human capital, working conditions, human rights management, and management involvement has emerged.

[Table 45] Key Considerations due to Changes in Labor-Management Relations

Type	Highlights
Human capital	Investment in workers
Working conditions	Fair compensation and benefits for workers
Human rights management	Recognition and respect for workers with dignity
Management involvement	Incorporation of workers' opinions in management

- Several countries within ASEAN, such as Vietnam, Thailand, and Malaysia, have recently revised their labor laws to improve working conditions for their employees.
 - Companies operating or planning to operate in the ASEAN region are advised to take a closer look at the revised labor laws of each country.

Implementation

:: Observe the labor laws of each country and provide various welfare benefits such as parental leave, self-development, and performance distribution as the company resources allow.

- Each company's environment is different. Therefore, carefully review whether each welfare system is feasible and, if not, use the special overtime work permit and flexible work systems due to the nature of the company or particular circumstances.
 - It is helpful to use an electronic time and attendance program to determine working hours when working hours are adjusted based on flexible working systems. In addition, it is desirable to conduct relevant training for all executives and employees for easy implementation.

- In addition, companies can consider introducing a selective welfare system that allows workers to freely select and receive benefits according to their preferences and needs.

- Ensure that all workers in the company receive fair welfare benefits when implementing a selective welfare system. The level of benefits may vary according to reasonable standards, considering the worker's position, years of service, dependents, etc.
- In addition, when designing welfare systems, it is necessary to reflect the primary livelihood security factors related to death, disability, and disease of workers and additional optional factors for individuals that can support good leisure, cultural, and sports activities in a balanced way.

Case 1 | Amended Labor Protection Act in Thailand

- The Labor Protection Act (No. 7), B.E.2562 (2019), amended in 2019, shows the Thailand government's commitment to improving overall working conditions.

[Table 46] Major Amendments to the Thailand Labor Protection Act in 2019

	Before amended	After amended
Maternity leave	90 days	Extended to 98 days, including spouses eligible for 45 days of paid maternity leave
Company leave	Discretion of the employer	Paid leave, at least 3 days per year
Relocation of workplace (including company relocation due to organizational restructuring)	-	Requires employee's consent. Severance should be paid upon contract expiration due to a refusal.
Severance pay	300 days' worth of final salary for those who have worked for ten years or more	400 days' worth of final salary for those who have worked for more than 20 years
Interest on unpaid wages	7.5%	15%
Prohibition of gender discrimination	-	Equal pay for work of equal value

Source: KOTRA's Overseas Market News

Case 2 | The Employee Welfare at Singapore Sea Limited

[Table 47] Employee Welfare by Sea Limited

Paid Leave	<ul style="list-style-type: none"> • Marriage leave and family care leave • Vaccination leave and sick day leave • Maternity and paternity leave
Medical benefits and insurance	<ul style="list-style-type: none"> • Outpatient, dental, maternity and inpatient claims • Annual health screening • Dental and optical benefits

Support resources	<ul style="list-style-type: none"> • Complimentary message services • Napping rooms • Fitness and welfare benefits including in-house gyms • Employee Assistance Programmes offers fully funded counseling services by professional external counsellors
Team bonding and welfare events	<ul style="list-style-type: none"> • Frequent company-wide events • Department and team retreats

Source: 2021 Sustainability Report by Sea Limited

Laws and regulations related to working conditions of major ASEAN countries

Countries	Laws	Source
Thailand	LABOUR PROTECTION ACT B.E. 2541 (1998)	World Laws Information Center
Malaysia	Act 265 EMPLOYMENT ACT 1995	
Philippines	THE LABOR CODE OF THE PHILIPPINES (PRESIDENTIAL DECREE NO.442 OF 1974, AS AMENDED RENUMBERED) BOOK 3 - CONDITIONS OF EMPLOYMENT	
Vietnam	No. 45/2019/QH14 - LABOR CODE	
Cambodia	No. 45/2019/QH14 - LABOR CODE	
Brunei	EMPLOYMENT ORDER PART 7 REST DAYS, HOURS OF WORK, HOLIDAYS AND OTHER CONDITIONS OF SERVICE	
Singapore	Employment Act 1968	

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Asean Daily News
- KOTRA's Overseas Market News
- HRM Asia

S-2 Human Rights and Labor Practices ▶ Ban on Any Forms of Forced or Child Labour

Management factor	Does the company prohibit forced/child labor in the organization's employment practices?	Factor type	
	▶ Prevent and prohibit child labor under the legal minimum age and any form of forced labor by establishing and strictly complying with internal regulations.		●

Significance

:: Forced labor is considered equivalent to slave labor and is strictly prohibited. Furthermore, regulations of the International Labor Organization (ILO) and the laws of many countries strictly prohibit child labor under the minimum age based on the principle of child protection.

- It is known that forced and child labor, in many forms, still exists in developing countries. Even in developed countries where the rule of law has been established, it is difficult to be certain that overt forced or child labor has been completely eradicated.
- Therefore, companies should not only voluntarily use forced or child labor but also thoroughly manage to avoid being involved in such labor anywhere in subsidiaries, supply chains, or overseas corporations, even indirectly.
- As of 2017, the share of forced labor in the total population of each ASEAN country is the highest in Cambodia (1.648%), followed by Myanmar (0.956%), Brunei (0.805%), Thailand (0.625%), Malaysia (0.425%), Philippines (0.398%), Indonesia (0.286%), Singapore (0.165%), and Vietnam (0.152%).
 - Thailand : Since June 2017, the country has imposed fines of up to 800,000 baht on employers for illegally hiring foreigners and others.
 - Malaysia : The country enforced health examinations for illegal foreign workers in October 2017, imposed an "employment tax" in 2018 to ensure that businesses were responsible for their welfare, and raised employment taxes in 2019.
 - Vietnam : As of 2019, there are 1.7 million child workers. The country aims to eradicate all forms of child labor by 2025 and strives to comply with the working conditions of the International Labor Organization (ILO) Convention.

Implementation

:: Indicate the prohibition of forced and child labor in the management policy of the businesses (in-house regulations), and develop an evaluation system using checklists and guidelines to conduct regular due diligence, including subsidiaries and suppliers.

- Businesses shall be careful not to accept human resources from organizations or businesses that engage in human trafficking or servitude and should not purchase goods produced by this personnel.

- Request subsidiaries or suppliers operating in foreign countries to state in documents such as contracts that they have not used or been involved in forced or child labor.
- Companies operating in countries with poor birth certificate issuance systems should ensure that children are not employed by considering appropriate alternative methods for verifying the age of workers. Take remedies such as providing educational opportunities upon recognition of employment below the minimum age.
 - Arrange for an additional review of the authenticity of identity documents in cases where there is a possibility that identity could be forged.

Case 1 | ASEAN Roadmap for the Elimination of the Worst Forms of Child Labor by 2025

- Adopted at the 26th ASEAN Employment and Labor Ministers' Meeting on October 28, 2020
- Purpose: To support ASEAN Member States based on achievements and lessons learned from implementing previous ASEAN Roadmaps and similar initiatives to end the worst child labor within ASEAN Member States over the next five years.

[Table 48] ASEAN Roadmap to Eradication of Child Labor

Prohibition of child labor practices and promotion of good governance for the prohibition of child labor	<ul style="list-style-type: none"> • Institutional capacity in the field of labor supervision and law enforcement in remote areas • Strengthened good governance to eliminate child labor • Reinforced cooperation and coordination among consultative bodies
Prevention of child labor practices	<ul style="list-style-type: none"> • Analysis of the root cause of child labor • Enhanced access to education in rural and remote areas • Rural development and poverty reduction • Quality jobs for youth workers • Public awareness
Child protection	<ul style="list-style-type: none"> • Strengthened social protection for children • Improvement of rescue and support system from child labor

Source: Ministry of Foreign Affairs in the Republic of Korea

Case 2 | Indonesia Indofood – Prohibition of Child and Forced Labor Practices

- Indofood has its own regulations that strictly prohibit hiring employees and casual labor below the minimum working age of 18 years, as well as prohibiting all forms of forced labor. The business operates in accordance with all prevailing Indonesian laws and regulations on labor and human rights, including ILO(International Labour Organization)'s Worst Forms of Child Labor Convention (1999, No.182) as well as Abolition of Forced Labor Convention (1957, No.105).
- The Agribusiness Group Labor Policy describes the proactive measures to prevent child and forced labor, including clauses in employment contracts, reminders in plantation areas, and provision of free education and day care facilities to keep children away from fields.

Source: Indofood 2021 Sustainability Report



Laws and regulations related to forced labor/child labor in major ASEAN countries

Countries	Laws	Source
Thailand	LABOUR PROTECTION ACT B.E. 2541 (1998) Chapter 4 Employment of Child Labour	World Laws Information Center
Malaysia	Act 350 CHILDREN AND YOUNG PERSONS (EMPLOYMENT) ACT 1966	
Philippines	THE LABOR CODE OF THE PHILIPPINES (PRESIDENTIAL DECREE NO.442 OF 1974, AS AMENDED RENUMBERED) BOOK 3 TITLE 3 CHAPTER 2 EMPLOYMENT OF MINORS	
Vietnam	No. 45/2019/QH14 - LABOR CODE Chapter 11 SEPARATE PROVISIONS FOR MINOR WORKERS AND OTHER WORKERS	
Cambodia	LABOR LAW CHAPTER 6 GENENRAL WORKING CONDITIONS SECTION 8 B. Child Labor	
Brunei	EMPLOYMENT ORDER PART 11 EMPLOYMENT OF CHILDREN AND YOUR PERSONS	
Singapore	Employment Act 1968 PART 8 EMPLOYMENT OF CHILDREN AND YOUNG PERSONS	



Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Maeil Economy
- Inside VINA

S-3 Human Rights and Labor Practices ▶ Diversity and Equal Opportunities

Management factor	Does the company provide equal opportunities to its employees in terms of employment, promotion, and job performance without discrimination based on gender, disability, or country of origin?	Factor type	●
	▶ Do not discriminate against workers based on gender, country of origin, and disability for hiring, fair wage, promotion, compensation, and training opportunities; provide explicit standards for performance evaluation throughout the organization.		

Anchor Significance

∴ Non-discrimination is among the human rights principles guaranteed by law. Through diversity management, organizations can break away from the monolithic idea of the same inclination group and enhance the productivity of businesses.

- The perspectives of employees with diverse cultures and characteristics in decision-making can increase the innovation and competitiveness of businesses.
 - According to a diversity survey conducted by the Boston Consulting Group (BCG) in 2018, businesses with high diversity in management generated half of their revenue from products and services launched in the last three years and generated about 9% more revenue than businesses with below-average diversity.
- As the trend of value consumption, which expresses one's beliefs or values through consumer behavior, is spreading, the importance of businesses' reputations is gradually increasing. Therefore, depending on the reputation being built, the brand value of businesses can be improved.

ABC Implementation

∴ Present clear criteria for performance evaluation and improve awareness within the organization so that arbitrary evaluation does not occur in granting opportunities such as promotion throughout the organization.

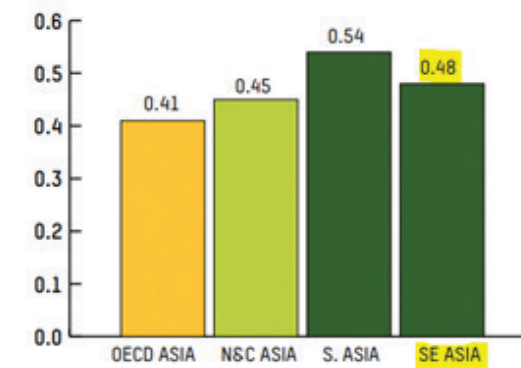
- Most countries have established laws relating to non-discrimination. Review in advance to check whether it is satisfied. Also, establish and comply with the independent non-discrimination principle, even when operating in an area with insufficient laws and systems.
- Aggregating and charting employee diversity data (e.g., gender, religion, nationality, social status), position, salary, and analyzing correlations can help make personnel decisions.
 - Businesses can establish more reasonable standards if they disclose personnel evaluation criteria and factors and establish an appeal procedure.
 - Businesses can achieve higher performance with autonomous and interactive programs rather than unilateral and controlled programs to strengthen their diversity capabilities.

Case 1 | Labor Inequality in South-East Asia

- According to the Oxfam's CRI(Commitment to Reducing Inequality Index) labour database South-East Asia also scores lower than other regions on women's labour rights.
- Especially, Singapore is included in one of the world's bottom 20 countries. Singapore is among only 10 countries in the world that have neither non-discrimination nor equal pay laws.
- Wage inequality is higher in South-East Asia [0.48] compared to OECD Asia [0.41] and North & Central Asia [0.45]. Especially, Myanmar and Singapore are estimated by the ILO to have wage Gini Coefficients side 0.4.

[Figure 32] Wage Inequality

FIGURE 32: WAGE INEQUALITY IN ASIAN SUB-REGIONS (2021, Gini of wages)



Source: OXFAM International

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

S-4 Human Rights and Labor Practices ▶ Ban on Harassment in the Workplace

Management factor	Does the company have in-business rules to prevent harassment (e.g., violence against workers, sexual violence, public shame, verbal abuse) and take disciplinary actions in case of violation?	Factor type	●
	▶ Establish a code of ethics to prevent harassment in the workplace, prepare a procedure in case of violation, and take disciplinary action corresponding to the result when a problem arises.		

Significance

:: Harassment in the workplace violates the victim's personality rights and requires an active response as it can cause a negative impact (e.g., impairment of the working environment, legal disputes, loss of internal and external reputation) that indirectly burdens businesses.

- Harassment in the workplace not only damages victims' mental and physical health but also affects witnesses, lowers job satisfaction and immersion among workers, and hinders regular organization operations by increasing turnover or resignation.
- Businesses operating abroad are not free from the issue as this phenomenon occurs in various countries worldwide.

Implementation

:: Reorganize the organization's internal regulations on harassment in the workplace to specify the definition and punishment of the act while establishing a reporting procedure and measures to prevent a recurrence.

- Establish the concept of harassment in the workplace and improve awareness. In addition, introduce regulations that describe the level of disciplinary action and the procedure to be followed.
- Establish reporting procedures within the organization by ensuring the anonymity of the reporting person and designating the proper personnel to perform objective investigations of reported cases.
- After taking action against harassment, monitor the victim's work environment with exceptional attention to ensure that it is appropriately managed.

Case 1 | Amended Labor Protection Act in Thailand

- On July 20, 2022, the Sexual Harassment Prevention Bill (Rang Undang-Undang Antingangguan Seksual) passed the Malaysian House of Representatives (Dewan Rakyat). This sexual harassment prevention bill was first introduced in Malaysia in 2011 and passed the plenary session after more than ten years of debate in the House of Representatives.
- An International Labor Organization (ILO) survey found that 88% of women in Malaysia had experienced sexual harassment in the workplace.

- A Sexual Harassment Prevention Court (Tribunal Antingangguan Seksual) is planned to address sexual harassment issues on a permanent basis.
- As sexual harassment victims complain of psychological trauma, Article 20 of the Sexual Harassment Prevention Act grants the sexual harassment prevention court the authority to order necessary measures such as counseling and community service for victims or perpetrators of sexual harassment.

Source: Free Malaysia Today, Korea Institute for International Economic Policy

Case 2 | Harassment and stress in the workplace in Singapore

- According to the report from experience management firm, Qualtrics, released on February 2020, Singapore's employee engagement – the extent to which employees feel passionate about their jobs - was at 47 percent.
- Singapore's score of 47 percent was comparatively low to the rest of the world including countries like the United States (U.S.), France, Canada, Australia, and New Zealand which all scored between 53 to 55 percent. According to the index, only 67 percent of employees in Singapore were willing to advocate for their businesses as good places to work in, compared to the regional average of 76 percent.
- In September 2019, a consulting business named Kantar released the results of a study which found that bullying in the workplace is exceptionally high in Singapore. The study discovered that 24 percent of workers in Singapore said they have been bullied in the workplace in the past year, which is among the highest levels in the 14 countries surveyed. In result, Singapore employees are also the most likely to be made to "feel uncomfortable" (32 percent) by their employers, compared with those in other countries polled.

Source: The ASEAN Post

Note (source)

- ISO 26000
- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

S-5 Health & Safety ▶ Accident Prevention in the Workplace

Management factor	Does the company manage the annual accident rate and operate worker safety/health policies and programs (safety and health education, workplace risk assessment) to prevent industrial accidents?	Factor type	●
	▶ Create a safe working environment by establishing occupational safety and health policies, setting specific performance targets, and organizing a dedicated management system.		

Significance

:: In addition to the risk of legal violations, businesses can prevent direct and indirect economic losses and social and humanitarian responsibilities resulting from industrial accidents by preventing industrial accidents.

- Businesses must comply with industrial accident prevention standards per national occupational safety-related laws, create a pleasant working environment for workers, and provide workplace safety and health-related information to workers.
- Industrial accidents trigger indirect losses in business performance (e.g., production setbacks, damaged company reputation, deteriorated labor relations, loss of labor force) as well as direct losses (e.g., accident handling costs, compensation liability costs, and cleanup costs in the event of pollution).

Implementation

:: Prepare safety and health management regulations within the workplace and share them with all employees. Strive to achieve safety and health goals by forming a dedicated organization in charge of industrial accident rate management, regular inspection of the work environment, and safety and health education.

- Set goals based on safety and health regulations, and develop safety and health activities by forming a dedicated safety and health organization centered on personnel with specialized knowledge and skills.
 - Prepare a list of harmful and dangerous facilities in the workplace, regularly check the safety and health risks of the working environment, and provide appropriate protective equipment to prevent accidents.
 - After the inspection, prepare an inspection ledger and keep it available for all workers passing through the area.
 - Separate safety measures are required for high-risk processes, materials, and facilities that may cause safety and health problems.
- ▷ Mandatory safety inspections for hazardous facilities such as presses, cutters, cranes, lifts, chemical facilities, and work platforms

- Estimate occupational accident indexes (e.g., occupational accident occurrence status, safety operation performance, safety work performance capability, and safety work plan) for a minimum of three years to assess safety and health levels and examine targets.
- Identify the target/time/contents related to safety and health education in advance and support them to complete appropriate education.
 - Conduct continuous and repeated education and training related to process safety with retraining on a regular basis.
- Operate a regular check-up program to identify work-related diseases that require intensive management in advance and support early detection of high-risk diseases.

Case 1 | Malaysia AirAsia – Standard Operational Safety and Safety Performance

- Safety training has been provided to all AirAsia's employees and new recruits (called 'Allstars') in regard to potentially hazardous functions. Such training allows Allstars to recognize their role in keeping themselves and others safe at all times.

[Table 49] AirAsia Safety Management

Safety Management System [SMS] Training	The company's Training, Standards and Safety Departments worked together to obtain online training approvals from the relevant regulators of each country. This allowed the company to conduct a total of 981 online SMS training hours, in addition to 218 hours in a classroom setting for its Operational Team.
Safety Management System [e-learning]	Approximately 3,000 Allstars from various functions and departments joined the four-hour course via Google classroom. This course aims to enhance safety awareness during the downtime.
Redeye Training	This training was introduced in 2020 to familiarize Allstars with AirAsia's new safety reporting tool, which has been created in-house, tailored to the Group's unique business structure. User-friendly, the app encourages participation in reporting and allows for safety as well as investigation report to be stored safely.
Aerial Genie Lift Safety Inspection Training	Every year, qualified Allstars from Ground Service Equipment [GSE] undergo eight-hour training to conduct aerial work platform equipment inspection, according to the manufacturer's instructions.
Working at Height course at NIOSH	Engineering Allstars undergo eight-hour training on how to minimize the hazards of working at height.

- The 2020 saw significant improvement in the company's safety performance, with a halving of recordable injuries; roughly two-third decrease in severity rate; and drastic reduction in incident rate. While these are very positive numbers, they are also the result of severely curtailed flight operations.

[Figure 33] AirAsia Safety Performance Indicators

Indicators	2018	2019	2020
Total man hours	21,520,512	22,042,176	21,268,416
No. recordable injuries	109	142	71
Incident rate	12.3	16.0	0.013
Severity rate	20.0	25.7	8.0
Fatalities	0	0	0

- The company reviews its Hazard Identification, Risk Assessment & Risk Control [HIRARC] procedures on an annual basis or whenever there is an accident. In addition, they won Malaysian Society for Occupational Safety & Health Gold (MSOSH) Award for two years in a row since 2020.

Source: AirAsia Sustainability Report 2020

Case 2 | Implementation of Worker Safety and Health Sector by Vietnam's Vinamilk

- The company assures to strictly and fully comply with the relevant provisions of the Labor Law and the Law on Occupational Safety and Health.
 - Organizing annual training courses for employees on occupational safety, environment, occupational health, fire prevention and fighting and first aid in case of occupational accidents, food poisoning and rehearsing emergency situations.
 - Carrying out self-inspection, monitoring and evaluation of safety work daily, monthly and annually at each unit.
 - Organizing annual health check-ups and examinations for all employees for detection of occupational diseases (or disease risks), etc.
 - Implementing periodic assessment programs (every 6 months) of occupational safety and health at the company level for all units.
- In 2021, Vinamilk continued to invest funds and arrange human resources in the field of occupational safety and health, in particular:

[Table 50] Occupational Safety and Health Management by Vinamilk

Financial Aspect	<ul style="list-style-type: none"> • Invested VND 17.17 billion on deploying technical solutions on occupational safety and health, equipping personal protective equipment, training on occupational and health • VND 8.29 billion on periodic health examination fee 								
Human Aspect	<ul style="list-style-type: none"> • Ensuring human resources in the management, and supervision of occupational safety and health, setting up grassroots occupational safety and health councils, assigning full-time employees in charge of occupational health and safety, setting up safety and health teams: <div data-bbox="499 1290 1029 1609"> <p>Percentage of total workforce on Occupational Safety and Health Committees</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>8.0%</td> </tr> <tr> <td>2020</td> <td>8.4%</td> </tr> <tr> <td>2021</td> <td>8.9%</td> </tr> </tbody> </table> </div> <p>[Figure 34] Percentage of Vinamilk's Workforce on Occupational Safety and Health Committees</p>	Year	Percentage	2019	8.0%	2020	8.4%	2021	8.9%
Year	Percentage								
2019	8.0%								
2020	8.4%								
2021	8.9%								

Source: Vinamilk Sustainability Report 2021



Laws and regulations related to industrial accident prevention in major ASEAN countries

Countries	Laws	Source
Thailand	OCCUPATIONAL SAFETY, HEALTH, AND ENVIRONMENT ACT, B.E. 2554 (2011)	World Laws Information Center
Malaysia	Act 514 OCCUPATIONAL SAFETY AND HEALTH ACT 1994	
Philippines	THE LABOR CODE OF THE PHILIPPINES (PRESIDENTIAL DECREE NO.442 OF 1974, AS AMENDED RENUMBERED) BOOK 4 TITLE 1 CHAPTER 2 OCCUPATIONAL HEALTH AND SAFETY	
Vietnam	No. 45/2019/QH14 - LABOR CODE Chapter 9 OCCUPATIONAL SAFETY AND HEALTH	
	Law No.: 84/2015/QH13 - LAW ON OCCUPATIONAL SAFETY AND HEALTH	
Cambodia	LABOR LAW CHAPTER 8 HEALTH AND SAFETY OF WORKERS	
Brunei	WORKPLACE SAFETY AND HEALTH ORDER, 2009	
Singapore	Workplace Safety and Health Act 2006	



Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

S-6 Health & Safety ▶ Certifications

Management factor	Does the company secure or prepare safety and health management certification (ISO 45001) for the workplace or the products (technologies)?	Factor type	○
▶ Ensure objectivity and reliability for businesses and products through certifications for safety and health management systems.			

Significance

Businesses can identify possible risks and manage them in advance through the safety and health management system, and create positive financial effects (e.g., costs required to handle safety accidents).


- Safety and health management can simultaneously achieve the ultimate goal of businesses, profit generation and disaster prevention, minimize losses due to accidents and disasters, and maximize profits through successful safety management.
- As the organization's responsibility for the health and safety of its workers is emphasized, businesses need to ensure that they are fulfilling their duties through independent third-party certification.

Implementation


Observe the labor laws of each country and provide various welfare benefits such as parental leave, self-development, and performance distribution as the company resources allow.

- Disclose certifications applicable to all industries and activities and objectively prove the strengthening of safety and health innovation capabilities to external stakeholders through communication channels such as sustainability reports and websites as the basis for businesses' commitment and efforts.
- Among various certifications, businesses shall select appropriate certifications depending on the characteristics of their business and plans.

[Table 51] Major Safety and Health Management Certifications

Certification	Details
 ISO 45001	<ul style="list-style-type: none"> • International standard for occupational health and safety management system for the reduction of occupational accidents and diseases • It demands safety and health management systems that meets international standards (e.g., organizational situation, leadership, planning, support, operation, performance evaluation, improvement, and more).

Case 1 | Malaysia Edotco – Continuously Enhancing a Safe Working Environment

 <p>[Figure 35] Edotco's Occupational Safety and Health Policy</p>	<ul style="list-style-type: none"> • Ranges of performance assessment and criteria to pursue a safer work environment are : <ol style="list-style-type: none"> (1) Site Inspection & Audit (2) Vendor Performance Audit (3) Quarterly Group HSE Committee Meeting (4) Mandatory learning & certification courses (5) Internal communications & yearly awareness campaigns (Do's & Don't's) (6) Established Emergency Response Team (7) Compulsory training for vendors and site workers
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Source: 2021 Sustainability Report by Edotco

Case 2 | Thailand Thai Beverage – ISO 45001: Occupational Health and Safety Management

 <p>[Figure 36] ThaiBev's ISO45001 Certification</p>	<ul style="list-style-type: none"> • Thai Beverage Public Company Limited and its subsidiaries ("ThaiBev") operate its business in accordance with the principles of good corporate governance with fairness and adhere to the "Business Ethics of Thai Beverage Group". They created the foundation of favorable and safe working environment and atmosphere by adhering to the Occupational Health and Safety (OHS) Standard defined by law and International Standard in order to reduce death, injuries, illnesses and diseases related to work. • ThaiBev formulates the Occupational Health and Safety Program ("OHS program") to ensure effective management of occupational health and safety risk/issues. Its occupational health and safety standard has been verified by the international independent external inspector such as ISO45001:occupational health and safety management system.
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Source: ThaiBev

Note (source)

- EcoVadis Sustainability Assessments

S -7 Consumer Policy ▶ Protection of Personal Information

Management factor	Does the company have in-house personal information security regulations and guidelines that comply with information security legal requirements for collection, storage, and processing?	Factor type	●*
▶ Protect the rights of information subjects from personal information infringement based on the personal information processing policy within businesses that comply with the 「Personal Information Protection Act」.			

Anchor Significance

∴ As the use of data soars, including personal information, the importance of security is increasing. Accordingly, the demand for personal information protection responsibilities and obligations of businesses should be further strengthened.

- Leakage of personal information may cause collateral damages at a managerial level (e.g., legal liability, compensation for damages, loss of customers, a decline in sales and credit rating, damage to reputation, and more)
- Due to the rapid development of IT technology, damage caused by personal information infringement spreads faster on a larger scale than before. Accordingly, it is essential to prevent possible damage in advance.
 - In particular, an accident immediately affects the ESG rating in industries such as IT and telecommunication services where personal information is critical

ABC Implementation

∴ Prepare measures for personal information infringement by developing a consumer personal information protection system in compliance with each country's information protection laws

- Develop a personal information protection system that encompasses all possible scenarios (e.g., collection, use, and provision of personal information without legal grounds, information leakage, misuse, and illegal distribution)
 - It is necessary to identify the type of personal information and limit the scope of personal information collected to a minimum

[Table 52] Classification and Examples by Type of Personal Information

Type	Highlights
Personal information	- Name, resident registration number, address, place of family register, phone number, contact information, date and place of birth, e-mail address, family relationship and family member information, etc.

Type	Highlights
Physical information	- (Physical information) face, fingerprint, iris, voice, genetic information, height, weight, etc. - (Medical/health information) health status, medical record, physical disability, disability grade, medical history, etc.
Mental information	- (Information on propensity) rental records such as books and videos, magazine subscriptions, product purchase history, website search history, etc. - (Inner secrets) ideology, creed, religion, values, political party/union membership and activity details, etc.
Property information	- (Personal financial information) income, credit card number, bank account number, movable/real estate holding details, savings details, etc. - (Credit information) personal credit rating information, loan or collateral details, credit card details, etc.
Social information	- (Educational information) academic background, grades, attendance, licenses, reward and punishment record, student record, etc. - (Legal information) criminal records, trial records, fine payments, etc. - (Employment information) workplace, employer, place of work, work history, reward/penalty record, job evaluation record, etc. - (Military service information) military services, service number, rank, service units, etc.
Others	- Phone call history, IP address, website access history, e-mail or phone message, and other personal location information by GPS

Source: Manager Kim to Become a Master of Information Security, Korea Internet & Security Agency, Ministry of the Interior and Safety

- Conduct regular training on personal information protection for all employees by selecting training methods (e.g., online training, self-training, outsourced training) considering different business situations.

Case 1 | Data Privacy and Cybersecurity at Malaysia Grab

- Grab is a Malaysian multinational technology business which provides users with transportation, food delivery and digital payments services via a mobile app. Grab's Data Privacy Framework is based on these four tenets:

[Table 53] Grab Data Privacy Principles

Notification and Obtaining Consent	• The company aims to notify and obtain consent of its consumers and suppliers when the business collects their personal data and it informs them of what it would be doing with its personal data.
Protection and Safe Custody of Personal Data	• The company seeks to provide and implement reasonable security arrangements to protect personal data. For example, this includes physical access controls and logical access controls to personal data.
Retention For No More Than Necessary	• The company endeavours to cease the retention of personal data, through anonymisation, disposal or other suitable means, when there is no longer a legal or business need for the business to retain the personal data.
Transparency	• The company aims to provide users with clear information on how it collects, uses, processes, and discloses personal data. Its Privacy Notice is publicly available on the company website with contact information for its Privacy Offices.

Source: Grab 2021 ESG Report

Laws and regulations related to personal information protection in major ASEAN countries

Countries	Laws	Source
Thailand	Personal Data Protection Act, B.E. 2562 (2019)	World Laws Information Center
Malaysia	ACT 709 PERSONAL DATA PROTECTION ACT 2010	
Philippines	[REPUBLIC ACT NO. 10173] AN ACT PROTECTING INDIVIDUAL PERSONAL INFORMATION IN INFORMATION AND COMMUNICATIONS SYSTEMS IN THE GOVERNMENT AND THE PRIVATE SECTOR, CREATING FOR THIS PURPOSE A NATIONAL PRIVACY COMMISSION, AND FOR OTHER PURPOSES	
Singapore	Personal Data Protection Act 2012	

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

S-8 Consumer Policy > Product Quality and Safety

Management factor	Does the company strictly comply with product safety and quality standards to protect consumer safety and rights?	Factor type	●*
▶ To ensure product safety, comply with safety and quality standards and preemptively evaluate and manage product safety to eliminate potential risk factors.			

*Applicable to BtoC companies only

Significance

:: Efforts to improve product quality lead to improved consumer satisfaction and strengthened competitiveness of businesses.

- Product quality and safety are critical for consumers to select products. Therefore, the satisfaction of consumers' demands is directly related to businesses' survival and sustainable growth.
 - Furthermore, consumers' expectations gradually rise as the desire to improve the quality of life grows. Therefore, existing quality control that prevents defects in the production process has limitations.
- Product quality and safety are important factors when consumers choose a product. Therefore, businesses should strive for quality control as risks such as damage compensation, recall, and loss of business reputation may occur during product quality deterioration.

Implementation

:: Develop a systematic process to check and comply with safety and quality standards for each product and examine risk factors at all stages, from product design to use and disposal.

- In the safety evaluation, it is necessary to examine possible problems in the storage and disposal of used products in addition to product safety and quality defects in the production process.
- Produce products that comply with safety and quality standards set by each country and transparently disclose quality standards and test analysis results to stakeholders, including consumers.

[Table 54] Product Design and Risk Assessment

Product design	Safety design elements	Risk assessment
Planning	Identify the hazards of the product Derive risk-related technologies and parts	Identification of risk factors
Conceptual design	Set risk management goals and suggest plans (risk reduction plan) Develop injury scenarios and assess risk	Risk analysis
Critical design	Set risk management level Change the design plan and finalize drawings.	Evaluation of the acceptable level of risks

Source: Guidelines for Product Risk Assessment Management by the National Clean Production Center of the Korea Institute of Industrial Technology

- Provide consumers with accurate and sufficient information about the product, and perform follow-up monitoring such as collecting safety and quality-related opinions, recording the trend of defective products and recalls, and tracking new risk factors after sales.

Case 1 | ASEAN High-Level Principles on Consumer Protection

- The ASEAN Strategic Action Plan on Consumer Protection (ASAPCP) 2025 proposes the adoption of a Set of High-level Principles on Consumer Protection in ASEAN, as the first step towards building a Common ASEAN Consumer Protection Framework.

[Table 55] ASEAN Consumer Protection Framework

Principle 1. Enforcement of Consumer Protection Laws are Fair, Consistent, Effective and Proportionate	<ul style="list-style-type: none"> • This principle calls for the adoption of up-to-date, comprehensive and flexible consumer protection legislation in all ASEAN Member States (AMSs), which should deal with all current and emerging consumer problems.
Principle 2. Consumers are Equipped with the Skills, Knowledge, Information and Confidence to Exercise their Rights	<ul style="list-style-type: none"> • In addition to ensuring that consumers are provided with comprehensible, accurate and relevant product information, there is a need to raise the awareness of individual consumers about their rights under existing consumer legislations by enhancing advocacy work of key stakeholders.
Principle 3. Consumers are Protected from Harmful Goods and Services	<ul style="list-style-type: none"> • Ensuring consumer's access to safe goods and services should be a collective effort of governments, businesses and consumers.
Principle 4. Consumers Have Access to Appropriate and Convenient Sources of Advice and Redress including Alternative Dispute Resolutions (ADR)	<ul style="list-style-type: none"> • It is essential that consumers have access to information to enable them to make informed choices and ready access to affordable and easy-to-use dispute resolution arrangements.
Principle 5. Consumers Understand the Impact of Consumption Decision on the Shared Environment	<ul style="list-style-type: none"> • Informed consumers have an essential role in promoting consumption that is environmentally, economically and socially sustainable, including through the effects of their choices on producers.
Principle 6. Strong Consumer Advocacy is Promoted	<ul style="list-style-type: none"> • The consumer voice should be heard by governments and consumer representation must be effective.
Principle 7. High Levels of Cooperation between Different Levels of Government and with Business and Other Stakeholders	<ul style="list-style-type: none"> • This principle calls for AMS to adopt, at the national level, a general consumer protection policy and strategy as well as planning.
Principle 8. Consumers in E-commerce are Protected	<ul style="list-style-type: none"> • This principle calls for AMS to conduct regular reviews of existing consumer protection laws and practices to determine amendments or additional subsidiary legislations needed to be implemented to provide effective protection to consumers on electric commerce.

Source: ASEAN Economic Community



Laws and regulations related to product safety and quality in major ASEAN countries

Countries	Laws	Source
Malaysia	Act 599 CONSUMER PROTECTION ACT 1999 PART 3 SAFETY OF GOODS AND SERVICES	World Laws Information Center
Philippines	REPUBLIC ACT NO.7394-THE CONSUMER ACT OF THE PHILIPPINES TITLE 2 CHAPTER 1 Consumer Product Quality and Safety	
Vietnam	Number:05/2007/QH12 - the Law on Product and Goods Quality	
Cambodia	LAW ON THE MANAGEMENT OF QUALITY AND SAFETY OF PRODUCTS AND SERVICES – No.NS/RKM/0600/001	
Singapore	Consumer Protection (Trade Descriptions and Safety Requirements) Act 1975 PART 3 POWER TO REQUIRE INFORMATIVE MARKING AND TO IMPOSE SAFETY REQUIREMENTS	



Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility

S-9 Consumer Policy ▶ Voice of the Customer

Management factor	Does the company have a communication process to collect and provide consumer feedback?	Factor type	○*
	▶ Collect opinions on business activities through two-way communication channels with consumers and reflect them in products.		

*Applicable to BtoC companies only

Significance

:: Businesses should actively collect consumer opinions and reflect them in their products to respond to increasingly diversified and rapidly changing consumer needs

- The role and importance of consumers in corporate sustainability management will grow with the emergence of green consumers and the eco-friendly goods market

※ Green consumers : consumers who 1) consume more expensive products to protect the environment, 2) consider the overall eco-friendliness of product production methods, packaging materials, and raw materials, and 3) prefer eco-friendly businesses

- Businesses can build intimacy and loyalty with their customers by actively listening to and giving feedback beyond individual customer and simple management-level responses

- VOC (Voice of Customers) is a voluntary expression of consumers' intentions for businesses and is a fundamental and vital asset for businesses that need to pay attention to customer requirements

Implementation

:: Establish a communication channel where consumers can freely suggest their opinions, and establish a systematic management process (operating entity, operating cycle, operating method) that allows those opinions to be reflected in products and services

- Collect all consumer opinions by preparing various channels (e.g., call center, website, mobile application), enabling two-way communication with consumers

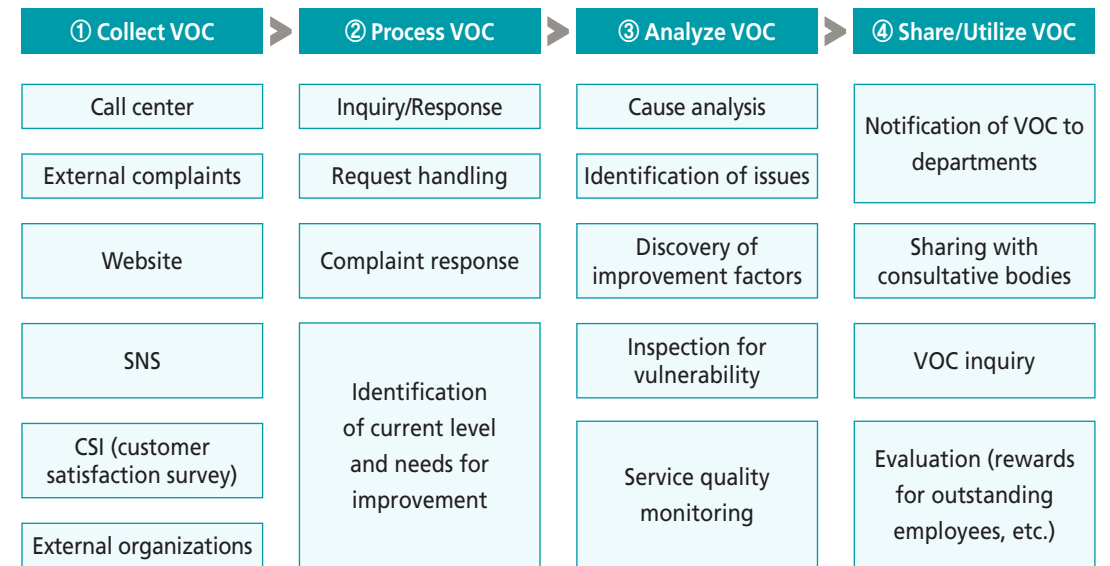
- Online-based communication channels are convenient, such as real-time monitoring. However, various communication channels must be available online and offline, considering digitally vulnerable classes, such as the elderly.

- Install organizations and procedures to analyze, respond to, and utilize consumer opinions collected on a regular basis.

- Accept consumers' negative opinions to form a relationship of trust

- Establish measures to prevent the recurrence of similar complaints by sharing consumer complaints by type and handling details and results within each business

[Table 56] Example of VOC process



Source: Operation Manual for Consumer Centered Management (CCM) by Seoul Facilities Corporation

Case 1 | Model for Company Internal Complaint Handling System of Association of Southeast Asian Nations(2022)

- The first stage of the implementation of internal complaint handling system for businesses is to undertake a survey
 - The survey should seek to assess the adequacy of existing internal complaint handling systems and to cross reference that with government records about complaints from the industry sectors examined.
 - In the event that the survey shows current internal complaint handling systems are not present or are inadequate, then further implementation of model one should be considered.
- The second stage is to meet with representatives of government departments.
- Collect and summarize information about the complaints they have received and then meet with industry associations about complaints handling systems encouraging them to implement ISO 10002 using the collected complaints data as a bargaining tool.
 - It may be useful to run workshops on ISO 10002 through the national body responsible for standardization
- The government should consider developing and implementing a policy that if these industries do not have their own schemes which meet the principles and features for external redress schemes developed by an agreed date that they will mandate redress schemes for these industries.

Source: ASEAN Consumer

Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct

S-10 Social Responsibility ▶ Local Community Development and Engagement

Management factor	Does the company officially support community contribution and development and carry out related activities (establishment of contribution policy, industry-university cooperation, start-up support, and more)?	Factor type	○
▶ Identify the local communities' needs from a macroscopic and long-term perspective, establish strategies for mutual development, and periodically manage the resources and performance invested in community participation activities.			

Significance

:: The idea of corporate social responsibility has become a growing topic in the boardrooms, with the debate centering on what obligations companies have to be socially responsible, and what impact it can have on the bottom line.

- A local community includes elements necessary for business operations, such as production resources, consumers, and markets. As a member, businesses should take responsibility and actively participate in addressing social issues.
- A local community provides a home for businesses to operate, including production resources, consumers, and markets. Therefore, the collapse of local communities soon leads to the collapse of businesses. As a result, there is a growing awareness that businesses should actively participate in addressing social issues as corporate citizens.

Implementation

:: Establish a long-term strategy considering businesses and regional characteristics from a macro perspective, and quantify and manage resources and performance to ensure sustainability and effectiveness of activities.

- C-level executives should establish a contribution policy that includes social value management strategies and provide related training to improve employees' awareness and participation to form a business-wide consensus
 - Provide financial and non-financial incentives based on employee participation in activities, or conduct monitoring to collect opinions regularly to plan activities with higher satisfaction levels
- Change the role and perception of businesses by integrating and linking social contribution issues that go beyond the operation of social contribution programs to improve participation in social contribution and expand influence
 - It is desirable to plan mid to long-term projects, not one-offs (e.g., profit donations and volunteer activities). Monitoring work is essential to accurately grasp the local community's needs by considering regional characteristics beforehand.
 - When establishing an activity strategy, communication through networks within the local community or direct participation by business employees helps identify the detailed needs of the local community.
- Quantify human and material resources and performance invested in social contribution activities, incorporate them in the plan, and disclose related information to the outside world to enhance the transparency of social contribution activities.
 - Qualitative social contribution activities may be difficult to be quantified. Thus, indirectly measurable factors (e.g., achievement levels and the number of places invested with personnel and funds) should be quantified and recorded whenever possible.

Case 1 | Vietnam Vietjet – Community Accountability



[Figure 37] Vietjet's Social Contribution

- Vietjet provided free transportation for relief goods on the earliest flights which depart from HCM City and Ha Noi to airports in Chu Lai in Quang Nam Province, Da Nang City, Phu Bai in Thua TheinHue, Dong Hoi in Quang Binb and Nghe An.

Source: Vietjet 2020 Annual Report. Retrieved from https://ir.vietjetair.com/File_Upload/financial-information/annual-reports-root/annual-reports/2021/VJA_AR%202020_ENG%20FULL%2009.08.21-R1.pdf

Case 2 | Cambodia Prince Group



[Figure 38] Prince Group's Social Contribution

- The Prince Group operates a charitable foundation with contributions of more than USD 14 million (approximately KRW 18.9 billion).
 - Activities focused on education, medical care, and local community participation
 - The business carries out activities for the local community by donating relief supplies for COVID-19 and flood victims, establishing schools, and supporting the national volleyball team.
- ※ Cambodian businesses are also gradually expanding their scope of CSR activities for the local community to environmental protection activities.

Source: Korea Institute for International Economic Policy. Trends of ESG in Cambodia. Retrieved from https://csf.kiep.go.kr/aif/businessDetail.es?brdctNo=320222&mid=a3040000000&search_option=&search_keyword=&search_year=&search_month=&search_tagkeyword=&systemcode=03&search_region=&search_area=¤tPage=28&pageCnt=10

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- The Wall Street Journal

III. Governance

Management factors for each category

● core factors, ○ additional factors, * Conditional factors (for BtoC, publicly listed companies, etc.)

Sub-categories	Checklist	Type
Executive Leadership	Does the executive management commit to practicing corporate sustainability?	●
Organizational Structure	Does the company have a dedicated organization and decision-making process for the corporate sustainability management implementation?	○
Board of Directors	Does the company organize and regularly operate a board of directors that identifies and manages ESG opportunities and risk factors?	○*
Compliance Management	Does the company have an organization and procedures to monitor ESG-related regulatory trends and manage the relevant risks?	●*
Ethics Management	Does the company establish and implement ethical management policies such as anti-corruption and fair competition?	●
Information Disclosures	Does the company have a systematic and consistent information disclosure system to respond to stakeholders' requests for ESG information disclosure?	●*
Internal Communications	Does the company introduce regulations for confidentiality, grievance handling, and prohibition of discrimination and retaliation for internal employees when ESG-related issues arise?	○
Supply Chain Management > Environmental Side	Does the company establish supply chain environmental management and carry out related activities for management?	●
Supply Chain Management > Social Side	Does the company set code of business conduct and ethics (fair competition policy, the protection of workers' human rights, and more) and apply it in the supplier selection process.	●

- Governance is a structure or framework that makes key decisions to achieve specific goals, such as maximizing business profits and value, representing a system that governs an organization. A stock business, the most common type of business, has systems such as the CEO, board of directors, and shareholders' meeting.
- The governance structure of business organization is recognized as a source and measure of sustainability because it creates new business value and significantly impacts the virtuous cycle of business development and stock price appreciation.
- SMEs should raise company-wide awareness as good governance is essential to promote corporate sustainability strategies. At the same time, implementing E (environmental) and S (social) primarily rely on management's decision-making.

G-1 Management System ▶ Executive Leadership

Management factor	Does the executive management commit to practicing corporate sustainability?	Factor type
	▶ Executive management should define its full commitment to ESG management and disclose it internally and externally.	●

Significance

:: Solid C-level leadership is critically essential for success of the corporate sustainability

- Executives need to make preemptive decisions to prioritize sustainability strategies as the tasks required for ESG management often are not directly related to profitability and may burden on small and medium-sized companies.
- Environmental and social well-being concerns have gained progressively larger stakes in mainstream business practices around the world. In detail, sustainability has increasingly become mainstream business for leading corporations

Implementation

:: In order to improve and continuously implement company-wide level ESG performance, executive management needs to express its solid commitment to sustainability management practice externally.

:: As sustainability becomes more of a strategic and operational imperative, executives must lead the way to set up a sustainability organization that is suitable for their businesses

- Success is more likely when executives empower sustainability organizations to engage proactively and strategically hold them responsible for creating measurable impact

Case 1 | Thailand B.Grimm Power PCL (BGRIM)

- The 2021 Sustainability Report includes a message containing the CEO's commitment to practice sustainability management.

[Figure 39] Sustainability Message by B.Grimm Power Group

Our commitment to the environment is displayed in our goals of net zero carbon emission by 2050. We are continuously expanding in renewable projects and are currently building five new power plants to replace existing ones with new technology and 15 percent less consumption, which will begin to be operational in the second half of 2022. Furthermore, we continue upgrading production efficiency to reduce gas consumption per unit with eight power plants under the collaboration programme with Siemens.

We are also proactive in our support for human rights across our value chain and implement the Human Rights Due Diligence and Risk Assessment. Other achievements we are proud of; our contribution to COVID-19 relief, educational funds, support of equestrian sport, music, culture, and the environment.


Mr. Pakorn Thavisin
Chairman


Mr. Harald Link
President

- B.Grimm Power PCL (BGRIM) has been included in the S&P Global Sustainability Yearbook 2022, and awarded with the “Industry Mover” distinction, following BGRIM’s strongest year-on-year score improvement within the Electric Utilities industry.

※For your understanding, the Sustainability Yearbook ranks global sustainability leaders, based on the S&P Global ESG Scores evaluated through the annual Corporate Sustainability Assessment (CSA). To be listed in the Yearbook, businesses must score within the top 15% of their industry and must achieve an S&P Global ESG score within 30% of their industry’s top-performing business.

Source: 2021 Sustainability Report by B.Grimm Power PCL (BGRIM)

Note (source)

- ISO 26000
- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Mckinsey Sustainability

-2 Management System ▶ Organizational Structure

Management factor	Does the company have a dedicated organization and decision-making process for the business’ ESG management implementation?	Factor type	<input type="radio"/>
▶ Identify required responsibilities and performance levels, establish strategies based on them, and install working-level organizations and reporting/decision-making processes dedicated to ESG management through appropriate human resource allocation.			

Significance

:: The basis of ESG management is for companies to set responsibilities, goals, and performance from a sustainability perspective and consistently promote strategies and tasks to achieve them. It also includes preparing means for successful and efficient implementation.

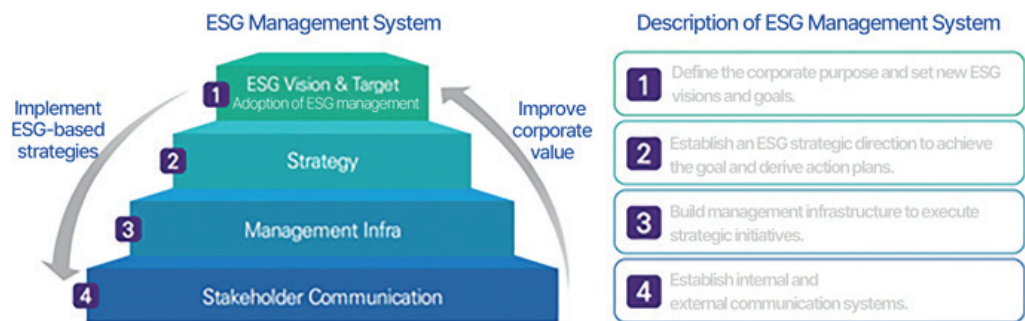
- For companies to increase their value and achieve sustainable growth, management activities from financial and non-financial perspectives should be interlinked. To this end, strategies for sustainability management should be conducted efficiently.
- Management strategies based on various stakeholder needs and risk analysis and appropriate human resources to implement and maintain them enable efficient ESG management, ultimately helping to enhance the value of businesses.

Implementation

:: The executives should establish suitable strategies for sustainability management from an integrated perspective that considers various aspects, (such as communication with internal and external stakeholders and risk analysis), and install a dedicated department, including appropriate personnel and processes.

- Identify the scope of social responsibility requirements by integrating opinions from internal and external stakeholders, and establish strategic approaches after deriving key ESG factors and priorities by considering valid requirements of businesses.
 - Set companies’ responsibilities, goals, and achievements from a sustainability perspective, and prepare means to implement efficient strategies and tasks to achieve them.
 - Conduct a materiality assessment to analyze the interests of stakeholders and their impact on the company’s business, and derive major tasks related to ESG management.
 - Set the promotion strategy for major tasks by dividing them into short-term, medium-term, and long-term, and include priorities and critical themes, overall vision and strategy, and impact management related to business activities.
 - The management philosophy and purpose of activities of the organization must be aligned, although some parts of the direction may be modified or supplemented in the process of ESG-related activities.

[Figure 40] ESG Management Structure



Source: The Rise of ESG: How Should Businesses Prepare? Samjeong KPMG Newsletter, 2021 No. 4

- A dedicated department should standardize work process to improve the efficiency of overall execution, such as identification of risk and opportunity factors (potential impact), connection with business strategy, coordination of collaboration between multiple departments, and reporting and decision-making to the highest decision maker.
 - It is desirable to identify potential impacts across businesses' value chains. Integrated management is required to monitor and report various types of risks and opportunities to top decision-makers, including regulatory, reputational, supply chain, and human capital.
 - Document matters related to businesses' sustainability management strategies, dedicated organizations, and member roles, and actively disclose them to all employees and stakeholders inside and outside the organization.
- For efficient work performance, it is desirable to designate dedicated organization members as those with qualifications beyond a certain level, such as professional knowledge. Assign clear roles, responsibilities, and authorities for activities.
 - It is recommended to regularly provide relevant information and training opportunities to members to raise awareness of ESG management and strengthen their capabilities.

Case 1 | Materiality assessment for key ESG elements

[Table 57] Materiality Assessment Process

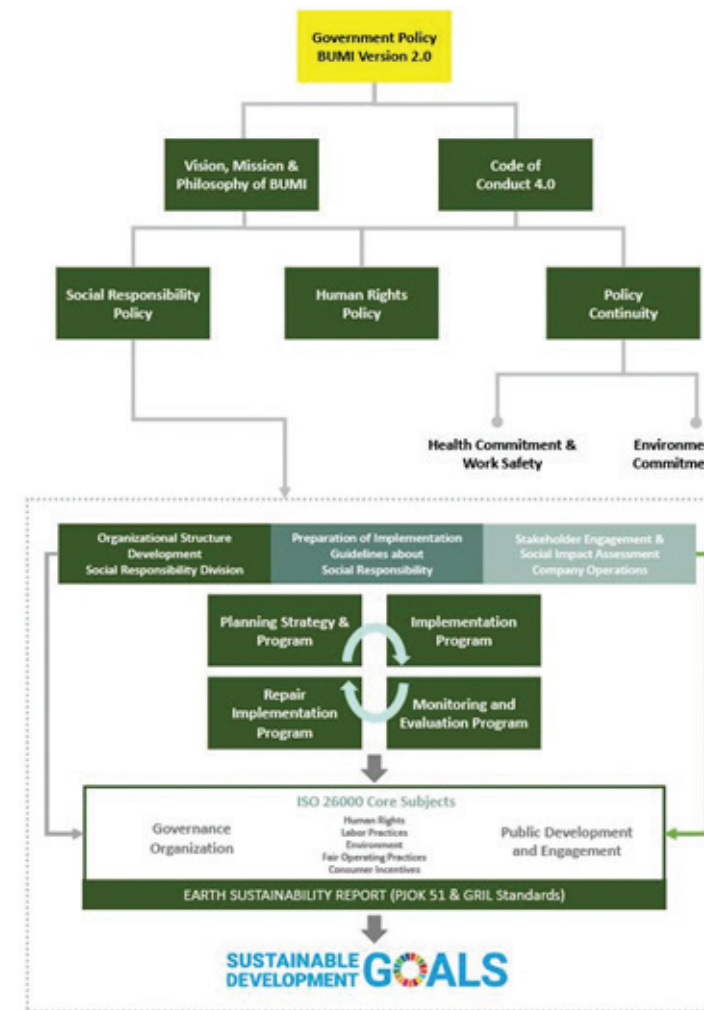
Step	Highlights
Issue identification	- Identification of significant issues that will affect sustainability management performance through analysis of international guidelines such as GRI and UN SDGs, relevant industries, media, and internal and external data
Issue evaluation	- Evaluation of social interest and business impact in the identified issues - Incorporation of impact evaluation on sales, cost, risk, and reputation through surveys of external stakeholders and employees
Topic selection	- Selection of material topics by integrating the top issues based on the evaluation results
Report approval	- Report and approval of the management's materiality assessment results and selected key topics - Incorporation into future management plans and strategies

Source: DSME Integrated Report 2021

Case 2 | Indonesia PT Bumi Resources – Social Responsibility Governance

- The business has a social responsibility system based on a set of policies, vision and mission, and code of conduct. The system ensures that the implementation of corporate social responsibility refers to the Seven Core Subjects of ISO 26000 with the ultimate goal of contributing optimally to the fulfillments of the Sustainable Development Goals (SDGs).

[Figure 41] Social Responsibility System by PT Bumi Resources



Source: 2021 Sustainability Report by PT Bumi Resources Tbk

Note (source)

- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

G-3 Management System ▶ Board of Directors

Management factor	Does the company organize and regularly operate a board of directors that identifies and manages ESG opportunities and risk factors?	Factor type	O*
	▶ Establish a board of directors capable of effective decision-making as the final organization responsible for ESG management.		

*Applicable to publicly listed companies only

Significance

:: The board of directors is responsible for overseeing management by participating in the business's key decision-making and further assisting management in maximizing the value of the business

- The governance of a business is represented by the board of directors, which plays a crucial role in management by reviewing and approving the business's strategy, investment, performance, and disclosure
- As ESG issues can present new opportunities and risks to a business, the board of directors is responsible for overseeing the ESG management strategy presented by the CEO
 - Sustainable management requires leading participation in the entire process, such as setting mid- and long-term goals, evaluating performance, and preparing improvement plans

Implementation

:: Periodically check major issues regarding ESG management activities and monitor whether they are operating effectively.

- The board of directors should periodically monitor ESG factors and conduct evaluations objectively
- The board of directors should be involved in efficiently using businesses' resources, coordinating requirements between businesses and stakeholders, and establishing their role as decision-making bodies

[Table 58] Scope of Authority of the Board of Directors (Example)

- Establish strategies, goals, and indicator related to social responsibility.
- Establish the role of decision-making bodies related to sustainability management.
- Make efficient use of business resources (financial and non-financial).
- Propose a system of monetary and non-monetary incentives linked to sustainability management performance.
- Adjust requirements between businesses and stakeholders / Establish communication procedures with stakeholders and engage in problem-solving.
- Review compliance with social responsibility management principles of decision-making implementation and positive or negative impacts.

Source: Best ESG Practices by Korea Institute of Corporate Governance and Sustainability, August 2021

- Disclose the ESG management system to the outside in detail, including the governance structure and composition of the organization, the role of the board of directors, capabilities and performance goals, and monitoring methods.

Reference 1 | Requirements for Businesses Invested by Global Asset Management Firms

[Table 59] Requirements for Businesses Invested by Global Asset Management Firms

BlackRock	<ul style="list-style-type: none"> - Emphasizes disclosure of risk management measures for climate change under TCFD (Task Force on Climate-related Financial Disclosures) and disclosure under industry-specific standards of SASB (Sustainable Accounting Standards Board) - Demands diversity of the board of directors and executive remuneration system based on ESG performance - Strengthens the board's ESG risk management and oversight functions
Vanguard	<ul style="list-style-type: none"> - Strengthens the board's oversight of climate change risks.
SSGA	<ul style="list-style-type: none"> - Emphasis on human rights management: development of a management system for possible human rights-related risk during business activities and the board of directors' strengthened supervision

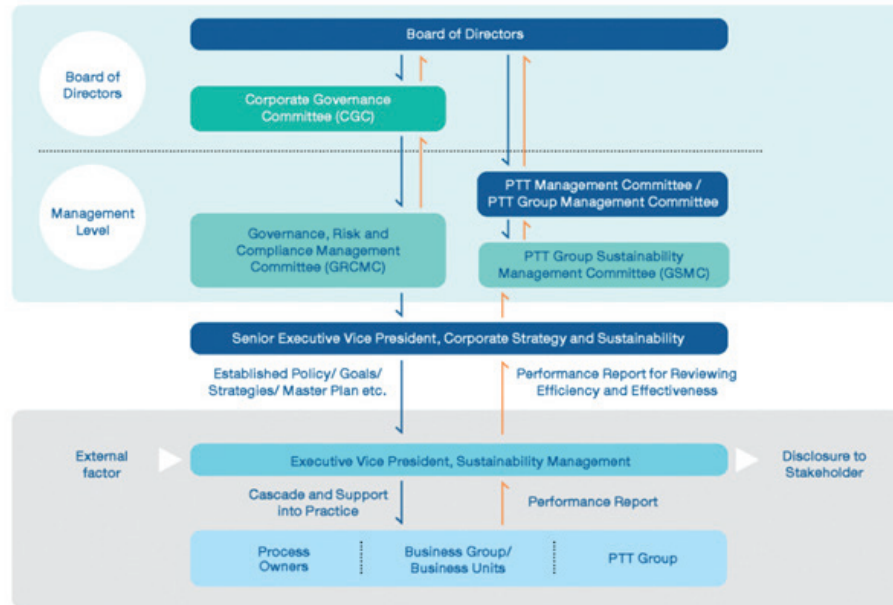
Reference 2 | Consulting Direction of Global Proxy Advisory Firms

[Table 60] Consulting Direction of Global Proxy Advisory Firms

ISS	<ul style="list-style-type: none"> - Recommends a negative vote in the re-appointment vote of the chairperson or senior member of the Director Candidate Recommendation Committee of the business if the business has all members of the board of directors of the same gender - Recommends voting against appointing directors where they believe the board has manifestly failed to manage environmental and social risks
Glass Lewis	<ul style="list-style-type: none"> - Recommends a negative vote in the re-appointment vote of the chairperson or senior member of the Director Candidate Recommendation Committee of the business if the business has all members of the board of directors of the same gender - Recommends voting against the re-election of responsible directors if they are deemed to have failed to adequately manage environmental and social risks that could undermine shareholder value.

Case 1 | Thailand PTT's Sustainable Governance Structure

[Figure 42] PTT's Sustainable Governance Structure



- PTT established governance structure to drive their business towards sustainability for all levels, from Board of Directors, Management, Executives, and internal departments, to drive, support, monitor, and review overall sustainability management, achieving targets effectively and efficiently as illustrated.
- In the sustainability material topic management, each topic has a clear designated owner department. This includes governance by the committee, both at the management level and PTT Board of Directors.

Source: PTT Sustainability

Note (source)

- GRI G4 Standards
- RBA Code of Conduct
- Harvard Business Review
- Kim & Chang

G-4 Management System ▶ Compliance Management

Management factor	Does the company have an organization and procedures to monitor ESG-related regulatory trends and manage risks?	Factor type	●*
	▶ Continuously monitor legal trends and amendments, and develop a system for compliance monitoring and internal control for each ESG factor.		

*Applicable to publicly listed companies only

Significance

- ∴ Compliance management is recognized as an essential means for minimizing business risks and strengthening competitiveness due to the increasing difficulty of legal compliance and changes in consumption patterns.
- Businesses incur economic losses and liability costs due to direct and indirect sanctions such as liability, fines, administrative measures, and reputational damage of businesses when they fail to meet various laws and regulations for all activities, including product production.
- Remedies for non-compliance are limited and costly. Therefore, businesses should be keen to comply in advance and systematically manage possible risks.
 - The consequences of infringing laws can be costly for businesses as this may entail significant financial penalties as well as other potential non-material impact, such as reputational loss, criminal convictions, and lawsuits from third parties.

Implementation

- ∴ As the difficulty of legal compliance rises and consumption patterns change, compliance management becomes essential for businesses to minimize business risks, defend their presence, and strengthen their competitiveness.
- Develop a voluntary compliance system for relevant laws and regulations through effective internal control, such as obtaining certifications, monitoring compliance with laws, and evaluating results.
 - ISO 37301 (Compliance Management System) is an international standard established by ISO (International Organization for Standardization). It evaluates and certifies whether a system is in place to protect the organization and its employees from potential risk factors through compliance with the law and practice of ethical management.
 - ISO 37001 (anti-corruption management system) is one of the standards require a risk-based approach and follow the Plan-Do-Check-Act (PDCA) process cycle.
- Minimize the management risks in businesses, defend their presence, and build an advanced law-abiding culture to strengthen the inherent competitiveness of businesses.
 - It is also recommended to establish follow-up measures, such as management activities to fulfill social responsibilities for problems at hand and prevent recurrence in preparation for when risks emerge.

[Table 61] Compliance Management Process

① Maintenance of risk pool	- Establish a risk pool by identifying common and industry-specific laws and systems to be followed in operating businesses. - Periodically monitor and update the amendments and enactments of the law.
② Determination of response scope	- Among many risks, decide legal risks to be addressed based on the probability of occurrence, impact, and other factors considered important for businesses.
③ Prioritization	- Categorize the impact of risk: major risk (top priority improvement), moderate risk (mid to long-term improvement), minor risk (maintain) through monitoring of businesses and compliance status.
④ Improvement	- Based on the evaluation results, devise improvement measures such as work procedures, bylaws, and in-house training.

Source: HOTEL & RESTAURANT, October 27, 2020, [Yulchon's Law Mentoring] The Value of Compliance Management Changed along with the Changes of the Times

Case 1 | Vietnam Vingroup – Transparency Regulations

- Inclusion of factors related to compliance management in the Transparency Regulations:

[Figure 43] Vingroup's Transparency Regulations

I. General Provisions
II. Anti-money-Laundering Provisions
III. Regulations on Anti-bribery and Anti-corruption
IV. Internal Transaction Controls
V. Notes on Sanctions Laws of Other Countries
1. Compliance Obligations
1.1. Vingroup is obliged to ensure that its business operations and transactions do not violate any obligations specified in any loan, credit, guarantee or other contracts or agreements to which Vingroup is a signatory, with respect to sanctions or any sanctions laws (Obligation to Comply with Sanctions)
...
2. Compliance Officer
2.1. The Chief of the Legal Affairs Committee or the person appointed by the Chief of the Legal Affairs Committee as the Compliance Officer of Vingroup and shall monitor the implementation of these Regulations at Vingroup
...
3. Addressing Non-compliance
3.1. Vingroup officers and employees must immediately report to the Compliance Officer for appropriate responses as soon as being aware of any actual or potential breach of the obligation to comply with sanctions and sanctions law
...

Source: Vingroup 2021 Annual Report

Case 2 | Analysis of Corporate Compliance in Southeast Asia - The Organization for Economic Co-operation and Development (OECD)

- According to the OECD-UNDP survey which 229 businesses in 10 ASEAN countries responded in 2020, 'corruption' is most frequently addressed, with 61% of respondents reporting that they have a formal written policy in place. This is followed by 'ethics' (55%) and 'RBC(Responsible Business Conduct)' (53%). In detail, a majority of the businesses surveyed have taken steps to manage sustainability risks broadly speaking, with respondents in the sample (91%) indicating that they have a formal written policy in place setting out expectations for the management of at least one sustainability issue.

Source: OECD, Guidelines for MNEs

Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- GRI G4 Standards
- RBA Code of Conduct
- ASEAN News

G-5 Management System ▶ Ethics Management

Management factor	Does the company establish and implement ethical management policies such as anti-corruption and fair competition?	Factor type	
	▶ Establish detailed ethical standards according to the organizational philosophy, install systematic implementation and management structures, and disclose them internally and externally.		●

Significance

:: Ethical management is part of activities that create new economic added value by correcting unfair practices within businesses and ultimately aims to maximize profits and improve competitiveness.

- The modern business model reflects the idea that they are responsible for social as well as economic improvement, and businesses are asked more than ever to strive to promote human and social values.
- Ethics management will include all familiar control mechanisms, including the creation of ethics agencies, codes of conduct, and sanctions for breach of the code.
 - Managers who fail to provide proper leadership and institute systems that facilitate ethical conduct share responsibility with those who conceive, execute, and knowingly benefit from corporate misdeeds.

Implementation

:: Establish a clear organizational philosophy at the C-level and build an ethical management system that establishes codes of conduct and sanctions for breach of the code in the form of supporting written documents.

- Prepare a specific code of conduct by diagnosing and analyzing the current status of businesses, such as managerial roots of unlawful conduct and fines generated by the business.
 - Establish a code of ethics considering the business situation and characteristics depending on different issues faced by each business. While each business has a different ethical standard, management ethics are largely the same in every industry
 - Create specific sanctions for breach of a code for the established codes of conduct, stipulate them as business rules, and demonstrate leadership for faithful compliance.
 - Business core values shape business ethics, and the establishment of an ethical culture relies on leadership.
- Utilize the develop ethics management system to regularly train and evaluate specific behavioral guidelines for executives and employees.
 - After the introduction of the system, ethics training should be conducted for employees to regularly identify, evaluate, and improve.

- Auditing the business's practices and needs is the first step to adopting better business ethics.
- After taking into account the individual needs of employees, it will be necessary to put in place incentives.

[Table 62] Seven Action Plans for the Introduction of Ethical Management Systems

Action plans	Highlights
Identify purpose/goals	- Identify the purpose of ethical management and set targets to achieve the purpose.
Diagnose/analyze	- Conduct employee surveys, interviews with CEOs, key executives, and managers, and self-diagnosis. - Analyze the surveys and diagnosis the results, and derive problems and improvements.
Strategize	- Establish ethical management strategic initiatives. - Set strategic targets and tasks for ethical management. - Build ethical management models and ethical management system components.
Install an ethical management organization	- Organize an ethics management committee and appoint a code of conduct officer. - Install an organization dedicated to ethical management (ethics department) - Establish ethics management regulations and ethics management committee operation regulations.
Introduce an ethical management system	- Establish ethical management models and finalize ethical management system components. - Establish essential guidelines from the code of ethics, practice guidelines, and ethical management policies
Conduct educational programs	- Establish plans for employee ethics training. - Develop an ethics education program. - Conduct ethics education.
Evaluate/Improve	- Develop evaluation tools for ethics management systems. - Evaluate the operating status of ethical management systems and practices by employees. - Operate the ethical management system and improve practices.

※ "Install an ethical management organization" is optional, depending on the characteristics of most SMEs. Each business may compress or reconstruct by considering each industry's specifics and economic feasibility.

Source: Korea Businesses Management Institute (KBMI)

[Table 63] Code of Ethics Highlights

- Prohibition of private gains, embezzlement, breach of trust, corruption, money laundering, insider trading, bribery, and solicitation by employees
- Fair trade and fair competition (prohibition of monopoly and anti-competitive behavior)
- Confidentiality of information, including company or customer's confidential and internal information
- Prohibition of unfair acts using undisclosed information
- Cultivation of environment/safety/health awareness
- Obligation to report and protection of whistleblowers in case of illegal/unethical behavior

Source: Best ESG Practices by KCGS, August 2021

Case 1 | Indonesia's GoTo's Ethical Conduct

- The business has policies and systems in place to ensure ethical conduct in its business and the larger partner ecosystem. Their code of conduct embeds ethical business practices into the fabric of the organization.

[Table 64] Key Elements of GoTo's Code of Conduct

Respect Each Other	Create a work environment free from discrimination, harassment, and any form of violence.
Protect Its Assets	Prevent unauthorized use of intellectual property and use business equipment, tools, and other resources diligently.
Avoid Conflicts of Interest	Do what is best for the business and its stakeholders.
Follow Anti-Bribery Laws	Do not give and receive bribes in any form (monetary and non-monetary).
Preserve Confidentiality	Safeguard the business's own information and the information received from its consumers, drivers and merchant suppliers, or others under any non-disclosure agreement.
Ensure Financial Integrity and Responsibility	Ensure that the business finances are appropriately spent, and its financial records are complete and accurate.

Source: 2021 Sustainability Report by GoTo

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- IPAG Business School
- Harvard Business Review

G-6 Communication ▶ Information Disclosure

Management factor	Does the company have a systematic and consistent information disclosure system to respond to stakeholders' requests for ESG information disclosure?	Factor type	●*
▶ Establish channels (e.g., websites, sustainability reports) to disclose business status information and develop systems to disclose and communicate related information internally and externally.			

*Applicable to publicly listed companies only

Significance

:: As ESG becomes the criterion for determining the value of businesses, it is necessary to develop an appropriate information disclosure system that can provide information to stakeholders promptly.

- Companies should make efforts to disclose company-wide sustainability-related information as stakeholders are demanding ESG from companies located in ASEAN as well
 - Institutional investors, asset managers, lenders, credit raters, and insurers are increasingly relying on businesses' ESG disclosures to make important decisions regarding the allocation of capital
 - Inadequate disclosure of ESG sustainability information within a company may hinder attracting external investment and competitive disadvantages. In addition, such companies may face difficulties in attracting talented people in their recruitment process.

Implementation

:: Prepare a method to appropriately disclose the major interests of internal and external stakeholders identified through monitoring, and disclose them along with the disclosure factors required by law

- When disclosing ESG performance, it is easy to utilize indexes presented by commonly used standards/initiatives. Among these, select core and common indexes and disclose information according to the ESG information disclosure principle.
 - It is desirable to provide important disclosure information in English for businesses considering exports, overseas corporations, and foreign shareholders
 - Use simple terms whenever possible when disclosing business information. Add explanations when using technical terminology.
 - In principle, disclose on an annual basis. In other cases, specify the applicable period.
 - Align the environmental, social, governance related information with a formally recognized national or international reporting standard or framework (eg. GRI, SASB)

- Make ESG information publicly accessible by using accessible means such as websites and promotional brochures.
 - Sustainability reports may include both qualitative and quantitative measures of sustainability performance
 - Sustainability reporting helps organizations measure, understand, and communicate their economic, social, and governance performance and set goals for the future

[Table 65] ESG Information Disclosure Procedure

Step	Highlights
Topic selection	- Select key reporting and material issues through materiality assessment.
	① Collecting and reviewing primary management data: Create a list of ESG issues by collecting and reviewing primary data, such as board meeting minutes, departmental KPIs, and internal audit reports, and identify how ESG factors are reflected in management strategies and decision-making. ② Analyzing ESG trends at home and abroad: Identify sustainability management issues and interests of stakeholders that can be reflected in the report through media reports and benchmarking surveys in comparable industries at home and abroad. ③ Collecting stakeholders' opinions: Select relevant stakeholder groups and collect their opinions in-depth through surveys and meetings. ④ Selecting material topics: Evaluate internal and external materiality to derive relatively high-priority topics
Report planning	- Plan the overall report direction and organize its contents. - Select the most appropriate structure considering business models and major reporting topics by applying stakeholder interests and business strategies as a basic frame.
Creation	- It is recommended to report ESG factors concerning the organization's strategy, structure, operating system, activities, and performance goals. - Prepare, review and supplement the content considering the requirements presented in the information disclosure.
Verification	- Improve the reliability of information by ensuring that information quality requirements are met. - Conduct independent verification through a third party without interest in businesses or applying certified verification standards.
Public disclosure	- Choose the right channel for stakeholders to access information promptly. - In principle, disclose information at least once a year, preferably at the same time every year. - Determine the timing of disclosure similar to business report disclosure so that ESG factors and financial information can be linked and evaluated.

Source: Guidance on ESG Information Disclosure, KRX Korea Exchange

- Designate a disclosure manager (or organization) with expertise responsible for information selection and finding effective means, and allow to complete disclosure training and submit related data to other departments for efficient work.

[Table 66] Principles for Disclosure of ESG Information

Accuracy	The information must be accurate so that stakeholders can evaluate the performance of businesses. Various errors, such as information collection and analysis, may occur when preparing reports. Writers for information and reports should systematically manage information to prevent errors or omissions.
Clarity	Information disclosure should be prepared to deliver information that meets the needs of stakeholders and should be provided in a way that stakeholders can easily understand. Anything too specific or abstract should be avoided. Appropriate use of qualitative and quantitative information is recommended.
Comparability	The information should enable stakeholders to compare a business's goals and performance and compare it to the performance of other businesses. To this end, information must be disclosed by applying a consistent method. In case of a significant change in the index calculation method, it is necessary to correct the previous information and specify the details of the change. In addition, it is recommended to apply global standards and reporting depending on indexes and methodologies to increase comparability with other businesses.
Balance	Many businesses downplay negative issues such as accidents and highlight positive activities. However, to ensure the completeness of the information and enable stakeholders to evaluate the organization's overall performance reasonably, the report should contain not only information favorable to businesses but also unfavorable information. In this case, it is recommended that businesses actively explain how they respond to negative issues.
Verifiability	The information must be defined, collected, and recorded so that it can be verified, and disclosure of information must follow internal control procedures similar to financial reports. To improve the quality of the report, it is desirable to undergo verification by an independent third-party verification agency. In addition, it is necessary to specify the level, scope, and process of verification in the report.
Timeliness	It is necessary to disclose information so stakeholders can use it effectively and regularly. For the timeliness of information, it is desirable to have the same period for financial reports and ESG information, and it is necessary to disclose ESG information as soon as possible after publishing financial statements. However, if an ESG issue that can significantly impact financial results occurs, it is recommended to disclose it promptly.

Case 1 | Corporate Sustainability Reporting in ASEAN Countries

National University of Singapore assessed the FY 2019 sustainability disclosures of the top public-listed 582 businesses in the six ASEAN countries of Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam.

- According to the report, the ASEAN businesses generally exhibit stronger performance on the reporting principles (Principles, average 57%) than on content (Content, 32%).
 - The highest scores for Principles were achieved for materiality (70%), followed by risks and opportunities (62%) and stakeholder engagement (61%); the lowest was for board governance (41%).
 - The highest average scores were for reporting framework (50%) and performance data (36%), while the lowest was for assurance (13%).
- Generally, higher rates of disclosure are seen for more fundamental aspects of ESG reporting, such as identification of material topics and stakeholder groups, and disclosure of targets and performance data.

- businesses had lower propensities for providing the rationale behind their disclosures, such as the processes used to identify stakeholders and select material factors, or explanations for their reporting scope.
- There were six countries show wide variations in sustainability reporting performance. Singapore- and Malaysia-listed companies earned the highest scores overall, followed by the Philippines-listed companies. Despite the generally low performance among the businesses in board governance disclosures, those listed in Indonesia showed a relative strength in those pertaining to statements of board responsibility and board sustainability training. Malaysia-listed companies stood out in terms of balance, leading the way in making unfavorable disclosures, while Philippines-listed companies exhibited a relative strength in disclosures relating to risks and opportunities.

Source: Corporate Sustainability Reporting In ASEAN Countries

Case 2 | Corporate Sustainability Reporting in ASEAN Countries

- The business is a national oil business considered at the forefront of ESG implementation in Indonesia and has published a sustainability report every year since 2011.
 - Pertamina expresses deep concern for environmental protection, community development, and human resource aspects through its sustainability reports.
 - The business regularly produces ESG-related publications (sustainability reports, press releases, presentations) as well as media reports to communicate with customers.
- It is evaluated for ESG through Sustainalytics (Sustainalytics has a 15% market share and operates the ESG Leader Index in collaboration with the Indonesia Stock Exchange)
 - In environmental categories, there are 102 indexes, including environmental policies, carbon intensity trends, renewable energy use, oil spills, GHG risk management, and green procurement policies.
 - In the social categories, there are 31 indexes, including supply chain monitoring, employee turnover, and health and safety management systems.
 - In the governance categories, 92 indexes are evaluated, and there are 92 indexes, including bribery and corruption policies and whistleblowers.

Source: Pertamina, KOTRA's Overseas Market News

Note (source)

- GRI G4 Standards
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- Deloitte report
- National University of Singapore Business School Center for Governance and Sustainability

G-7 Communication ▶ Internal Communication

Management factor	Does the company have a dedicated organization and decision-making process for the business' ESG management implementation?	Factor type	○
<p>▶ Maintain a system that allows workers to immediately raise issues without fear of retaliation in the event of an internal issue.</p>			

Significance

:: Businesses can quickly identify and correct problems within the company through whistleblowing system and prevent related issues, resulting in proper operation and development, smooth communication, and improved relationships among members.

■ The whistleblowing system is presented as an essential index when evaluating businesses worldwide. In addition, ESG rating firms, ISO 26000 and ISO 37001, including the global ESG disclosure standards, also emphasize the importance of the whistleblowing system.

- The GRI criteria pick a business's reporting mechanisms as an important index for unethical or illegal behavior and organizational integrity issues. SASB also requires clarification of its whistleblower policies and procedures.

■ In this trend, the internal reporting system of a business is recognized as a security means to prevent risks such as loss of business reputation and productivity decline and improve the trust of stakeholders in the business.

■ For many organizational members who are hesitant to whistle-blower for fear of unfavorable disposition and retaliation, businesses should not only protect them by guaranteeing their anonymity but also promote positive actions.

Implementation

:: Establish specific guidelines and procedures for handling problems and protecting whistleblowers, inform them internally and externally, and collect opinions by developing a whistleblowing system that guarantees anonymity and non-retaliation.

■ Guidelines and procedures must include responsible persons and their authority, how to deal with related issues, confidentiality, and non-retaliation issues. In connection with the whistleblowing system, investigations and sanctions should be implemented for all complaints.

- Care must be taken to ensure fairness, objectivity, and anonymity are maintained throughout filing, handling, and sanctioning whistleblowers through the whistleblowing system manual and the operation of designated experts (generally handled by the HR department).

■ Leadership strategies are required to ensure clear internal communications

- Provide opportunities for two-way communication: Feedback forms and opportunities for ideation may provide an opportunity for employees to underpin new developments and breakthroughs

[Table 67] The 10 Steps to An Effective Whistle-blowing Process

Step		Description
1	Establish the baseline	- Whistle-blowing should be clearly differentiated from a personal complaint or grievance.
2	Review the whistle-blowing policy	- The policy should place whistle-blowing in its proper context as a positive measure that will assist in enabling workers to conduct business honestly and with integrity at all times. - Directors and senior managers must ensure that the policy covers a number of critical areas concerning whistle-blowing: that workers can raise any matters of genuine concern without fear of reprisals; that they can do so on a confidential basis, which means that their identity will be protected if they so wish; that all reports will be taken seriously and the matters raised will be investigated appropriately; and that they will be given feedback periodically on the progress of the investigation. All of these points need to be clearly stated in the corporate policy.
3	Scope of the policy	- The policy should of course apply to all managers and employees within the organisation. Best practice suggests that the scope could be extended with advantage to include anyone performing services for or on behalf of the organisation (for example, to agents, brokers, consultants, contractors, etc.) and also to other stakeholders (in particular to customers and suppliers).
4	Reporting obligations	- The policy should address the question of what is expected of managers and employees should they become concerned about something that they observe is happening in the workplace. - Generally, concerns should be reported to nominated officers as soon as possible; speed of disclosure is important and the policy might provide for a very prompt response time such as 'within 24 hours'.
5	Reporting lines	- It is very important that the organization establishes a number of alternative reporting channels in order to facilitate disclosure. The most traditional route for such a disclosure would be to the employee's line manager. - An alternative (and certainly in extreme cases) the organization's chairman or the CEO could be contacted. - It is important to recognise that some workers are likely to be uncomfortable with the prospect of talking to anyone internally in the first instance. So, it is always helpful to have an external point of contact also, in addition to the various internal reporting lines.
6	Confidentiality and/or anonymity	- Whistle-blowing hotlines should aim to accommodate both confidential and anonymous reporting. There is an important difference between the two, however, and the policy should make this clear. A fundamental aspect of effective whistle-blowing is that people are confident that they can raise concerns on a confidential basis. - Proper investigation may prove impossible if the investigator cannot obtain sufficient information or ascertain whether the disclosure was made in good faith. - It is always preferable for whistle-blowers to reveal their identity because only then is the organisation in a position to take measures to preserve and protect their confidentiality.
7	Protection for 'good faith' whistle-blowers	- No manager or member of staff should be able to use their position to prevent a whistle-blowing disclosure. - It should be stated in the policy that the organization offers no protection to bad faith whistle-blowers, who may be subject to disciplinary action subsequently.

Step	Description
8	Raising awareness <ul style="list-style-type: none"> - As many as possible, people need to know that the whistle-blowing hotline exists. - There should also be specific training sessions aimed at showing how the mechanics of the process work in practice and also to answer any questions or concerns that employees might have. - It is important that senior managers are seen to take part fully in the whistle-blowing training process as this will serve not only to raise awareness but also to emphasize its importance. - Publicity of the hotline should be extended outside the organization also if maximum benefit from the control is to be achieved.
9	The investigation process <ul style="list-style-type: none"> - It is of fundamental importance that if whistle-blowing is to remain credible within an organization, all disclosures made are followed up quickly and are properly investigated. - All organizations should follow the best practice principles of any investigation when they handle a whistle-blowing disclosure. - All organizations should be committed to investigating the matter fully, fairly, quickly and confidentially. - It is very important that in cases where the identity of the whistle-blower is known that he or she is kept informed of progress and is not simply ignored once they have been interviewed and all the information concerning the disclosure has been obtained.
10	Reporting results <ul style="list-style-type: none"> - The person who oversees the whistle-blowing process (for example, the ethics officer) should be responsible for reporting on the progress of individual investigations to the audit committee or to another nominated body. - The organization should ensure that internal reports are produced periodically on the outcomes from the whistle-blowing process and are publicized internally.

Source: Giles, S. (2015). The business ethics twin-track combining controls and culture to minimise reputational risk. Wiley.

Case 1 | Malaysia Maybank Investing Banking Group Whistleblowing Policy

- Maybank Investment Banking Group (“MIBG”) has the policy that governs the reporting, investigation and deliberation of whistleblowing reports on alleged misconducts or unethical activities. This policy is intended to provide guidance to the directors, employees as well as the general public on the concerns that are reportable and the avenues available for reporting.
- The key objectives of the policy are to:
 1. Provide an avenue and standards expected to be adhered to in dealing with reporting/disclosures by a whistleblower;
 2. Promote a culture of openness, accountability, integrity and professional responsibility among the directors and employees;
 3. Re-assure whistleblower of protection against harassment, reprisals or victimization for raising genuine concerns;
 4. Provide management opportunity to address any corrupt, dishonest or fraudulent activities by implementing mitigating or remedial actions to prevent systemic collapse; and

5. Deter potential offenders from engaging in fraudulent activities or misconducts, which could violate any laws, regulations, guidelines or policies.

- The scope of the policy (but not limited to the following types of misconduct) :
 1. Any fraud, unlawful civil or criminal act;
 2. Any act of dishonesty, bribery, corrupt, abuse of power or authority for personal financial gain or any unauthorized purposes;
 3. Any breach of MIBG Policies, violation of any laws, rules and regulations governing the business and operations of MIBG; and
 4. Any malpractice or misdeeds, unethical and unlawful activity with regards to privileged information, material non-public information, market manipulation, rogue trading, market rigging, credit fraud, forgery, misappropriation of funds and/or assets, and any other unprofessional conduct that is a violation of laws, rules, regulations.

Source: Maybank

Note (source)

- ISO 26000
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- Maybank
- Harvard Business Review

G-8 Supply Chain Management ▶ Environmental Side

Management factor	Does the company establish supply chain environmental management and carry out related activities for management?	Factor type	●
▶ Understand environmental impact through every part of the business, establish rules for environmental protection, and apply them to supplier selection and management to ensure a sustainable supply chain.			

Significance

∴ Competitive pressures and changes in the economic climate have forced management of international businesses to evaluate afresh the operation and structure of international supply chains

- Various ESG issues of suppliers, such as environment, quality, health, and safety, increasingly influence the buyer's reputation. Therefore, there is a growing need to manage environmental factors within the supply chain, particularly for large global businesses.
 - Growing number of corporate procurement departments have staffs with "environment" in their title.
 - Apple prepares standards for evaluating its suppliers' activities in all supply chains, such as environmental protection, human rights, and labor rights, and reflects them in performance evaluation. The business also announced that it would double the number of suppliers that use only clean energy.
 - Many businesses that have undertaken SCEM(Supply Chain Environmental Management) initiatives have found that working with suppliers on environmental issues not only generates significant environmental benefits, but also offers opportunities for cost containment and strategic and competitive advantage.

Implementation

∴ Evaluate the environmental management when selecting new suppliers, and improve shortfalls by developing an ESG supply chain management system and regularly reviewing environmental performance through due diligence.

- Revise existing regulations related to supplier selection and evaluation. Also, add environmental management evaluation factors to the diagnosis sheet, conduct document and on-site assessments for suppliers' environmental management, and incorporate the results in a comprehensive evaluation.
 - List information to be requested from suppliers in advance by classifying factors into core areas and additional areas depending on the importance and selectively request appropriate information based on the size and characteristics of suppliers.
 - If necessary, a business shall develop an objective risk management system by verifying the information provided by suppliers through a third-party verification agency.

[Table 68] Required information in Core Areas to Determine Suppliers' Reliability

Core area	Required information
Environmental management	Environmental management system certificates, product environment certificates, environmental management policy, emission facility permits, list of hazardous chemicals, MSDS in local language, energy management system certificates, etc.

Source: PAS7000:2014, <http://bsiblog.co.kr/archives/343>

- Apply qualitative and quantitative self-standards when inspecting suppliers' environmental performance, such as compliance with environmental management principles and environmental performance. It is desirable to derive improvement tasks based on the results and perform them in each phase.
 - Implementation of improvement tasks can also be an evaluation criterion. Businesses could encourage continuous improvement by providing incentives such as long-term supply rights and contract priority to excellent suppliers.
 - Share the evaluation results with suppliers to motivate improvement and make efforts to inspire a sense of responsibility.

Case 1 | Chery Jaguar Land Rover (CJLR) – Supply Chain Sustainability Guide (Global Best Practice)

CJLR's Supply Chain Sustainability Guide outlines the environmental and social requirements the business expects their suppliers.

- ✓ CJLR requests each of their suppliers to nominate an Environmental Champion through which future strategy and requirements can be communicated
- ✓ CJLR requires suppliers with manufacturing facilities to obtain certification from an accredited third party that all such facilities meet ISO 14001 (or equivalent).
- ✓ CJLR expects its suppliers to comply with all laws and regulations including those which pertain to the environment. Regulatory compliance is not only limited to those statutory requirements from environmental government departments and regulatory bodies, but also to requirements of other bodies (e.g. the local water authority).
- ✓ Compliance is also required to regulations which, whilst not derived primarily out of the need for environmental protection, do nonetheless, help to minimize environmental impact (e.g. Transportation of Dangerous Goods regulations)
- ✓ All goods and services supplied to CJLR must be aligned to their environmental requirements, and any other applicable legislation. Suppliers are also required to have a process to cascade all environmental requirements to sub-tier suppliers upon request
- ✓ Suppliers acting as sub-contractors will be required to comply with all local requirements as specified by the terms and conditions of the contract (e.g. health, safety and the handling of waste materials)

Source: Jaguar Land Rover. Retrieved from www.jaguarlandrover.com

Case 2 | Thailand SCG – Sustainable Value Towards Supplier

- SCG runs through the selection process of their suppliers with the capacity to conduct business ethically, with professionalism and preparedness to adapt to changes that impact sustainability under the risk management plan.
- Purpose of the supply chain management:
 - 95% of the procurement spend comes from suppliers who commit to comply with Supplier Code of Conduct by 2023
 - 100% suppliers of the procurement spend pass the annual environmental, social and governance (ESG) risk assessment every year
 - 100% of operation contractors certified under SCG Contractor Safety Certification every year from 2012 onwards
- Strategies of the supply chain management:
 - (1) Select and assess suppliers with the capability for sustainable business
 - (2) Assess risks and classify suppliers into groups
 - (3) Develop supplier's capability towards sustainability
 - (4) Raise awareness, knowledge and people's competency

Source: SCG Sustainability Report.

Retrieved from <https://www.scgsustainability.com/en/sustainable-value-towards-suppliers-en/>

Case 3 | Thailand Thailoil – ESG Risk In Supply Chain Management

- Thailoil is committed to implementing sustainable procurement priorities that align with the Thailoil Group Sustainability Management Framework. It carries out its work in line with the Sustainable Code of Conduct for Suppliers of Thailoil and Subsidiaries (SCOC). The business takes action to ensure that its procurement processes support the realization of the corporate business strategy, while also following international standards of practice such as ISO 20400: Sustainable Procurement.
- Thailoil makes efforts to control oil loss during marine transport. The business established the Energy Management and Loss Improvement Working Team and the Internal Energy Audit Team, who are both responsible for monitoring oil loss during marine transport, analyzing the root cause, and assigning corrective actions continuously to maintain oil loss during marine transport within the set targets.

Source: Thailoil 2021 Sustainability Report.

Retrieved from https://www.thailoilgroup.com/home/media_ebook.aspx?id=273&lang=en

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments
- The British Standards Institution

G-9 Supply Chain Management ▶ Social Side

Management factor	Does the company apply fair competition as a principle when selecting suppliers, and apply the protection of workers' human rights and application of ethical management as selection criteria?	Factor type	●
▶ Conduct activities to raise awareness of suppliers' social value creation, such as checking existing suppliers' fulfillment of social responsibilities and supporting risk factor improvement. In addition, when selecting new suppliers, add social responsibility fulfillment evaluation to the conditions.			

Significance

:: Organizations need to be socially responsible by assessing their social impacts and/or performances and those of their supply chain actors in order to achieve competitive advantages

- The supply chain relies primarily on the physical activities related to the transformation of the organization assets and the raw material flow from the extraction phase up to final consumption, in addition to activities associated with information, material and financial flows

- The organizations, within the same supply chain, depend on each other and underline that the value created is not for the organization itself but for all the actors involved in the supply chain

- Social supply chain management seeks to incorporate the social network, social interactions and social data to enhance relationship management with all stakeholders, in order to maximize value in the final market place at less cost to the supply chain as a whole

- Businesses are increasingly working with their suppliers to manage the sustainability risks that lie in their supply chains

Implementation

:: Evaluate social responsibility fulfillment when selecting new suppliers and improve insufficient areas.

- Revise existing regulations related to supplier selection and evaluation. Also, add social responsibility evaluation factors to the diagnosis sheet, conduct document and on-site assessments for suppliers' social responsibility fulfillment, and incorporate the results in a comprehensive evaluation.

- List information to be requested from suppliers in advance by classifying factors into core areas and additional areas depending on the importance and selectively request appropriate information based on the size and characteristics of suppliers.

- If necessary, a business shall develop an objective risk management system by verifying the information provided by suppliers through a third-party verification agency.

[Table 69] Required Information in Core Areas for Determining Suppliers' Reliability

Core areas	Required information
Employee policy	Social responsibility management system certificates; latest version of industry initiative (e.g., EICC) review reports; regulations on the minimum age for employment; child labor prohibition policy and procedures; documents and records regarding age verification procedures for hiring, etc.
Safety and health	Safety and health management system certificates; fire extinguishing equipment inspection and maintenance records; risk assessment records for processes/work areas; emergency preparedness and response procedures; accident investigation records, etc.
Information protection	Policies and procedures on the collection, processing, and storage of information from customers, employees, and suppliers; policies and procedures on the retention period of collected information; policies and procedures on the right to delete information; information security management system certificate, etc.
Quality management	Quality management system certificates; quality management policy; list of manuals and procedures; corrective and preventive action procedures, etc.

Source: PAS7000:2014, <http://bsiblog.co.kr/archives/343>

■ Apply qualitative and quantitative self-standards when inspecting suppliers' environmental performance, such as compliance with environmental management principles and environmental performance. It is desirable to derive improvement tasks based on the results and perform them in each phase.

- Implementation of improvement tasks can also be an evaluation criterion. Businesses could encourage continuous improvement by providing incentives such as long-term supply rights and contract priority to excellent suppliers.

- Share the evaluation results with suppliers to motivate improvement and make efforts to inspire a sense of responsibility.

[Table 70] Responsible Business Alliance (RBA) Code of Conduct

Category	Contents
Labor Young Workers	Shall implement an appropriate mechanism to verify the age of workers. Child labor is not to be used in any stage of manufacturing. The term "child" refers to any person under the age of 15, or under the age for completing compulsory education, or under the minimum age for employment in the country, whichever is greatest. The use of legitimate workplace learning programs, which comply with all laws and regulations, is supported. Workers under the age of 18 (Young Workers) shall not perform work that is likely to jeopardize their health or safety, including night shifts and overtime.
Ethics Responsible Sourcing of Minerals	Shall adopt a policy and exercise due diligence on the source and chain of custody of the tantalum, tin, tungsten, and gold in the products they manufacture to reasonably assure that they are sourced in a way consistent with the Organization for Economic Co-operation and Development (OECD) Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas or an equivalent and recognized due diligence framework.

Source: Responsible Business Alliance. Code of Conduct (Version 7.0) 2021, Retrieved from www.responsiblebusiness.org

Case 1 | ASEAN (Malaysia, Thailand, Vietnam, Indonesia) based BlueScope Asia – Supplier Code of Conduct

- This Code of Conduct sets out BlueScope's minimum standards for suppliers. The business expects its suppliers to meet the expectations in this Code themselves and to share these expectations with their own suppliers so that they are communicated through the supply chain.
- Code of Conduct Detailed Guidance

[Table 71] BlueScope Asia Supplier Code of Conduct

A. Business Integrity and Ethics

Suppliers maintain the highest standards of integrity and transparency in all business interactions and comply with applicable laws they operate.

- A1. Transparency
- A2. Ethics and Anti-Corruption
- A3. Management Systems
- A4. Responsible Sourcing of Minerals

B. Social and Labour Conditions

Suppliers must support and respect the protection of internationally proclaimed human rights and ensure that they are not complicit in human right abuses.

- B1. Hiring, Disciplinary, and Termination Practices
- B2. Young Worker and Child Labour
- B3. Forced Labour
- B4. Harassment and Abuse
- B5. Discrimination
- B6. Freedom of Association
- B7. Grievance Mechanisms
- B8. Wages and Benefits
- B9. Working Hours

C. Health and Safety

Suppliers must uphold the wellness, health and safety of workers (including contractors) in the work environment and take appropriate measures to ensure that workers are provided with adequate protection against occupational injury and illnesses.

- C1. Occupational Health and Safety (OH&S) Management
- C2. Industrial Hygiene
- C3. Health and Safety Training
- C4. Fire Safety Controls and Emergency Preparedness
- C5. Sanitation, Food and Accommodations
- C6. Health and Safety Communication

Source: BlueScope Asia Responsibility Sourcing

Case 2 | Singapore Indorama – Human Rights and Compliance in the Supply Chain

- The business's human rights policy is consistent with its dedication to enriching its workplace, partnering with its supply chain, preserving the environment and supporting the communities where it operates. Compliance with IVL(Indorama Ventures PCL)'s policies, Supplier Code of Conduct and a Supplier Self-Assessment along with adhering to proper business ethics and environmental regulations is mandatory for all suppliers. These include ethics, human rights, EHS (Environment, Health and Safety) and mutual trust and respect. The business educates its suppliers by including quality control and traceability clauses in its supplier contracts and monitoring their compliance with relevant labour and health & safety laws, regulations, practices and protocols in the workplace.
- Its due diligence also covers contract arrangements and negotiations, including adherence to quality standards such as the REACH(Registration, Evaluation, Authorisation and restriction of chemicals) certification. Suppliers are to acknowledge receipt and effectively communicate the policies and Code of Conduct. Terms and conditions are outlined in the self-assessment documents for suppliers.
- The contracts for key suppliers include detailed ESG compliance requirements according to IVL's policy and Codes of Conduct, as well as references to comply with IVL's ESG requirements with appropriate sustainable development practices in addition to suppliers' own standards and Business Codes of Conduct. All suppliers met the stipulated regulations in 2021.
- The business' adherence to UNGC (UN Global Compact), ILO (International Labour Organization) and ISO (International Organization for Standardization) standards ensures that suppliers comply with regulations concerning labour conditions, human rights, anti-corruption and environmental and social responsibilities, as well as policies and performance verifications by assessing their websites. The SRMC (Sustainability and Risk Management Committee) reviews supply chain risks and actions to mitigate them to prevent potential human right impacts.

Source: 2021 Sustainability Report by Indorama. Retrieved from <https://sustainability.indoramaventures.com/en/home>

Note (source)

- ISO 26000
- GRI G4 Standards
- NORMAPME User Guide for European SMEs on ISO 26000 Guidance on Social Responsibility
- RBA Code of Conduct
- EcoVadis Sustainability Assessments

The Action Guide to ESG

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