


A close-up photograph of a person's hands wearing grey work gloves, working on a dark, metallic industrial component.


Guidance on
ESG Metrics by
Industry Group

A young woman with long dark hair, wearing a black and white striped shirt and light-colored shorts, is sitting and looking at a tablet computer. She is holding a white stylus in her right hand.

Industry Group:
Industrials

A man with a beard and glasses, wearing a blue and white plaid shirt, is smiling and looking at a tablet computer. He is holding a white object in his left hand.

The Stock Exchange of Thailand

A wide-angle photograph of an industrial facility, showing a long row of large blue cylindrical tanks or storage containers connected by pipes and machinery. The floor is polished and reflects the overhead lights.

Disclaimer

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ESG Metrics

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Introduction

The reporting of information is an important process that enhances an organization's transparency and credibility with investors. Information regarding Environmental, Social, and Governance (ESG) performance has garnered significant interest, in addition to purely financial information. ESG-related information is considered vital as it has an increasing effect on investors' decisions. This is due to the growing intensity and complexity of environmental and social issues, which lead to risks in current business operations. Various industries face unique challenges due to the differing nature of their business operations. Therefore, the disclosure of business information needs to encompass details concerning risks and operational efficiencies that address the ESG issues specific to each industry group.

The Stock Exchange of Thailand (SET) prepared this Guidance on ESG Metrics for the Industrials group to be used in conjunction with the Sustainability Reporting Guide for Listed Companies. This guidance describes the sustainability indicators of the Industrials group, consisting of 2 parts as follows:

Part 1 describes the details of the indicators for the Industrials group. This includes explaining the significance of the indicators, providing guidelines for reporting based on these indicators, and illustrating their connection with an international sustainability reporting framework—the GRI Standards and the Sustainable Development Goals (SDGs).

Part 2 presents summary tables that illustrate examples of performance based on annual indicators. These tables provide information that can be compared on a yearly basis and demonstrate the continuity of operations over time.

Listed companies should use this guidance in conjunction with the Sustainability Reporting Guide for Listed Companies to prepare sustainability reports categorized by industry group and business sector. This guidance can serve as both a tool and a checklist for monitoring performance within an organization and facilitating its continuous improvement. This approach will enrich the quality of sustainability information disclosure and reporting, aligning them with the current interests and needs of stakeholders.

Business Sector:

Automotive





Environmental Dimension			E
Code	ESG Indicators	GRI Standards	SDGs
AUT-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)			
AUT-E1.1	Disclosure of social and environmental impact assessment (SIA/EIA)	Disclosure 413-1	Goal 12: Responsible Consumption and Production
AUT-E1.2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Disclosure 413-2	Goal 12: Responsible Consumption and Production
<p>Rationale</p> <ul style="list-style-type: none"> Reporting on the analysis of social and environmental impacts (Social Impact Assessment: SIA/ Environmental Impact Assessment: EIA) demonstrates compliance with laws and the establishment of prevention measures to minimize the impact on communities and the environment resulting from the business’s project operations. Additionally, reports on social and environmental impact analyses serve as decision-making guidelines for project developers to efficiently execute related activities and build long-term confidence in customers. 			
<p>Reporting Approach</p> <p>A company should report the following information:</p> <ul style="list-style-type: none"> Summary of the impact assessment, monitoring process, and measures to reduce social and environmental impacts of the company, covering four aspects, including: <ol style="list-style-type: none"> Impact on human quality of life, including air and noise pollution, and changes in soil and water resources. Impact on living organisms in natural ecosystems, such as forest and marine resources, etc. Impact from land use and community benefit activities. Impact on community lifestyles, economic systems, culture, beliefs, aesthetics, and surrounding landscapes. 			

Code	ESG Indicators	GRI Standards	SDGs
AUT-E2 Environmentally Friendly Products			
AUT-E2.1	Policy and guidelines for preventing contamination or leakage from production processes	Disclosure 416-1	Goal 12: Responsible Consumption and Production
AUT-E2.2	The life cycle impact assessment of products	Disclosure 416-1	Goal 12: Responsible Consumption and Production
AUT-E2.3	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	Disclosure 416-1	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly products reflects the design and development of products to minimize environmental impacts, considering efficient resource usage and environmental effects. It also demonstrates efficiency in production, and being environmentally conscious throughout the product’s life cycle, which starts from the process of material selection, manufacturing, and packaging, to the process of proper product disposal. Effective implementation of these operations helps reduce waste generated from production processes. Furthermore, environmentally friendly products (eco products) not only contribute to environmental protection but also enhance value and competitiveness.

Reporting Approach

A company should report the following information:

- Key summary of policy, guidelines, and measures to prevent contamination or leakage from production processes that may impact the environment.
- Summary of information regarding the life cycle impact assessment of products. The scope of the assessment should encompass raw material selection, manufacturing, packaging, and the process of proper product disposal. The assessment should be conducted efficiently according to international standards, such as ISO 14040:2006, etc.
- Percentage of sales for environmentally friendly products (eco products) compared to total product sales, with the calculation guidelines as follows:

$$\text{Percentage of eco product sales} = \frac{\text{Total eco product sales}}{\text{Total product sales}} \times 100$$

- Additional reference:
 - ISO 14040:2006, an international standard for product life cycle assessment.

Code	ESG Indicators	GRI Standards	SDGs
AUT-E3 Environmentally Friendly Materials			
AUT-E3.1	Total weight of all materials classified by type, such as: - Non-renewable materials - Renewable materials	Disclosure 301-1	Goal 12: Responsible Consumption and Production
AUT-E3.2	Percentage of recycled input materials used in product development	Disclosure 301-2	Goal 12: Responsible Consumption and Production
AUT-E3.3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	Disclosure 301-3	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly materials usage reflects the company’s efforts to recycle materials from waste and create added value for the business. This also highlights the design and production of products that help maintain cost-effectiveness and maximize resource utilization benefits, ultimately aligning with the principles of a circular economy.

Reporting Approach

A company should report the following information:

- Total weight of all materials in kilograms
- Weight of materials classified by type, such as:

Types of resources used in production	Weight of materials (Kilograms)
Non-renewable materials	
Renewable materials	

Remark:

- 1) *Non-renewable materials refer to natural resources that are depleted or exhausted when used and may take a very long time, exceeding the human lifespan, to naturally regenerate or replace the portion that has been utilized. Examples of non-renewable materials include minerals, metals, natural gases, petroleum, and coal.*
- 2) *Renewable materials refer to materials derived from natural resources that are not depleted when used. They undergo processes of regeneration or replenishment in a relatively short timeframe, following natural cycles. Examples of renewable materials include biomass materials and wood.*

- Percentage of recycled input materials used in product development. For example, materials from plastic waste or wood scraps, etc., with calculation guidelines as follows:

$$\text{Percentage of recycled input materials used in product development} = \frac{\text{Total weight of recycled input materials used in product development}}{\text{Total weight of all materials}} \times 100$$

- Percentage of expired or deteriorated materials (reclaimed) that are reused in product development. For examples, old car tires, old vinyl cloth, etc., with calculation guidelines as follows:

$$\text{Percentage of expired or deteriorated materials (reclaimed) that are reused in product development} = \frac{\text{Total weight of expired or deteriorated materials (reclaimed) that are reused in product development}}{\text{Total weight of all materials}} \times 100$$

- Additional reference:
 - Organization for Economic Co-operation and Development (OECD) Renewable Material

Code	ESG Indicators	GRI Standards	SDGs
AUT-E4 Climate Change Risks			
AUT-E4.1	Climate change risk assessment with explanation of potential impacts on business operations	Disclosure 201-2	Goal 13: Climate Action
AUT-E4.2	Goals, plans, and measures to mitigate climate change risks	Disclosure 201-2	Goal 13: Climate Action

Rationale

- Information on risks and adaptation measures in response to climate change reflects the company's efforts to mitigate impacts of these risks and enhance business opportunities arising from such risks. Furthermore, it showcases the management's preparedness and adaptability of the business during emergency situations caused by natural disasters, which can significantly affect business operations. Examples are droughts, floods, sea level changes, and extreme weather conditions. These events impact production factors, land allocation, transportation, etc.

Reporting Approach

A company should report the following information:

- Risk factors arising from climate change and significantly impacting business operations, such as:
 - Examples of physical risks, such as impacts on businesses from changes in sea levels, atmospheric temperatures, natural freshwater sources, storm occurrences, forest fires, and impact on employee health due to increased exposure to high temperatures and heat radiation, etc.

- Examples of regulatory risks include international laws and agreements that require businesses to be accountable for greenhouse gas emissions through taxation mechanisms, which consequently lead to significantly higher production costs, etc.
- Other examples of risks, such as changes in the energy industry, the increasing demand for environmentally friendly technologies, products, and services, which leads to continuous environmental trends, etc.
- Quantitative and qualitative targets to prepare the business for climate change.
- Plans and measures to mitigate risks from climate change. Examples are as follows:
 - Utilizing clean energy or renewable energy sources that do not emit greenhouse gases.
 - Increasing energy efficiency by using less resources.
 - Carbon offsetting.

Social Dimension



Code	ESG Indicators	GRI Standards	SDGs
AUT-S1 Local Employment			
AUT-S1.1	Policy and guidelines about local employment	Disclosure 202-2	Goal 8: Decent Work and Economic Growth
AUT-S1.2	Percentage of employees from local communities	Disclosure 202-2	Goal 8: Decent Work and Economic Growth

Rationale

- Reporting on local employment data reflects the role of businesses in strengthening the grassroots economy and the well-being of local communities. Higher local employment rates lead to increased income and consumption, enhancing the quality of life within the community. It fosters collaboration between businesses and communities while reducing the risk of labor shortages in the supply chain.

Reporting Approach

A company should report the following information:

- Information on policy and guidelines showing the importance of local employment and guidelines for recruitment of local workers.
- Percentage of employees from local communities.

$$\text{Percentage of employees from local communities} = \frac{\text{Total number of employees from local communities}}{\text{Total number of employees}} \times 100$$

Remark: Employees from local communities mean employees who were born or domiciled in the same area that the business operates. This is determined based on the business's location in comparison to the employee's citizenship registration documents, such as household registration, birth certificate, national identification card, and change of address notification, etc.

Code	ESG Indicators	GRI Standards	SDGs
AUT-S2 Respecting Diversity and Equality			
AUT-S2.1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
AUT-S2.2	Employee information categorized by gender and nationality	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
AUT-S2.3	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	Disclosure 406-1	Goal 8: Decent Work and Economic Growth

Rationale

- Information on the respect of diversity and equality reflects the diversity of employees within the organization and the efforts to protect the rights and equality of employees, without discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines regarding the respect for diversity and equality within the organization and the supply chain without discrimination based on gender, age, nationality, disability, religion, etc. Additionally, the company should demonstrate that it has monitoring mechanisms in place to ensure continuous adherence to this policy.
- Employee statistics categorized by gender and nationality.

Nationality	Total Number of Employees (People)		Number of Disabled Employees (People)	
	Female	Male	Female	Male
Thai				
Burmese				
Cambodian				
Laotian				
Others				

- Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures.

Code	ESG Indicators	GRI Standards	SDGs
AUT-S3 Promotion of Female Workforce			
AUT-S3.1	Policy and guidelines related to promoting gender equality in the workplace	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth
AUT-S3.2	Number of female employees categorized by employment level: - Senior management level - Management level - Staff level	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth

Rationale

- Information on promoting the female workforce within the workplace reflects the creation of equal opportunities for professional growth among personnel in the company, without gender-based discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines related to promoting the female workforce within the workplace.
- Female-to-male employee ratio.
- Number of female employees categorized by employment level.

Employment Level	Total Number of Employees (People)	
	Female	Male
Senior management level		
Management level		
Staff level		

Governance and Economic Dimension



Code	ESG Indicators	GRI Standards	SDGs
AUT-G1 Cybersecurity and Personal Data Protection			
AUT-G1.1	Policy and guidelines on cybersecurity and personal data protection	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Code	ESG Indicators	GRI Standards	SDGs
AUT-G1.2	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
AUT-G1.3	Measures and guidelines related to personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
AUT-G1.4	Percentage of employees who have been trained in cybersecurity and personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
AUT-G1.5	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
AUT-G1.6	Number of incidents or cases of personal data breaches, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Rationale

- Information related to cybersecurity management and personal data protection reflects the organization's capabilities and effectiveness in managing information technology and security systems. It encompasses the organization's data storage capabilities, leading to confidence in conducting business.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines that demonstrate the company's management of technology security, information technology, and personal data in accordance with legal regulations and international standards.
- Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other standards, calculated as follows:

$$\text{Percentage of technology infrastructures certified with cybersecurity standards} = \frac{\text{Total number of technology infrastructures certified with cybersecurity standards}}{\text{Total number of technology infrastructures}} \times 100$$

- Percentage of employees who have been trained in cybersecurity and personal data usage.

$$\text{Percentage of employees trained in cybersecurity and personal data usage} = \frac{\text{Total employees trained in cybersecurity and personal data usage}}{\text{Total number of employees}} \times 100$$

- Number of incidents or cases of cyberattacks against the company, along with mitigation measures.
- Number of incidents or cases of personal data breaches, along with mitigation measures.
- Additional reference:
 - ISO 27001 is an internationally recognized standard for information security management systems.

Code	ESG Indicators	GRI Standards	SDGs
AUT-G2 Product Quality and Recall			
AUT-G2.1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Disclosure 416-1	Goal 12: Responsible Consumption and Production
AUT-G2.2	Product warranty guidelines	-	Goal 12: Responsible Consumption and Production
AUT-G2.3	Product recall plan	Disclosure 416-2	Goal 12: Responsible Consumption and Production
AUT-G2.4	Number of cases or incidents of product recall, along with remediation and mitigation measures	Disclosure 416-2	Goal 12: Responsible Consumption and Production

Rationale

- Information about product quality and recall reflects the business's commitment to develop and deliver quality and safe products to consumers in accordance with accepted standards. It demonstrates the process of continuous improvement of quality in production, as well as providing warranty and recalling products in the event of product errors, to maintain customer satisfaction and relationships.

Reporting Approach

A company should report the following information:

- Summary of product quality management policy and guidelines that demonstrate goals and measures to continuously control the quality of production processes and products in accordance with international standards, such as ISO 9001:2015, etc.
- Guidelines and duration of product warranties to instill customer confidence in the quality and standards of the products.
- Key summary of the product recall plan to illustrate the rapid, systematic, and efficient response procedures, especially in terms of communication and notification to customers, distributors, and all relevant parties of the supply chain related to the recalled products. This is to mitigate the severity and impact of product recall on consumers.
- Number of product recall cases or incidents that have a significant impact on the business, which may be determined by the extent of damage caused by the recalled products, such as recalled products with orders exceeding 1 million baht, etc., along with summary of information about the causes and risk issues that cause the recall. This is to establish prevention measures for future incidents.

Code	ESG Indicators	GRI Standards	SDGs
AUT-G3 Conflict-free Minerals Sourcing			
AUT-G3.1	Principles for suppliers regarding conflict-free mineral sourcing	Disclosure 414-1	Goal 12: Responsible Consumption and Production
AUT-G3.2	Percentage of suppliers acknowledging the conflict-free mineral sourcing principles	Disclosure 414-1	Goal 12: Responsible Consumption and Production
AUT-G3.3	Percentage of suppliers who have undergone training on the conflict-free mineral sourcing principles	Disclosure 414-1	Goal 12: Responsible Consumption and Production

Rationale

- Trading minerals, which are associated with countries experiencing conflict, characterized by violence, and lacking political stability, or so-called conflict minerals, is considered to be indirectly supporting human rights violations and money laundering. Therefore, responsible and ethical mineral sourcing information will instill confidence that the company tracks its suppliers' mineral sourcing, which is pivotal in production, considering its societal and environmental impacts. If the company's suppliers are linked to conflict minerals, it could negatively affect the business reputation or escalate to a level of risk that hinders trade or leads to disputes with stakeholders.

Reporting Approach

A company should report the following information:

- Key summary of principles of conflict-free mineral sourcing in the procurement process, along with measures and communication strategies with suppliers, to track compliance with these principles and prevent the sourcing of conflict minerals in high-risk countries.
- Percentage of suppliers acknowledging the conflict-free mineral sourcing principles, using the following method:

$$\text{Percentage of suppliers acknowledging the conflict-free mineral sourcing principles} = \frac{\text{Total number of suppliers acknowledging the conflict-free mineral sourcing principles}}{\text{Total number of suppliers}} \times 100$$

- Percentage of suppliers who have undergone training on the conflict-free mineral sourcing principles, using the following method:

$$\text{Percentage of suppliers who have undergone training on the conflict-free mineral sourcing principles} = \frac{\text{Total number of suppliers who have undergone training on the conflict-free mineral sourcing principles}}{\text{Total number of suppliers}} \times 100$$

- Additional reference:
 - The European Commission has issued regulations to prevent the trade of conflict minerals.

Performance Summary:
ESG Metrics - Automotive Sector

Environmental Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
AUT-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)							
AUT-E1.1	Disclosure 413-1	Disclosure of social and environmental impact assessment (SIA/EIA)	Yes/No				
AUT-E1.2	Disclosure 413-2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Yes/No				
AUT-E2 Environmentally Friendly Products							
AUT-E2.1	Disclosure 416-1	Policy and guidelines for preventing contamination or leakage from production processes	Yes/No				
AUT-E2.2	Disclosure 416-1	The life cycle impact assessment of products	Yes/No				
AUT-E2.3	Disclosure 416-1	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	%				
AUT-E3 Environmentally Friendly Materials							
		Total weight of all materials	Kilograms				
		Total weight of materials classified by type					
		- Non-renewable materials	Kilograms				
		- Renewable materials	Kilograms				
AUT-E3.2	Disclosure 301-2	Percentage of recycled input materials used in product development	%				
AUT-E3.3	Disclosure 301-3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	%				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
AUT-E4 Climate Change Risks							
AUT-E4.1	Disclosure 201-2	Climate change risk assessment with explanation of potential impacts on business operations	Yes/No				
AUT-E4.2	Disclosure 201-2	Goals, plans, and measures to mitigate climate change risks	Yes/No				

Social Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)		
AUT-S1 Local Employment									
AUT-S1.1	Disclosure 202-2	Policy and guidelines about local employment	Yes/No						
AUT-S1.2	Disclosure 202-2	Percentage of employees from local communities	%						
AUT-S2 Respecting Diversity and Equality									
AUT-S2.1	Disclosure 405-1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Yes/No						
AUT-S2.2	Disclosure 405-1	Employee statistics categorized by gender and nationality		Female	Male	Female	Male	Female	Male
		Total employees in the company	People						
		- Thai	People						
		- Burmese	People						
		- Cambodian	People						
		- Laotian	People						
		- Others	People						
AUT-S2.3	Disclosure 406-1	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	No. of cases						

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)		
AUT-S3 Promotion of Female Workforce									
AUT-S3.1	Disclosure 405-1	Policy and guidelines related to promoting gender equality in the workplace	Yes/No						
AUT-S3.2	Disclosure 405-1	Number of female employees categorized by employment level		Female	Male	Female	Male	Female	Male
		Total employees in the company	People						
		- Senior management level	People						
		- Management level	People						
		- Staff level	People						

Governance and Economic Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
AUT-G1 Cybersecurity and Personal Data Protection							
AUT-G1.1	Disclosure 418-1	Policy and guidelines on cybersecurity and personal data protection	Yes/No				
AUT-G1.2	Disclosure 418-1	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	%				
AUT-G1.3	Disclosure 418-1	Measures and guidelines related to personal data usage	Yes/No				
AUT-G1.4	Disclosure 418-1	Percentage of employees who have been trained in cybersecurity and personal data usage	%				
AUT-G1.5	Disclosure 418-1	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	No. of cases				
AUT-G1.6	Disclosure 418-1	Number of incidents or cases of personal data breaches, along with mitigation measures	No. of cases				

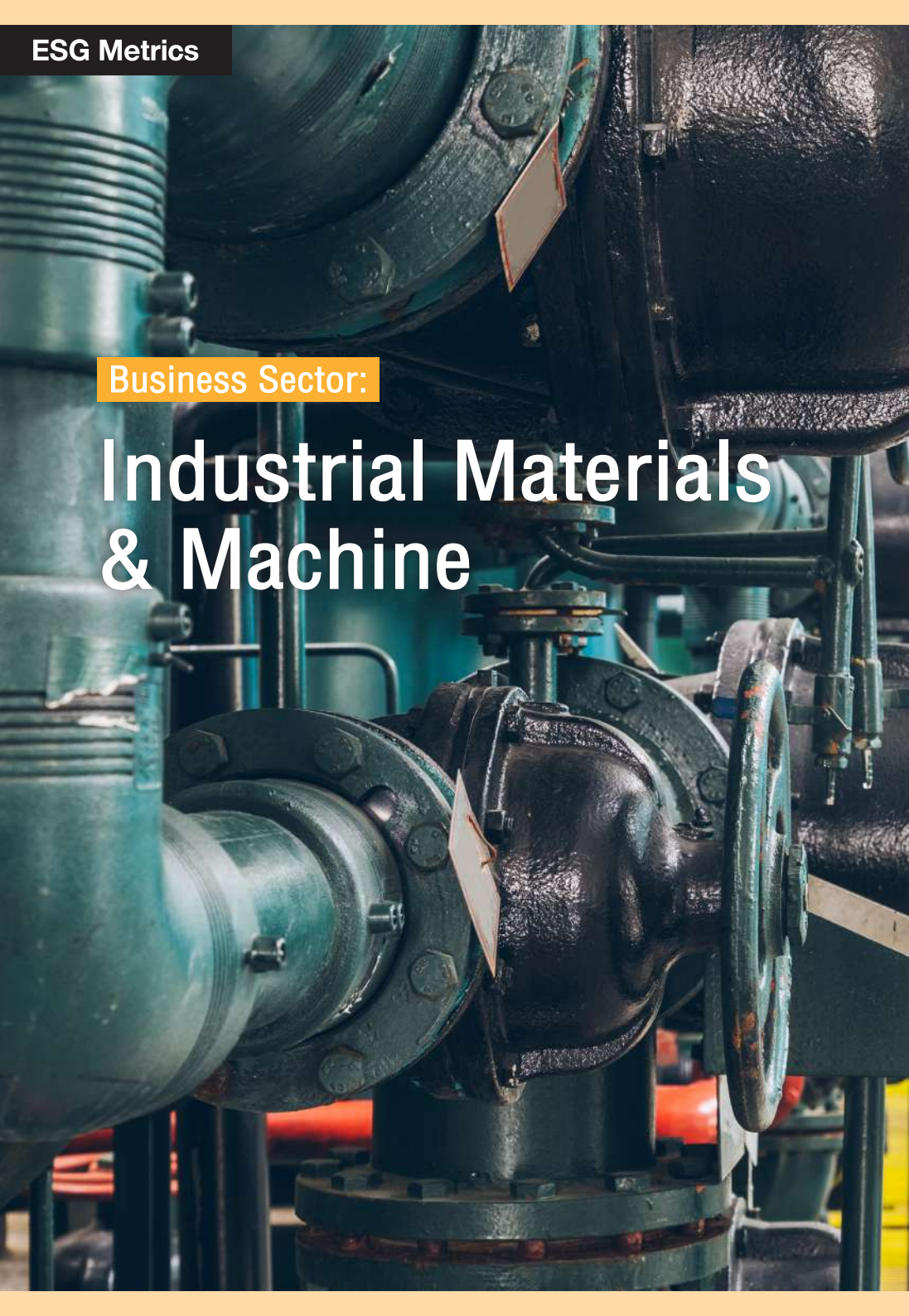
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
AUT-G2 Product Quality and Recall							
AUT-G2.1	Disclosure 416-1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Yes/No				
AUT-G2.2	-	Product warranty guidelines	Yes/No				
AUT-G2.3	Disclosure 416-2	Product recall plan	Yes/No				
AUT-G2.4	Disclosure 416-2	Number of cases or incidents of product recall, along with remediation and mitigation measures	No. of cases				
AUT-G3 Conflict-free Minerals Sourcing							
AUT-G3.1	Disclosure 414-1	Principles for suppliers regarding conflict-free mineral sourcing	Yes/No				
AUT-G3.2	Disclosure 414-1	Percentage of suppliers acknowledging the conflict-free mineral sourcing principles	%				
AUT-G3.3	Disclosure 414-1	Percentage of suppliers who have undergone training on the conflict-free mineral sourcing principles	%				





Business Sector:

Industrial Materials & Machine





Environmental Dimension			E
Code	ESG Indicators	GRI Standards	SDGs
IMA-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)			
IMA-E1.1	Disclosure of social and environmental impact assessment (SIA/EIA)	Disclosure 413-1	Goal 12: Responsible Consumption and Production
IMA-E1.2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Disclosure 413-2	Goal 12: Responsible Consumption and Production
<p>Rationale</p> <ul style="list-style-type: none"> Reporting on the analysis of social and environmental impacts (Social Impact Assessment: SIA/ Environmental Impact Assessment: EIA) demonstrates compliance with laws and the establishment of prevention measures to minimize the impact on communities and the environment resulting from the business’s project operations. Additionally, reports on social and environmental impact analyses serve as decision-making guidelines for project developers to efficiently execute related activities and build long-term confidence in customers. 			
<p>Reporting Approach</p> <p>A company should report the following information:</p> <ul style="list-style-type: none"> Summary of the impact assessment, monitoring process, and measures to reduce social and environmental impacts of the company, covering four aspects, including: <ol style="list-style-type: none"> Impact on human quality of life, including air and noise pollution, and changes in soil and water resources. Impact on living organisms in natural ecosystems, such as forest and marine resources, etc. Impact from land use and community benefit activities. Impact on community lifestyles, economic systems, culture, beliefs, aesthetics, and surrounding landscapes. 			

Code	ESG Indicators	GRI Standards	SDGs
IMA-E2 Environmentally Friendly Products			
IMA-E2.1	Policy and guidelines for preventing contamination or leakage from production processes	Disclosure 416-1	Goal 12: Responsible Consumption and Production
IMA-E2.2	The life cycle impact assessment of products	Disclosure 416-1	Goal 12: Responsible Consumption and Production
IMA-E2.3	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	Disclosure 416-1	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly products reflects the design and development of products to minimize environmental impacts, considering efficient resource usage and environmental effects. It also demonstrates efficiency in production, and being environmentally conscious throughout the product's life cycle, which starts from the process of material selection, manufacturing, and packaging, to the process of proper product disposal. Effective implementation of these operations helps reduce waste generated from production processes. Furthermore, environmentally friendly products (eco products) not only contribute to environmental protection but also enhance value and competitiveness.

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Code	ESG Indicators	GRI Standards	SDGs
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IMA-E3.1	Total weight of all materials classified by type, such as: - Non-renewable materials - Renewable materials	Disclosure 301-1	Goal 12: Responsible Consumption and Production
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IMA-E3.3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	Disclosure 301-3	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly materials usage reflects the company’s efforts to recycle materials from waste and create added value for the business. This also highlights the design and production of products that help maintain cost-effectiveness and maximize resource utilization benefits, ultimately aligning with the principles of a circular economy.

Reporting Approach

A company should report the following information:

- Total weight of all materials in kilograms
- Weight of materials classified by type, such as:

Types of resources used in production	Weight of materials (Kilograms)
Non-renewable materials	
Renewable materials	

Remark:

- 1) *Non-renewable materials refer to natural resources that are depleted or exhausted when used and may take a very long time, exceeding the human lifespan, to naturally regenerate or replace the portion that has been utilized. Examples of non-renewable materials include minerals, metals, natural gases, petroleum, and coal.*
- 2) *Renewable materials refer to materials derived from natural resources that are not depleted when used. They undergo processes of regeneration or replenishment in a relatively short timeframe, following natural cycles. Examples of renewable materials include biomass materials and wood.*

- Percentage of recycled input materials used in product development. For example, materials from plastic waste or wood scraps, etc., with calculation guidelines as follows:

$$\text{Percentage of recycled input materials used in product development} = \frac{\text{Total weight of recycled input materials used in product development}}{\text{Total weight of all materials}} \times 100$$

- Percentage of expired or deteriorated materials (reclaimed) that are reused in product development. For examples, old car tires, old vinyl cloth, etc., with calculation guidelines as follows:

$$\text{Percentage of expired or deteriorated materials (reclaimed) that are reused in product development} = \frac{\text{Total weight of expired or deteriorated materials (reclaimed) that are reused in product development}}{\text{Total weight of all materials}} \times 100$$

- Additional reference:
 - Organization for Economic Co-operation and Development (OECD) Renewable Material

Code	ESG Indicators	GRI Standards	SDGs
IMA-E4 Air Pollution			
IMA-E4.1	Volume of air pollution from business operations, such as: <ul style="list-style-type: none"> – Nitrogen Oxide (NO_x) – Sulfur Dioxide (SO_x) – Persistent Organic Pollutants (POP) – Volatile Organic Compounds (VOC) – Hazardous Air Pollutants (HAP) – Particulate Matter (PM) 	Disclosure 305-7	Goal 12: Responsible Consumption and Production

Rationale

- Reporting air pollution data reflects the company's efforts to control and reduce air pollution from its business operations, which could impact the health of the surrounding communities. Therefore, if the company has effective management, the risks that leads to environmental law violations, and disputes with communities will be reduced.

Reporting Approach

A company should report the following information:

- Sources of air pollution emissions from business operations, along with summary of prevention measures and the air quality monitoring process conducted at least once a year.

- Results of air quality measurements compared to standard values, with units in milligrams per cubic meter (mg/m³) or parts per million (ppm). For example:

Pollution	Standard Value (mg/m ³ or ppm)	Measured Value (mg/m ³ or ppm)
Nitrogen Oxide (NO _x)		
Sulfur Dioxide (SO _x)		
Persistent Organic Pollutants (POP)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants (HAP)		
Particulate Matter (PM)		
Others		

- Air quality information that indicates the air pollution situation that may affect the health of the community in each area around the business facilities, based on the Air Quality Index (AQI).
- Additional references:
 - Handbook for Air Pollution Monitoring from Emissions, Volume 1 by Pollution Control Department
 - Document for Pollutant Emissions Calculation from Measurement Data by Pollution Control Department

Code	ESG Indicators	GRI Standards	SDGs
IMA-E5 Climate Change Risks			
IMA-E5.1	Climate change risk assessment with explanation of potential impacts on business operations	Disclosure 201-2	Goal 13: Climate Action
IMA-E5.2	Goals, plans, and measures to mitigate climate change risks	Disclosure 201-2	Goal 13: Climate Action

Rationale

- Information on risks and adaptation measures in response to climate change reflects the company’s efforts to mitigate impacts of these risks and enhance business opportunities arising from such risks. Furthermore, it showcases the management’s preparedness and adaptability of the business during emergency situations caused by natural disasters, which can significantly affect business operations. Examples are droughts, floods, sea level changes, and extreme weather conditions. These events impact production factors, land allocation, transportation, etc.

Reporting Approach

A company should report the following information:

- Risk factors arising from climate change and significantly impacting business operations, such as:
 - Examples of physical risks, such as impacts on businesses from changes in sea levels, atmospheric temperatures, natural freshwater sources, storm occurrences, forest fires, and impact on employee health due to increased exposure to high temperatures and heat radiation, etc.
 - Examples of regulatory risks include international laws and agreements that require businesses to be accountable for greenhouse gas emissions through taxation mechanisms, which consequently lead to significantly higher production costs, etc.
 - Other examples of risks, such as changes in the energy industry, the increasing demand for environmentally friendly technologies, products, and services, which leads to continuous environmental trends, etc.
- Quantitative and qualitative targets to prepare the business for climate change.
- Plans and measures to mitigate risks from climate change. Examples are as follows:
 - Utilizing clean energy or renewable energy sources that do not emit greenhouse gases.
 - Increasing energy efficiency by using less resources.
 - Carbon offsetting.

Social Dimension



Code	ESG Indicators	GRI Standards	SDGs
IMA-S1 Local Employment			
IMA-S1.1	Policy and guidelines about local employment	Disclosure 202-2	Goal 8: Decent Work and Economic Growth
IMA-S1.2	Percentage of employees from local communities	Disclosure 202-2	Goal 8: Decent Work and Economic Growth

Rationale

- Reporting on local employment data reflects the role of businesses in strengthening the grassroots economy and the well-being of local communities. Higher local employment rates lead to increased income and consumption, enhancing the quality of life within the community. It fosters collaboration between businesses and communities while reducing the risk of labor shortages in the supply chain.

Reporting Approach

A company should report the following information:

- Information on policy and guidelines showing the importance of local employment and guidelines for recruitment of local workers.
- Percentage of employees from local communities.

$$\text{Percentage of employees from local communities} = \frac{\text{Total number of employees from local communities}}{\text{Total number of employees}} \times 100$$

Remark: Employees from local communities mean employees who were born or domiciled in the same area that the business operates. This is determined based on the business’s location in comparison to the employee’s citizenship registration documents, such as household registration, birth certificate, national identification card, and change of address notification, etc.

Code	ESG Indicators	GRI Standards	SDGs
IMA-S2 Respecting Diversity and Equality			
IMA-S2.1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
IMA-S2.2	Employee information categorized by gender and nationality	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
IMA-S2.3	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	Disclosure 406-1	Goal 8: Decent Work and Economic Growth

Rationale

- Information on the respect of diversity and equality reflects the diversity of employees within the organization and the efforts to protect the rights and equality of employees, without discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines regarding the respect for diversity and equality within the organization and the supply chain without discrimination based on gender, age, nationality, disability, religion, etc. Additionally, the company should demonstrate that it has monitoring mechanisms in place to ensure continuous adherence to this policy.

- Employee statistics categorized by gender and nationality.

Nationality	Total Number of Employees (People)		Number of Disabled Employees (People)	
	Female	Male	Female	Male
Thai				
Burmese				
Cambodian				
Laotian				
Others				

- Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures.

Code	ESG Indicators	GRI Standards	SDGs
IMA-S3 Promotion of Female Workforce			
IMA-S3.1	Policy and guidelines related to promoting gender equality in the workplace	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth
IMA-S3.2	Number of female employees categorized by employment level: - Senior management level - Management level - Staff level	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth

Rationale

- Information on promoting the female workforce within the workplace reflects the creation of equal opportunities for professional growth among personnel in the company, without gender-based discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines related to promoting the female workforce within the workplace.
- Female-to-male employee ratio.
- Number of female employees categorized by employment level.

Employment Level	Total Number of Employees (People)	
	Female	Male
Senior management level		
Management level		
Staff level		

Governance and Economic Dimension



Code	ESG Indicators	GRI Standards	SDGs
IMA-G1 Cybersecurity and Personal Data Protection			
IMA-G1.1	Policy and guidelines on cybersecurity and personal data protection	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
IMA-G1.2	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
IMA-G1.3	Measures and guidelines related to personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
IMA-G1.4	Percentage of employees who have been trained in cybersecurity and personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
IMA-G1.5	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
IMA-G1.6	Number of incidents or cases of personal data breaches, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Rationale

- Information related to cybersecurity management and personal data protection reflects the organization’s capabilities and effectiveness in managing information technology and security systems. It encompasses the organization’s data storage capabilities, leading to confidence in conducting business.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines that demonstrate the company's management of technology security, information technology, and personal data in accordance with legal regulations and international standards.
- Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other standards, calculated as follows:

$$\text{Percentage of technology infrastructures certified with cybersecurity standards} = \frac{\text{Total number of technology infrastructures certified with cybersecurity standards}}{\text{Total number of technology infrastructures}} \times 100$$

- Percentage of employees who have been trained in cybersecurity and personal data usage.

$$\text{Percentage of employees trained in cybersecurity and personal data usage} = \frac{\text{Total employees trained in cybersecurity and personal data usage}}{\text{Total number of employees}} \times 100$$

- Number of incidents or cases of cyberattacks against the company, along with mitigation measures.
- Number of incidents or cases of personal data breaches, along with mitigation measures.
- Additional reference:
 - ISO 27001 is an internationally recognized standard for information security management systems.

Code	ESG Indicators	GRI Standards	SDGs
IMA-G2 Product Quality and Recall			
IMA-G2.1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Disclosure 416-1	Goal 12: Responsible Consumption and Production
IMA-G2.2	Product warranty guidelines	-	Goal 12: Responsible Consumption and Production
IMA-G2.3	Product recall plan	Disclosure 416-2	Goal 12: Responsible Consumption and Production
IMA-G2.4	Number of cases or incidents of product recall, along with remediation and mitigation measures	Disclosure 416-2	Goal 12: Responsible Consumption and Production

Rationale

- Information about product quality and recall reflects the business's commitment to develop and deliver quality and safe products to consumers in accordance with accepted standards. It demonstrates the process of continuous improvement of quality in production, as well as providing warranty and recalling products in the event of product errors, to maintain customer satisfaction and relationships.


Reporting Approach


A company should report the following information:

- Summary of product quality management policy and guidelines that demonstrate goals and measures to continuously control the quality of production processes and products in accordance with international standards, such as ISO 9001:2015, etc.
- Guidelines and duration of product warranties to instill customer confidence in the quality and standards of the products.
- Key summary of the product recall plan to illustrate the rapid, systematic, and efficient response procedures, especially in terms of communication and notification to customers, distributors, and all relevant parties of the supply chain related to the recalled products. This is to mitigate the severity and impact of product recall on consumers.
- Number of product recall cases or incidents that have a significant impact on the business, which may be determined by the extent of damage caused by the recalled products, such as recalled products with orders exceeding 1 million baht, etc., along with summary of information about the causes and risk issues that cause the recall. This is to establish prevention measures for future incidents.

Performance Summary:

ESG Metrics - Industrial Materials & Machine Sector

Environmental Dimension							
							
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
IMA-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)							
IMA-E1.1	Disclosure 413-1	Disclosure of social and environmental impact assessment (SIA/EIA)	Yes/No				
IMA-E1.2	Disclosure 413-2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Yes/No				
IMA-E2 Environmentally Friendly Products							
IMA-E2.1	Disclosure 416-1	Policy and guidelines for preventing contamination or leakage from production processes	Yes/No				
IMA-E2.2	Disclosure 416-1	The life cycle impact assessment of products	Yes/No				
IMA-E2.3	Disclosure 416-1	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	%				
IMA-E3 Environmentally Friendly Materials							
IMA-E3.1	Disclosure 301-1	Total weight of all materials	Kilograms				
		Total weight of materials classified by type					
		- Non-renewable materials	Kilograms				
		- Renewable materials	Kilograms				
IMA-E3.2	Disclosure 301-2	Percentage of recycled input materials used in product development	%				
IMA-E3.3	Disclosure 301-3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	%				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
IMA-E4 Air Pollution							
IMA-E4.1	Disclosure 305-7	Volume of air pollution from business operations					
		- Nitrogen Oxide (NO _x)	mg/m ³				
		- Sulfur Dioxide (SO _x)	mg/m ³				
		- Persistent Organic Pollutants (POP)	mg/m ³				
		- Volatile Organic Compounds (VOC)	mg/m ³				
		- Hazardous Air Pollutants (HAP)	mg/m ³				
		- Particulate Matter (PM)	mg/m ³				
		- Others	mg/m ³				
IMA-E5 Climate Change Risks							
IMA-E5.1	Disclosure 201-2	Climate change risk assessment with explanation of potential impacts on business operations	Yes/No				
IMA-E5.2	Disclosure 201-2	Goals, plans, and measures to mitigate climate change risks	Yes/No				
Social Dimension							
							
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
IMA-S1 Local Employment							
IMA-S1.1	Disclosure 202-2	Policy and guidelines about local employment	Yes/No				
IMA-S1.2	Disclosure 202-2	Percentage of employees from local communities	%				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
IMA-S2 Respecting Diversity and Equality							
IMA-S2.1	Disclosure 405-1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Yes/No				
IMA-S2.2	Disclosure 405-1	Employee statistics categorized by gender and nationality		Female	Male	Female	Male
		Total employees in the company	People				
		- Thai	People				
		- Burmese	People				
		- Cambodian	People				
		- Laotian	People				
		- Others	People				
IMA-S2.3	Disclosure 406-1	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	No. of cases				
IMA-S3 Promotion of Female Workforce							
IMA-S3.1	Disclosure 405-1	Policy and guidelines related to promoting gender equality in the workplace	Yes/No				
IMA-S3.2	Disclosure 405-1	Number of female employees categorized by employment level		Female	Male	Female	Male
		Total employees in the company	People				
		- Senior management level	People				
		- Management level	People				
		- Staff level	People				



Governance and Economic Dimension

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
IMA-G1 Cybersecurity and Personal Data Protection							
IMA-G1.1	Disclosure 418-1	Policy and guidelines on cybersecurity and personal data protection	Yes/No				
IMA-G1.2	Disclosure 418-1	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	%				
IMA-G1.3	Disclosure 418-1	Measures and guidelines related to personal data usage	Yes/No				
IMA-G1.4	Disclosure 418-1	Percentage of employees who have been trained in cybersecurity and personal data usage	%				
IMA-G1.5	Disclosure 418-1	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	No. of cases				
IMA-G1.6	Disclosure 418-1	Number of incidents or cases of personal data breaches, along with mitigation measures	No. of cases				
IMA-G2 Product Quality and Recall							
IMA-G2.1	Disclosure 416-1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Yes/No				
IMA-G2.2	-	Product warranty guidelines	Yes/No				
IMA-G2.3	Disclosure 416-2	Product recall plan	Yes/No				
IMA-G2.4	Disclosure 416-2	Number of cases or incidents of product recall, along with remediation and mitigation measures	No. of cases				



Business Sector:

Packaging





Environmental Dimension



Code	ESG Indicators	GRI Standards	SDGs
PAC-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)			
PAC-E1.1	Disclosure of social and environmental impact assessment (SIA/EIA)	Disclosure 413-1	Goal 12: Responsible Consumption and Production
PAC-E1.2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Disclosure 413-2	Goal 12: Responsible Consumption and Production

Rationale

- Reporting on the analysis of social and environmental impacts (Social Impact Assessment: SIA/ Environmental Impact Assessment: EIA) demonstrates compliance with laws and the establishment of prevention measures to minimize the impact on communities and the environment resulting from the business’s project operations. Additionally, reports on social and environmental impact analyses serve as decision-making guidelines for project developers to efficiently execute related activities and build long-term confidence in customers.

Reporting Approach

A company should report the following information:

- Summary of the impact assessment, monitoring process, and measures to reduce social and environmental impacts of the company, covering four aspects, including:
 - Impact on human quality of life, including air and noise pollution, and changes in soil and water resources.
 - Impact on living organisms in natural ecosystems, such as forest and marine resources, etc.
 - Impact from land use and community benefit activities.
 - Impact on community lifestyles, economic systems, culture, beliefs, aesthetics, and surrounding landscapes.

Code	ESG Indicators	GRI Standards	SDGs
PAC-E2 Environmentally Friendly Products			
PAC-E2.1	Policy and guidelines for preventing contamination or leakage from production processes	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PAC-E2.2	The life cycle impact assessment of products	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PAC-E2.3	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	Disclosure 416-1	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly products reflects the design and development of products to minimize environmental impacts, considering efficient resource usage and environmental effects. It also demonstrates efficiency in production, and being environmentally conscious throughout the product’s life cycle, which starts from the process of material selection, manufacturing, and packaging, to the process of proper product disposal. Effective implementation of these operations helps reduce waste generated from production processes. Furthermore, environmentally friendly products (eco products) not only contribute to environmental protection but also enhance value and competitiveness.

Reporting Approach

A company should report the following information:

- Key summary of policy, guidelines, and measures to prevent contamination or leakage from production processes that may impact the environment.
- Summary of information regarding the life cycle impact assessment of products. The scope of the assessment should encompass raw material selection, manufacturing, packaging, and the process of proper product disposal. The assessment should be conducted efficiently according to international standards, such as ISO 14040:2006, etc.
- Percentage of sales for environmentally friendly products (eco products) compared to total product sales, with the calculation guidelines as follows:

$$\text{Percentage of eco product sales} = \frac{\text{Total eco product sales}}{\text{Total product sales}} \times 100$$

- Additional reference:
 - ISO 14040:2006, an international standard for product life cycle assessment.

Code	ESG Indicators	GRI Standards	SDGs
PAC-E3 Biodiversity and Cessation of Deforestation			
PAC-E3.1	Policy and guidelines regarding the conservation of biodiversity and cessation of deforestation, encompassing the company’s business operations and supply chain	Disclosure 304-1	Goal 15: Life on Land
PAC-E3.2	Assessment of the risks and impacts on biodiversity resulting from business operations	Disclosure 304-2	Goal 15: Life on Land
PAC-E3.3	Number of the company’s business areas with biodiversity conservation efforts	Disclosure 304-1	Goal 15: Life on Land
PAC-E3.4	Number of forest areas conserved under the company’s care	Disclosure 304-1	Goal 15: Life on Land
PAC-E3.5	Diversity conservation plans or projects in business operations	Disclosure 304-3	Goal 15: Life on Land
PAC-E3.6	Forest conservation plans or projects in business operations	Disclosure 304-3	Goal 15: Life on Land

Rationale

- Information on the company’s efforts to conserve biodiversity and cease deforestation reflects its commitment to achieving a balance, abundance, and environmental impact reduction from its business operations. The integrity of the ecosystem and forest areas is a crucial mechanism for absorbing carbon dioxide and mitigating the effects of climate change.

Reporting Approach

A company should report the following information:

- Key summary of policy and guidelines regarding biodiversity conservation and deforestation cessation, encompassing the company’s business processes and supply chain. These policy and guidelines should align with laws, regulations, and directives enforced by regulatory agencies, as well as conform to standards related to biodiversity conservation, such as IRIS metrics (biodiversity assessment) by the Global Impact for Investing Network (GIIN), etc.

- Summary of the assessment of risks and impacts on biodiversity, such as natural characteristics, plant species, wildlife species, water source quality, and natural water catchment areas, etc.
- Total business areas of the company that is actively monitored for biodiversity conservation, measured in square meters.
- Forest areas that the company manages and continuously monitors for conservation, measured in square meters.
- Summary of biodiversity and forest areas conservation plans or projects in the company's business operations, along with explanations of outcomes and achievements through project implementation, such as the percentage increase in green areas or the rate of greenhouse gas absorption, etc.
- Additional reference:
 - IRIS metrics (O15929) refer to the standards for biodiversity impact assessment by the Global Impact for Investing Network (GIIN).

Code	ESG Indicators	GRI Standards	SDGs
PAC-E4 Environmentally Friendly Materials			
PAC-E4.1	Total weight of all materials classified by type, such as: <ul style="list-style-type: none"> - Non-renewable materials - Renewable materials 	Disclosure 301-1	Goal 12: Responsible Consumption and Production
PAC-E4.2	Percentage of recycled input materials used in product development	Disclosure 301-2	Goal 12: Responsible Consumption and Production
PAC-E4.3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	Disclosure 301-3	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly materials usage reflects the company's efforts to recycle materials from waste and create added value for the business. This also highlights the design and production of products that help maintain cost-effectiveness and maximize resource utilization benefits, ultimately aligning with the principles of a circular economy.

Reporting Approach

A company should report the following information:

- Total weight of all materials in kilograms
- Weight of materials classified by type, such as:

Types of resources used in production	Weight of materials (Kilograms)
Non-renewable materials	
Renewable materials	

Remark:

- 1) *Non-renewable materials refer to natural resources that are depleted or exhausted when used and may take a very long time, exceeding the human lifespan, to naturally regenerate or replace the portion that has been utilized. Examples of non-renewable materials include minerals, metals, natural gases, petroleum, and coal.*
- 2) *Renewable materials refer to materials derived from natural resources that are not depleted when used. They undergo processes of regeneration or replenishment in a relatively short timeframe, following natural cycles. Examples of renewable materials include biomass materials and wood.*

- Percentage of recycled input materials used in product development. For example, materials from plastic waste or wood scraps, etc., with calculation guidelines as follows:

$$\text{Percentage of recycled input materials used in product development} = \frac{\text{Total weight of recycled input materials used in product development}}{\text{Total weight of all materials}} \times 100$$

- Percentage of expired or deteriorated materials (reclaimed) that are reused in product development. For examples, old car tires, old vinyl cloth, etc., with calculation guidelines as follows:

$$\text{Percentage of expired or deteriorated materials (reclaimed) that are reused in product development} = \frac{\text{Total weight of expired or deteriorated materials (reclaimed) that are reused in product development}}{\text{Total weight of all materials}} \times 100$$

- Additional reference:
 - Organization for Economic Co-operation and Development (OECD) Renewable Material

Code	ESG Indicators	GRI Standards	SDGs
PAC-E5 Air Pollution			
PAC-E5.1	Volume of air pollution from business operations, such as: <ul style="list-style-type: none"> - Nitrogen Oxide (NO_x) - Sulfur Dioxide (SO_x) - Persistent Organic Pollutants (POP) - Volatile Organic Compounds (VOC) - Hazardous Air Pollutants (HAP) - Particulate Matter (PM) 	Disclosure 305-7	Goal 12: Responsible Consumption and Production

Rationale

- Reporting air pollution data reflects the company’s efforts to control and reduce air pollution from its business operations, which could impact the health of the surrounding communities. Therefore, if the company has effective management, the risks that leads to environmental law violations, and disputes with communities will be reduced.

Reporting Approach

A company should report the following information:

- Sources of air pollution emissions from business operations, along with summary of prevention measures and the air quality monitoring process conducted at least once a year.
- Results of air quality measurements compared to standard values, with units in milligrams per cubic meter (mg/m³) or parts per million (ppm). For example:

Pollution	Standard Value (mg/m ³ or ppm)	Measured Value (mg/m ³ or ppm)
Nitrogen Oxide (NO _x)		
Sulfur Dioxide (SO _x)		
Persistent Organic Pollutants (POP)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants (HAP)		
Particulate Matter (PM)		
Others		

- Air quality information that indicates the air pollution situation that may affect the health of the community in each area around the business facilities, based on the Air Quality Index (AQI).
- Additional references:
 - Handbook for Air Pollution Monitoring from Emissions, Volume 1 by Pollution Control Department
 - Document for Pollutant Emissions Calculation from Measurement Data by Pollution Control Department

Code	ESG Indicators	GRI Standards	SDGs
PAC-E6 Climate Change Risks			
PAC-E6.1	Climate change risk assessment with explanation of potential impacts on business operations	Disclosure 201-2	Goal 13: Climate Action
PAC-E6.2	Goals, plans, and measures to mitigate climate change risks	Disclosure 201-2	Goal 13: Climate Action

Rationale

- Information on risks and adaptation measures in response to climate change reflects the company’s efforts to mitigate impacts of these risks and enhance business opportunities arising from such risks. Furthermore, it showcases the management’s preparedness and adaptability of the business during emergency situations caused by natural disasters, which can significantly affect business operations. Examples are droughts, floods, sea level changes, and extreme weather conditions. These events impact production factors, land allocation, transportation, etc.

Reporting Approach

A company should report the following information:

- Risk factors arising from climate change and significantly impacting business operations, such as:
 - Examples of physical risks, such as impacts on businesses from changes in sea levels, atmospheric temperatures, natural freshwater sources, storm occurrences, forest fires, and impact on employee health due to increased exposure to high temperatures and heat radiation, etc.
 - Examples of regulatory risks include international laws and agreements that require businesses to be accountable for greenhouse gas emissions through taxation mechanisms, which consequently lead to significantly higher production costs, etc.
 - Other examples of risks, such as changes in the energy industry, the increasing demand for environmentally friendly technologies, products, and services, which leads to continuous environmental trends, etc.
- Quantitative and qualitative targets to prepare the business for climate change.
- Plans and measures to mitigate risks from climate change. Examples are as follows:
 - Utilizing clean energy or renewable energy sources that do not emit greenhouse gases.
 - Increasing energy efficiency by using less resources.
 - Carbon offsetting.

Social Dimension



Code	ESG Indicators	GRI Standards	SDGs
PAC-S1 Local Employment			
PAC-S1.1	Policy and guidelines about local employment	Disclosure 202-2	Goal 8: Decent Work and Economic Growth
PAC-S1.2	Percentage of employees from local communities	Disclosure 202-2	Goal 8: Decent Work and Economic Growth

Rationale

- Reporting on local employment data reflects the role of businesses in strengthening the grassroots economy and the well-being of local communities. Higher local employment rates lead to increased income and consumption, enhancing the quality of life within the community. It fosters collaboration between businesses and communities while reducing the risk of labor shortages in the supply chain.

Reporting Approach

A company should report the following information:

- Information on policy and guidelines showing the importance of local employment and guidelines for recruitment of local workers.
- Percentage of employees from local communities.

$$\text{Percentage of employees from local communities} = \frac{\text{Total number of employees from local communities}}{\text{Total number of employees}} \times 100$$

Remark: Employees from local communities mean employees who were born or domiciled in the same area that the business operates. This is determined based on the business's location in comparison to the employee's citizenship registration documents, such as household registration, birth certificate, national identification card, and change of address notification, etc.

Code	ESG Indicators	GRI Standards	SDGs
PAC-S2 Respecting Diversity and Equality			
PAC-S2.1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
PAC-S2.2	Employee information categorized by gender and nationality	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
PAC-S2.3	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	Disclosure 406-1	Goal 8: Decent Work and Economic Growth

Rationale

- Information on the respect of diversity and equality reflects the diversity of employees within the organization and the efforts to protect the rights and equality of employees, without discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines regarding the respect for diversity and equality within the organization and the supply chain without discrimination based on gender, age, nationality, disability, religion, etc. Additionally, the company should demonstrate that it has monitoring mechanisms in place to ensure continuous adherence to this policy.
- Employee statistics categorized by gender and nationality.

Nationality	Total Number of Employees (People)		Number of Disabled Employees (People)	
	Female	Male	Female	Male
Thai				
Burmese				
Cambodian				
Laotian				
Others				

- Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures.

Code	ESG Indicators	GRI Standards	SDGs
PAC-S3 Promotion of Female Workforce			
PAC-S3.1	Policy and guidelines related to promoting gender equality in the workplace	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth
PAC-S3.2	Number of female employees categorized by employment level: - Senior management level - Management level - Staff level	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth

Rationale

- Information on promoting the female workforce within the workplace reflects the creation of equal opportunities for professional growth among personnel in the company, without gender-based discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines related to promoting the female workforce within the workplace.
- Female-to-male employee ratio.
- Number of female employees categorized by employment level.

Employment Level	Total Number of Employees (People)	
	Female	Male
Senior management level		
Management level		
Staff level		

Code	ESG Indicators	GRI Standards	SDGs
PAC-S4 Monitoring and Assessing Impacts on Communities			
PAC-S4.1	Monitoring and assessing impacts on communities from the company's business operations	Disclosure 413-1	Goal 12: Responsible Consumption and Production
PAC-S4.2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	Disclosure 413-2	Goal 12: Responsible Consumption and Production

Rationale

- Information on monitoring and assessing impacts on communities highlights the risks associated with conducting business that could affect the quality of life for communities in terms of economics, society, and environment, both directly and indirectly. Once the company is aware of these issues, it has crucial information to establish prevention measures to mitigate the risks that could lead to human rights violations and disputes with communities, and potentially cause business interruption.

Reporting Approach

A company should report the following information:

- Summary of the results of monitoring and assessing impacts on communities from the company’s business operations, highlighting risk factors and prevention measures.
- Summary of the outcomes of risk prevention measures or impacts that may have occurred to the communities in the past year.
- Number of disputes or complaints related to community rights violations, along with remediation and mitigation measures.

Governance and Economic Dimension



Code	ESG Indicators	GRI Standards	SDGs
PAC-G1 Cybersecurity and Personal Data Protection			
PAC-G1.1	Policy and guidelines on cybersecurity and personal data protection	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PAC-G1.2	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PAC-G1.3	Measures and guidelines related to personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PAC-G1.4	Percentage of employees who have been trained in cybersecurity and personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Code	ESG Indicators	GRI Standards	SDGs
PAC-G1.5	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PAC-G1.6	Number of incidents or cases of personal data breaches, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Rationale

- Information related to cybersecurity management and personal data protection reflects the organization’s capabilities and effectiveness in managing information technology and security systems. It encompasses the organization’s data storage capabilities, leading to confidence in conducting business.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines that demonstrate the company’s management of technology security, information technology, and personal data in accordance with legal regulations and international standards.
- Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other standards, calculated as follows:

$$\text{Percentage of technology infrastructures certified with cybersecurity standards} = \frac{\text{Total number of technology infrastructures certified with cybersecurity standards}}{\text{Total number of technology infrastructures}} \times 100$$

- Percentage of employees who have been trained in cybersecurity and personal data usage.

$$\text{Percentage of employees trained in cybersecurity and personal data usage} = \frac{\text{Total employees trained in cybersecurity and personal data usage}}{\text{Total number of employees}} \times 100$$

- Number of incidents or cases of cyberattacks against the company, along with mitigation measures.
- Number of incidents or cases of personal data breaches, along with mitigation measures.
- Additional reference:
 - ISO 27001 is an internationally recognized standard for information security management systems.

Code	ESG Indicators	GRI Standards	SDGs
PAC-G2 Product Quality and Recall			
PAC-G2.1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PAC-G2.2	Product recall plan	Disclosure 416-2	Goal 12: Responsible Consumption and Production
PAC-G2.3	Number of cases or incidents of product recall, along with remediation and mitigation measures	Disclosure 416-2	Goal 12: Responsible Consumption and Production

Rationale

- Information about product quality and recall reflects the business’s commitment to develop and deliver quality and safe products to consumers in accordance with accepted standards. It demonstrates the process of continuous improvement of quality in production, as well as providing warranty and recalling products in the event of product errors, to maintain customer satisfaction and relationships.

Reporting Approach

A company should report the following information:

- Summary of product quality management policy and guidelines that demonstrate goals and measures to continuously control the quality of production processes and products in accordance with international standards, such as ISO 9001:2015, etc.
- Guidelines and duration of product warranties to instill customer confidence in the quality and standards of the products.
- Key summary of the product recall plan to illustrate the rapid, systematic, and efficient response procedures, especially in terms of communication and notification to customers, distributors, and all relevant parties of the supply chain related to the recalled products. This is to mitigate the severity and impact of product recall on consumers.
- Number of product recall cases or incidents that have a significant impact on the business, which may be determined by the extent of damage caused by the recalled products, such as recalled products with orders exceeding 1 million baht, etc., along with summary of information about the causes and risk issues that cause the recall. This is to establish prevention measures for future incidents.

Performance Summary:
ESG Metrics - Packaging Sector

Environmental Dimension E							
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PAC-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)							
PAC-E1.1	Disclosure 413-1	Disclosure of social and environmental impact assessment (SIA/EIA)	Yes/No				
PAC-E1.2	Disclosure 413-2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Yes/No				
PAC-E2 Environmentally Friendly Products							
PAC-E2.1	Disclosure 416-1	Policy and guidelines for preventing contamination or leakage from production processes	Yes/No				
PAC-E2.2	Disclosure 416-1	The life cycle impact assessment of products	Yes/No				
PAC-E2.3	Disclosure 416-1	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	%				
PAC-E3 Biodiversity and Cessation of Deforestation							
PAC-E3.1	Disclosure 304-1	Policy and guidelines regarding the conservation of biodiversity and cessation of deforestation, encompassing the company's business operations and supply chain	Yes/No				
PAC-E3.2	Disclosure 304-2	Assessment of the risks and impacts on biodiversity resulting from business operations	Yes/No				
PAC-E3.3	Disclosure 304-1	Number of the company's business areas with biodiversity conservation efforts	Square Meter				
PAC-E3.4	Disclosure 304-1	Number of forest areas conserved under the company's care	Square Meter				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)	
PAC-E3.5	Disclosure 304-3	Diversity conservation plans or projects in business operations	Yes/No					
PAC-E3.6	Disclosure 304-3	Forest conservation plans or projects in business operations	Yes/No					
PAC-E4 Environmentally Friendly Materials								
PAC-E4.1	Disclosure 301-1	Total weight of all materials	Kilograms					
		Total weight of materials classified by type						
		- Non-renewable materials	Kilograms					
		- Renewable materials	Kilograms					
PAC-E4.2	Disclosure 301-2	Percentage of recycled input materials used in product development	%					
PAC-E4.3	Disclosure 301-3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	%					
PAC-E5 Air Pollution								
PAC-E5.1	Disclosure 305-7	Volume of air pollution from business operations						
		- Nitrogen Oxide (NO _x)	mg/m ³					
		- Sulfur Dioxide (SO _x)	mg/m ³					
		- Persistent Organic Pollutants (POP)	mg/m ³					
		- Volatile Organic Compounds (VOC)	mg/m ³					
		- Hazardous Air Pollutants (HAP)	mg/m ³					
		- Particulate Matter (PM)	mg/m ³					
- Others	mg/m ³							
PAC-E6 Climate Change Risks								
PAC-E6.1	Disclosure 201-2	Climate change risk assessment with explanation of potential impacts on business operations	Yes/No					
PAC-E6.2	Disclosure 201-2	Goals, plans, and measures to mitigate climate change risks	Yes/No					

Social Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PAC-S1 Local Employment							
PAC-S1.1	Disclosure 202-2	Policy and guidelines about local employment	Yes/No				
PAC-S1.2	Disclosure 202-2	Percentage of employees from local communities	%				
PAC-S2 Respecting Diversity and Equality							
PAC-S2.1	Disclosure 405-1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Yes/No				
PAC-S2.2	Disclosure 405-1	Employee statistics categorized by gender and nationality		Female	Male	Female	Male
		Total employees in the company	People				
		- Thai	People				
		- Burmese	People				
		- Cambodian	People				
		- Laotian	People				
		- Others	People				
PAC-S2.3	Disclosure 406-1	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	No. of cases				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PAC-S3 Promotion of Female Workforce							
PAC-S3.1	Disclosure 405-1	Policy and guidelines related to promoting gender equality in the workplace	Yes/No				
PAC-S3.2	Disclosure 405-1	Number of female employees categorized by employment level		Female	Male	Female	Male
		Total employees in the company	People				
		- Senior management level	People				
		- Management level	People				
		- Staff level	People				

PAC-S4 Monitoring and Assessing Impacts on Communities							
PAC-S4.1	Disclosure 413-1	Monitoring and assessing impacts on communities from the company's business operations	Yes/No				
PAC-S4.2	Disclosure 413-2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	No. of cases				

Governance and Economic Dimension

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PAC-G1 Cybersecurity and Personal Data Protection							
PAC-G1.1	Disclosure 418-1	Policy and guidelines on cybersecurity and personal data protection	Yes/No				
PAC-G1.2	Disclosure 418-1	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	%				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PAC-G1.3	Disclosure 418-1	Measures and guidelines related to personal data usage	Yes/No				
PAC-G1.4	Disclosure 418-1	Percentage of employees who have been trained in cybersecurity and personal data usage	%				
PAC-G1.5	Disclosure 418-1	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	No. of cases				
PAC-G1.6	Disclosure 418-1	Number of incidents or cases of personal data breaches, along with mitigation measures	No. of cases				
PAC-G2 Product Quality and Recall							
PAC-G2.1	Disclosure 416-1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Yes/No				
PAC-G2.2	Disclosure 416-2	Product recall plan	Yes/No				
PAC-G2.3	Disclosure 416-2	Number of cases or incidents of product recall, along with remediation and mitigation measures	No. of cases				





Business Sector:

Paper & Printing Materials



Environmental Dimension



Code	ESG Indicators	GRI Standards	SDGs
PPR-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)			
PPR-E1.1	Disclosure of social and environmental impact assessment (SIA/EIA)	Disclosure 413-1	Goal 12: Responsible Consumption and Production
PPR-E1.2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Disclosure 413-2	Goal 12: Responsible Consumption and Production

Rationale

- Reporting on the analysis of social and environmental impacts (Social Impact Assessment: SIA/ Environmental Impact Assessment: EIA) demonstrates compliance with laws and the establishment of prevention measures to minimize the impact on communities and the environment resulting from the business’s project operations. Additionally, reports on social and environmental impact analyses serve as decision-making guidelines for project developers to efficiently execute related activities and build long-term confidence in customers.

Reporting Approach

A company should report the following information:

- Summary of the impact assessment, monitoring process, and measures to reduce social and environmental impacts of the company, covering four aspects, including:
 - Impact on human quality of life, including air and noise pollution, and changes in soil and water resources.
 - Impact on living organisms in natural ecosystems, such as forest and marine resources, etc.
 - Impact from land use and community benefit activities.
 - Impact on community lifestyles, economic systems, culture, beliefs, aesthetics, and surrounding landscapes.

Code	ESG Indicators	GRI Standards	SDGs
PPR-E2 Environmentally Friendly Products			
PPR-E2.1	Policy and guidelines for preventing contamination or leakage from production processes	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PPR-E2.2	The life cycle impact assessment of products	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PPR-E2.3	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	Disclosure 416-1	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly products reflects the design and development of products to minimize environmental impacts, considering efficient resource usage and environmental effects. It also demonstrates efficiency in production, and being environmentally conscious throughout the product’s life cycle, which starts from the process of material selection, manufacturing, and packaging, to the process of proper product disposal. Effective implementation of these operations helps reduce waste generated from production processes. Furthermore, environmentally friendly products (eco products) not only contribute to environmental protection but also enhance value and competitiveness.

Reporting Approach

A company should report the following information:

- Key summary of policy, guidelines, and measures to prevent contamination or leakage from production processes that may impact the environment.
- Summary of information regarding the life cycle impact assessment of products. The scope of the assessment should encompass raw material selection, manufacturing, packaging, and the process of proper product disposal. The assessment should be conducted efficiently according to international standards, such as ISO 14040:2006, etc.
- Percentage of sales for environmentally friendly products (eco products) compared to total product sales, with the calculation guidelines as follows:

$$\text{Percentage of eco product sales} = \frac{\text{Total eco product sales}}{\text{Total product sales}} \times 100$$

- Additional reference:
 - ISO 14040:2006, an international standard for product life cycle assessment.

Code	ESG Indicators	GRI Standards	SDGs
PPR-E3 Biodiversity and Cessation of Deforestation			
PPR-E3.1	Policy and guidelines regarding the conservation of biodiversity and cessation of deforestation, encompassing the company’s business operations and supply chain	Disclosure 304-1	Goal 15: Life on Land
PPR-E3.2	Assessment of the risks and impacts on biodiversity resulting from business operations	Disclosure 304-2	Goal 15: Life on Land
PPR-E3.3	Number of the company’s business areas with biodiversity conservation efforts	Disclosure 304-1	Goal 15: Life on Land
PPR-E3.4	Number of forest areas conserved under the company’s care	Disclosure 304-1	Goal 15: Life on Land
PPR-E3.5	Diversity conservation plans or projects in business operations	Disclosure 304-3	Goal 15: Life on Land
PPR-E3.6	Forest conservation plans or projects in business operations	Disclosure 304-3	Goal 15: Life on Land

Rationale

- Information on the company’s efforts to conserve biodiversity and cease deforestation reflects its commitment to achieving a balance, abundance, and environmental impact reduction from its business operations. The integrity of the ecosystem and forest areas is a crucial mechanism for absorbing carbon dioxide and mitigating the effects of climate change.

Reporting Approach

A company should report the following information:

- Key summary of policy and guidelines regarding biodiversity conservation and deforestation cessation, encompassing the company’s business processes and supply chain. These policy and guidelines should align with laws, regulations, and directives enforced by regulatory agencies, as well as conform to standards related to biodiversity conservation, such as IRIS metrics (biodiversity assessment) by the Global Impact for Investing Network (GIIN), etc.

- Summary of the assessment of risks and impacts on biodiversity, such as natural characteristics, plant species, wildlife species, water source quality, and natural water catchment areas, etc.
- Total business areas of the company that is actively monitored for biodiversity conservation, measured in square meters.
- Forest areas that the company manages and continuously monitors for conservation, measured in square meters.
- Summary of biodiversity and forest areas conservation plans or projects in the company's business operations, along with explanations of outcomes and achievements through project implementation, such as the percentage increase in green areas or the rate of greenhouse gas absorption, etc.
- Additional reference:
 - IRIS metrics (O15929) refer to the standards for biodiversity impact assessment by the Global Impact for Investing Network (GIIN).

Code	ESG Indicators	GRI Standards	SDGs
PPR-E4 Environmentally Friendly Materials			
PPR-E4.1	Total weight of all materials classified by type, such as: <ul style="list-style-type: none"> - Non-renewable materials - Renewable materials 	Disclosure 301-1	Goal 12: Responsible Consumption and Production
PPR-E4.2	Percentage of recycled input materials used in product development	Disclosure 301-2	Goal 12: Responsible Consumption and Production
PPR-E4.3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	Disclosure 301-3	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly materials usage reflects the company's efforts to recycle materials from waste and create added value for the business. This also highlights the design and production of products that help maintain cost-effectiveness and maximize resource utilization benefits, ultimately aligning with the principles of a circular economy.

Reporting Approach

A company should report the following information:

- Total weight of all materials in kilograms
- Weight of materials classified by type, such as:

Types of resources used in production	Weight of materials (Kilograms)
Non-renewable materials	
Renewable materials	

Remark:

- 1) *Non-renewable materials refer to natural resources that are depleted or exhausted when used and may take a very long time, exceeding the human lifespan, to naturally regenerate or replace the portion that has been utilized. Examples of non-renewable materials include minerals, metals, natural gases, petroleum, and coal.*
- 2) *Renewable materials refer to materials derived from natural resources that are not depleted when used. They undergo processes of regeneration or replenishment in a relatively short timeframe, following natural cycles. Examples of renewable materials include biomass materials and wood.*

- Percentage of recycled input materials used in product development. For example, materials from plastic waste or wood scraps, etc., with calculation guidelines as follows:

$$\text{Percentage of recycled input materials used in product development} = \frac{\text{Total weight of recycled input materials used in product development}}{\text{Total weight of all materials}} \times 100$$

- Percentage of expired or deteriorated materials (reclaimed) that are reused in product development. For examples, old car tires, old vinyl cloth, etc., with calculation guidelines as follows:

$$\text{Percentage of expired or deteriorated materials (reclaimed) that are reused in product development} = \frac{\text{Total weight of expired or deteriorated materials (reclaimed) that are reused in product development}}{\text{Total weight of all materials}} \times 100$$

- Additional reference:
 - Organization for Economic Co-operation and Development (OECD) Renewable Material

Code	ESG Indicators	GRI Standards	SDGs
PPR-E5 Air Pollution			
PPR-E5.1	Volume of air pollution from business operations, such as: <ul style="list-style-type: none"> - Nitrogen Oxide (NO_x) - Sulfur Dioxide (SO_x) - Persistent Organic Pollutants (POP) - Volatile Organic Compounds (VOC) - Hazardous Air Pollutants (HAP) - Particulate Matter (PM) 	Disclosure 305-7	Goal 12: Responsible Consumption and Production

Rationale

- Reporting air pollution data reflects the company’s efforts to control and reduce air pollution from its business operations, which could impact the health of the surrounding communities. Therefore, if the company has effective management, the risks that leads to environmental law violations, and disputes with communities will be reduced.

Reporting Approach

A company should report the following information:

- Sources of air pollution emissions from business operations, along with summary of prevention measures and the air quality monitoring process conducted at least once a year.
- Results of air quality measurements compared to standard values, with units in milligrams per cubic meter (mg/m³) or parts per million (ppm). For example:

Pollution	Standard Value (mg/m ³ or ppm)	Measured Value (mg/m ³ or ppm)
Nitrogen Oxide (NO _x)		
Sulfur Dioxide (SO _x)		
Persistent Organic Pollutants (POP)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants (HAP)		
Particulate Matter (PM)		
Others		

- Air quality information that indicates the air pollution situation that may affect the health of the community in each area around the business facilities, based on the Air Quality Index (AQI).
- Additional references:
 - Handbook for Air Pollution Monitoring from Emissions, Volume 1 by Pollution Control Department
 - Document for Pollutant Emissions Calculation from Measurement Data by Pollution Control Department

Code	ESG Indicators	GRI Standards	SDGs
PPR-E6 Sustainable Forest Management			
PPR-E6.1	List of certification standards related to sustainable forest management in both products and supply chain	-	Goal 13: Climate Action
PPR-E6.2	Percentage of products certified with sustainable forest management standards	-	Goal 13: Climate Action

Rationale

- Information about sustainable forest management reflects the company’s commitment to conserving forest resources throughout its business operations, from sourcing raw materials, receiving and storing raw materials, controlling quantity and quality, to the processes of selling and delivering products. This ensures the responsible use of materials from forest resources, protecting the richness of the ecosystem and restoring biodiversity.
- Certification related to sustainable forest management comes in various standards and is widely recognized among consumer groups. Examples include Forest Stewardship Council (FSC) or Chain of Custody (FSCCoC) standards. If the company systematically operates in accordance with these standards, it will help create added value to the business’ products and marketing activities.

Reporting Approach

A company should report the following information:

- List of certification standards regarding sustainable forest management in products, such as the Forest Management Certification (FSCFM) standard according to FSC guidelines and the forest product supply chain management standard, Chain of Custody (FSCCoC) or Programme for the Endorsement of Forest Certification (PEFC) standard, etc.
- Key summary of the principles, guidelines or measures that the company implements according to sustainable forest management standards. This includes compliance with forestry laws, sustainable forest utilization, forest management planning, forest monitoring and control systems, and reforestation planning.
- Percentage of products certified with sustainable forest management standards, such as paper and packaging, which contain materials from forests, etc., with the following calculation guideline:

$$\text{Percentage of products certified with sustainable forest management standards} = \frac{\text{Total weight of products certified with sustainable forest management standards}}{\text{Total weight of products from forest resources}} \times 100$$

- Additional references:
 - Forest Stewardship Council (FSC)
 - Programme for the Endorsement of Forest Certification (PEFC)

Code	ESG Indicators	GRI Standards	SDGs
PPR-E7 Climate Change Risks			
PPR-E7.1	Climate change risk assessment with explanation of potential impacts on business operations	Disclosure 201-2	Goal 13: Climate Action
PPR-E7.2	Goals, plans, and measures to mitigate climate change risks	Disclosure 201-2	Goal 13: Climate Action

Rationale

- Information on risks and adaptation measures in response to climate change reflects the company’s efforts to mitigate impacts of these risks and enhance business opportunities arising from such risks. Furthermore, it showcases the management’s preparedness and adaptability of the business during emergency situations caused by natural disasters, which can significantly affect business operations. Examples are droughts, floods, sea level changes, and extreme weather conditions. These events impact production factors, land allocation, transportation, etc.

Reporting Approach

A company should report the following information:

- Risk factors arising from climate change and significantly impacting business operations, such as:
 - Examples of physical risks, such as impacts on businesses from changes in sea levels, atmospheric temperatures, natural freshwater sources, storm occurrences, forest fires, and impact on employee health due to increased exposure to high temperatures and heat radiation, etc.
 - Examples of regulatory risks include international laws and agreements that require businesses to be accountable for greenhouse gas emissions through taxation mechanisms, which consequently lead to significantly higher production costs, etc.
 - Other examples of risks, such as changes in the energy industry, the increasing demand for environmentally friendly technologies, products, and services, which leads to continuous environmental trends, etc.
- Quantitative and qualitative targets to prepare the business for climate change.
- Plans and measures to mitigate risks from climate change. Examples are as follows:
 - Utilizing clean energy or renewable energy sources that do not emit greenhouse gases.
 - Increasing energy efficiency by using less resources.
 - Carbon offsetting.

Social Dimension



Code	ESG Indicators	GRI Standards	SDGs
PPR-S1 Local Employment			
PPR-S1.1	Policy and guidelines about local employment	Disclosure 202-2	Goal 8: Decent Work and Economic Growth
PPR-S1.2	Percentage of employees from local communities	Disclosure 202-2	Goal 8: Decent Work and Economic Growth

Rationale

- Reporting on local employment data reflects the role of businesses in strengthening the grassroots economy and the well-being of local communities. Higher local employment rates lead to increased income and consumption, enhancing the quality of life within the community. It fosters collaboration between businesses and communities while reducing the risk of labor shortages in the supply chain.

Reporting Approach

A company should report the following information:

- Information on policy and guidelines showing the importance of local employment and guidelines for recruitment of local workers.
- Percentage of employees from local communities.

$$\text{Percentage of employees from local communities} = \frac{\text{Total number of employees from local communities}}{\text{Total number of employees}} \times 100$$

Remark: Employees from local communities mean employees who were born or domiciled in the same area that the business operates. This is determined based on the business's location in comparison to the employee's citizenship registration documents, such as household registration, birth certificate, national identification card, and change of address notification, etc.

Code	ESG Indicators	GRI Standards	SDGs
PPR-S2 Respecting Diversity and Equality			
PPR-S2.1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
PPR-S2.2	Employee information categorized by gender and nationality	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
PPR-S2.3	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	Disclosure 406-1	Goal 8: Decent Work and Economic Growth

Rationale

- Information on the respect of diversity and equality reflects the diversity of employees within the organization and the efforts to protect the rights and equality of employees, without discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines regarding the respect for diversity and equality within the organization and the supply chain without discrimination based on gender, age, nationality, disability, religion, etc. Additionally, the company should demonstrate that it has monitoring mechanisms in place to ensure continuous adherence to this policy.
- Employee statistics categorized by gender and nationality.

Nationality	Total Number of Employees (People)		Number of Disabled Employees (People)	
	Female	Male	Female	Male
Thai				
Burmese				
Cambodian				
Laotian				
Others				

- Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures.

Code	ESG Indicators	GRI Standards	SDGs
PPR-S3 Promotion of Female Workforce			
PPR-S3.1	Policy and guidelines related to promoting gender equality in the workplace	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth
PPR-S3.2	Number of female employees categorized by employment level: - Senior management level - Management level - Staff level	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth

Rationale

- Information on promoting the female workforce within the workplace reflects the creation of equal opportunities for professional growth among personnel in the company, without gender-based discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines related to promoting the female workforce within the workplace.
- Female-to-male employee ratio.
- Number of female employees categorized by employment level.

Employment Level	Total Number of Employees (People)	
	Female	Male
Senior management level		
Management level		
Staff level		

Code	ESG Indicators	GRI Standards	SDGs
PPR-S4 Monitoring and Assessing Impacts on Communities			
PPR-S4.1	Monitoring and assessing impacts on communities from the company’s business operations	Disclosure 413-1	Goal 12: Responsible Consumption and Production
PPR-S4.2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	Disclosure 413-2	Goal 12: Responsible Consumption and Production

Rationale

- Information on monitoring and assessing impacts on communities highlights the risks associated with conducting business that could affect the quality of life for communities in terms of economics, society, and environment, both directly and indirectly. Once the company is aware of these issues, it has crucial information to establish prevention measures to mitigate the risks that could lead to human rights violations and disputes with communities, and potentially cause business interruption.

Reporting Approach

A company should report the following information:

- Summary of the results of monitoring and assessing impacts on communities from the company's business operations, highlighting risk factors and prevention measures.
- Summary of the outcomes of risk prevention measures or impacts that may have occurred to the communities in the past year.
- Number of disputes or complaints related to community rights violations, along with remediation and mitigation measures.

Governance and Economic Dimension



Code	ESG Indicators	GRI Standards	SDGs
PPR-G1 Cybersecurity and Personal Data Protection			
PPR-G1.1	Policy and guidelines on cybersecurity and personal data protection	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PPR-G1.2	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PPR-G1.3	Measures and guidelines related to personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PPR-G1.4	Percentage of employees who have been trained in cybersecurity and personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Code	ESG Indicators	GRI Standards	SDGs
PPR-G1.5	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PPR-G1.6	Number of incidents or cases of personal data breaches, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Rationale

- Information related to cybersecurity management and personal data protection reflects the organization’s capabilities and effectiveness in managing information technology and security systems. It encompasses the organization’s data storage capabilities, leading to confidence in conducting business.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines that demonstrate the company’s management of technology security, information technology, and personal data in accordance with legal regulations and international standards.
- Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other standards, calculated as follows:

$$\text{Percentage of technology infrastructures certified with cybersecurity standards} = \frac{\text{Total number of technology infrastructures certified with cybersecurity standards}}{\text{Total number of technology infrastructures}} \times 100$$

- Percentage of employees who have been trained in cybersecurity and personal data usage.

$$\text{Percentage of employees trained in cybersecurity and personal data usage} = \frac{\text{Total employees trained in cybersecurity and personal data usage}}{\text{Total number of employees}} \times 100$$

- Number of incidents or cases of cyberattacks against the company, along with mitigation measures.
- Number of incidents or cases of personal data breaches, along with mitigation measures.
- Additional reference:
 - ISO 27001 is an internationally recognized standard for information security management systems.

Code	ESG Indicators	GRI Standards	SDGs
PPR-G2 Product Quality and Recall			
PPR-G2.1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PPR-G2.2	Product recall plan	Disclosure 416-2	Goal 12: Responsible Consumption and Production
PPR-G2.3	Number of cases or incidents of product recall, along with remediation and mitigation measures	Disclosure 416-2	Goal 12: Responsible Consumption and Production

Rationale

- Information about product quality and recall reflects the business’s commitment to develop and deliver quality and safe products to consumers in accordance with accepted standards. It demonstrates the process of continuous improvement of quality in production, as well as providing warranty and recalling products in the event of product errors, to maintain customer satisfaction and relationships.

Reporting Approach

A company should report the following information:

- Summary of product quality management policy and guidelines that demonstrate goals and measures to continuously control the quality of production processes and products in accordance with international standards, such as ISO 9001:2015, etc.
- Guidelines and duration of product warranties to instill customer confidence in the quality and standards of the products.
- Key summary of the product recall plan to illustrate the rapid, systematic, and efficient response procedures, especially in terms of communication and notification to customers, distributors, and all relevant parties of the supply chain related to the recalled products. This is to mitigate the severity and impact of product recall on consumers.
- Number of product recall cases or incidents that have a significant impact on the business, which may be determined by the extent of damage caused by the recalled products, such as recalled products with orders exceeding 1 million baht, etc., along with summary of information about the causes and risk issues that cause the recall. This is to establish prevention measures for future incidents.

Performance Summary:

ESG Metrics – Paper & Printing Materials Sector

Environmental Dimension E							
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PPR-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)							
PPR-E1.1	Disclosure 413-1	Disclosure of social and environmental impact assessment (SIA/EIA)	Yes/No				
PPR-E1.2	Disclosure 413-2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Yes/No				
PPR-E2 Environmentally Friendly Products							
PPR-E2.1	Disclosure 416-1	Policy and guidelines for preventing contamination or leakage from production processes	Yes/No				
PPR-E2.2	Disclosure 416-1	The life cycle impact assessment of products	Yes/No				
PPR-E2.3	Disclosure 416-1	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	%				
PPR-E3 Biodiversity and Cessation of Deforestation							
PPR-E3.1	Disclosure 304-1	Policy and guidelines regarding the conservation of biodiversity and cessation of deforestation, encompassing the company's business operations and supply chain	Yes/No				
PPR-E3.2	Disclosure 304-2	Assessment of the risks and impacts on biodiversity resulting from business operations	Yes/No				
PPR-E3.3	Disclosure 304-1	Number of the company's business areas with biodiversity conservation efforts	Square Meter				
PPR-E3.4	Disclosure 304-1	Number of forest areas conserved under the company's care	Square Meter				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PPR-E3.5	Disclosure 304-3	Diversity conservation plans or projects in business operations	Yes/No				
PPR-E3.6	Disclosure 304-3	Forest conservation plans or projects in business operations	Yes/No				
PPR-E4 Environmentally Friendly Materials							
PPR-E4.1	Disclosure 301-1	Total weight of all materials	Kilograms				
		Total weight of materials classified by type					
		- Non-renewable materials	Kilograms				
		- Renewable materials	Kilograms				
PPR-E4.2	Disclosure 301-2	Percentage of recycled input materials used in product development	%				
PPR-E4.3	Disclosure 301-3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	%				
PPR-E5 Air Pollution							
PPR-E5.1	Disclosure 305-7	Volume of air pollution from business operations					
		- Nitrogen Oxide (NO _x)	mg/m ³				
		- Sulfur Dioxide (SO _x)	mg/m ³				
		- Persistent Organic Pollutants (POP)	mg/m ³				
		- Volatile Organic Compounds (VOC)	mg/m ³				
		- Hazardous Air Pollutants (HAP)	mg/m ³				
		- Particulate Matter (PM)	mg/m ³				
		- Others	mg/m ³				
PPR-E6 Sustainable Forest Management							
PPR-E6.1	-	List of certification standards related to sustainable forest management in both products and supply chain	Yes/No				
PPR-E6.2	-	Percentage of products certified with sustainable forest management standards	%				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PPR-E7 Climate Change Risks							
PPR-E7.1	Disclosure 201-2	Climate change risk assessment with explanation of potential impacts on business operations	Yes/No				
PPR-E7.2	Disclosure 201-2	Goals, plans, and measures to mitigate climate change risks	Yes/No				

Social Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)		
PPR-S1 Local Employment									
PPR-S1.1	Disclosure 202-2	Policy and guidelines about local employment	Yes/No						
PPR-S1.2	Disclosure 202-2	Percentage of employees from local communities	%						
PPR-S2 Respecting Diversity and Equality									
PPR-S2.1	Disclosure 405-1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Yes/No						
PPR-S2.2	Disclosure 405-1	Employee statistics categorized by gender and nationality		Female	Male	Female	Male	Female	Male
		Total employees in the company	People						
		- Thai	People						
		- Burmese	People						
		- Cambodian	People						
		- Laotian	People						
		- Others	People						

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PPR-S2.3	Disclosure 406-1	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	No. of cases				

PPR-S3 Promotion of Female Workforce

PPR-S3.1	Disclosure 405-1	Policy and guidelines related to promoting gender equality in the workplace	Yes/No						
PPR-S3.2	Disclosure 405-1	Number of female employees categorized by employment level		Female	Male	Female	Male	Female	Male
		Total employees in the company	People						
		- Senior management level	People						
		- Management level	People						
		- Staff level	People						

PPR-S4 Monitoring and Assessing Impacts on Communities

PPR-S4.1	Disclosure 413-1	Monitoring and assessing impacts on communities from the company's business operations	Yes/No				
PPR-S4.2	Disclosure 413-2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	No. of cases				

Governance and Economic Dimension



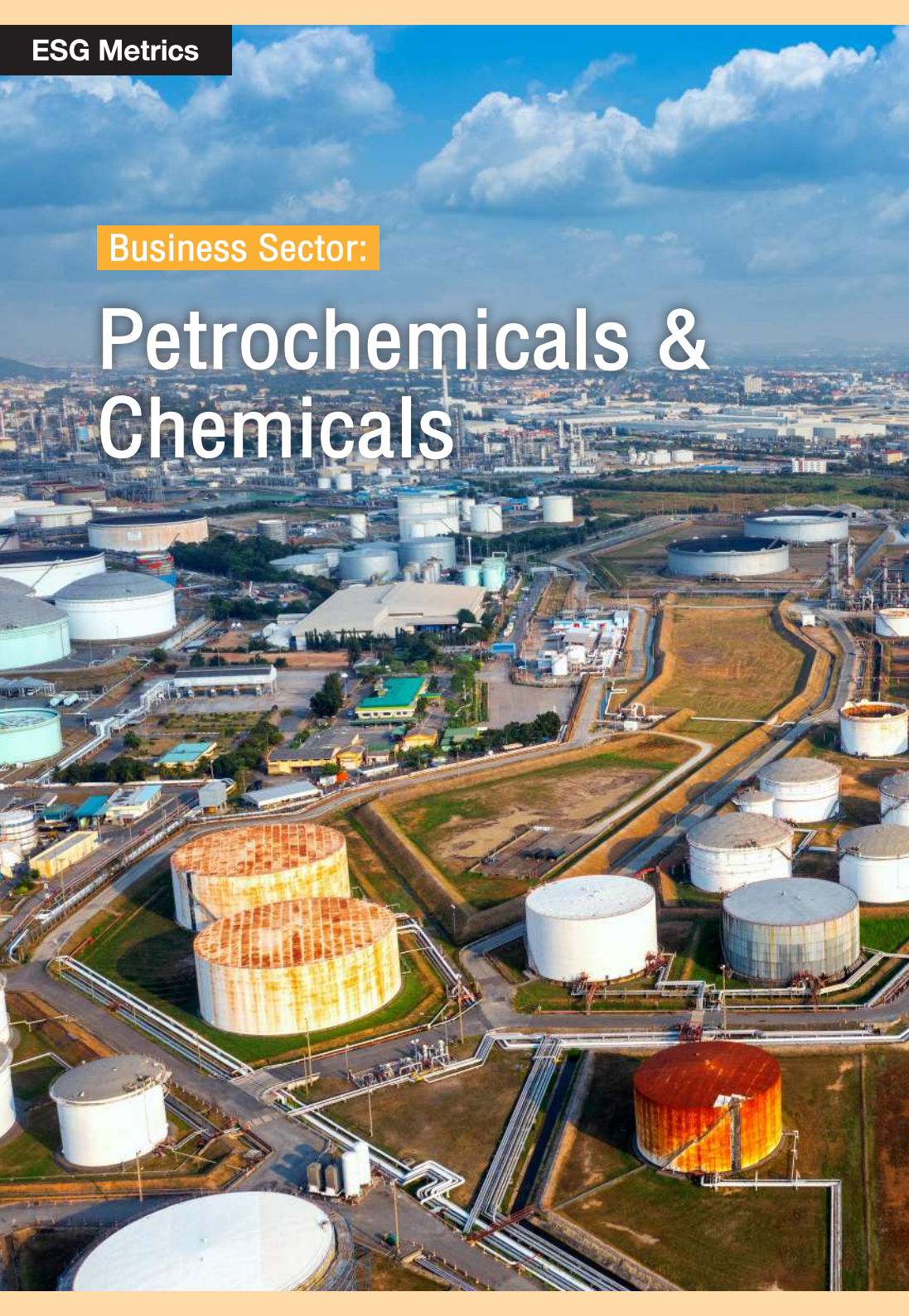
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PPR-G1 Cybersecurity and Personal Data Protection							
PPR-G1.1	Disclosure 418-1	Policy and guidelines on cybersecurity and personal data protection	Yes/No				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PPR-G1.2	Disclosure 418-1	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	%				
PPR-G1.3	Disclosure 418-1	Measures and guidelines related to personal data usage	Yes/No				
PPR-G1.4	Disclosure 418-1	Percentage of employees who have been trained in cybersecurity and personal data usage	%				
PPR-G1.5	Disclosure 418-1	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	No. of cases				
PPR-G1.6	Disclosure 418-1	Number of incidents or cases of personal data breaches, along with mitigation measures	No. of cases				
PPR-G2 Product Quality and Recall							
PPR-G2.1	Disclosure 416-1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Yes/No				
PPR-G2.2	Disclosure 416-2	Product recall plan	Yes/No				
PPR-G2.3	Disclosure 416-2	Number of cases or incidents of product recall, along with remediation and mitigation measures	No. of cases				



Business Sector:

Petrochemicals & Chemicals





Environmental Dimension			E
Code	ESG Indicators	GRI Standards	SDGs
PCH-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)			
PCH-E1.1	Disclosure of social and environmental impact assessment (SIA/EIA)	Disclosure 413-1	Goal 12: Responsible Consumption and Production
PCH-E1.2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Disclosure 413-2	Goal 12: Responsible Consumption and Production
<p>Rationale</p> <ul style="list-style-type: none"> Reporting on the analysis of social and environmental impacts (Social Impact Assessment: SIA/ Environmental Impact Assessment: EIA) demonstrates compliance with laws and the establishment of prevention measures to minimize the impact on communities and the environment resulting from the business’s project operations. Additionally, reports on social and environmental impact analyses serve as decision-making guidelines for project developers to efficiently execute related activities and build long-term confidence in customers. 			
<p>Reporting Approach</p> <p>A company should report the following information:</p> <ul style="list-style-type: none"> Summary of the impact assessment, monitoring process, and measures to reduce social and environmental impacts of the company, covering four aspects, including: <ol style="list-style-type: none"> Impact on human quality of life, including air and noise pollution, and changes in soil and water resources. Impact on living organisms in natural ecosystems, such as forest and marine resources, etc. Impact from land use and community benefit activities. Impact on community lifestyles, economic systems, culture, beliefs, aesthetics, and surrounding landscapes. 			

Code	ESG Indicators	GRI Standards	SDGs
PCH-E2 Environmentally Friendly Products			
PCH-E2.1	Policy and guidelines for preventing contamination or leakage from production processes	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PCH-E2.2	The life cycle impact assessment of products	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PCH-E2.3	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	Disclosure 416-1	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly products reflects the design and development of products to minimize environmental impacts, considering efficient resource usage and environmental effects. It also demonstrates efficiency in production, and being environmentally conscious throughout the product’s life cycle, which starts from the process of material selection, manufacturing, and packaging, to the process of proper product disposal. Effective implementation of these operations helps reduce waste generated from production processes. Furthermore, environmentally friendly products (eco products) not only contribute to environmental protection but also enhance value and competitiveness.

Reporting Approach

A company should report the following information:

- Key summary of policy, guidelines, and measures to prevent contamination or leakage from production processes that may impact the environment.
- Summary of information regarding the life cycle impact assessment of products. The scope of the assessment should encompass raw material selection, manufacturing, packaging, and the process of proper product disposal. The assessment should be conducted efficiently according to international standards, such as ISO 14040:2006, etc.
- Percentage of sales for environmentally friendly products (eco products) compared to total product sales, with the calculation guidelines as follows:

$$\text{Percentage of eco product sales} = \frac{\text{Total eco product sales}}{\text{Total product sales}} \times 100$$

- Additional reference:
 - ISO 14040:2006, an international standard for product life cycle assessment.

Code	ESG Indicators	GRI Standards	SDGs
PCH-E3 Biodiversity and Cessation of Deforestation			
PCH-E3.1	Policy and guidelines regarding the conservation of biodiversity and cessation of deforestation, encompassing the company’s business operations and supply chain	Disclosure 304-1	Goal 15: Life on Land
PCH-E3.2	Assessment of the risks and impacts on biodiversity resulting from business operations	Disclosure 304-2	Goal 15: Life on Land
PCH-E3.3	Number of the company’s business areas with biodiversity conservation efforts	Disclosure 304-1	Goal 15: Life on Land
PCH-E3.4	Number of forest areas conserved under the company’s care	Disclosure 304-1	Goal 15: Life on Land
PCH-E3.5	Diversity conservation plans or projects in business operations	Disclosure 304-3	Goal 15: Life on Land
PCH-E3.6	Forest conservation plans or projects in business operations	Disclosure 304-3	Goal 15: Life on Land

Rationale

- Information on the company’s efforts to conserve biodiversity and cease deforestation reflects its commitment to achieving a balance, abundance, and environmental impact reduction from its business operations. The integrity of the ecosystem and forest areas is a crucial mechanism for absorbing carbon dioxide and mitigating the effects of climate change.

Reporting Approach

A company should report the following information:

- Key summary of policy and guidelines regarding biodiversity conservation and deforestation cessation, encompassing the company’s business processes and supply chain. These policy and guidelines should align with laws, regulations, and directives enforced by regulatory agencies, as well as conform to standards related to biodiversity conservation, such as IRIS metrics (biodiversity assessment) by the Global Impact for Investing Network (GIIN), etc.

- Summary of the assessment of risks and impacts on biodiversity, such as natural characteristics, plant species, wildlife species, water source quality, and natural water catchment areas, etc.
- Total business areas of the company that is actively monitored for biodiversity conservation, measured in square meters.
- Forest areas that the company manages and continuously monitors for conservation, measured in square meters.
- Summary of biodiversity and forest areas conservation plans or projects in the company's business operations, along with explanations of outcomes and achievements through project implementation, such as the percentage increase in green areas or the rate of greenhouse gas absorption, etc.
- Additional reference:
 - IRIS metrics (O15929) refer to the standards for biodiversity impact assessment by the Global Impact for Investing Network (GIIN).

Code	ESG Indicators	GRI Standards	SDGs
PCH-E4 Environmentally Friendly Materials			
PCH-E4.1	Total weight of all materials classified by type, such as: <ul style="list-style-type: none"> - Non-renewable materials - Renewable materials 	Disclosure 301-1	Goal 12: Responsible Consumption and Production
PCH-E4.2	Percentage of recycled input materials used in product development	Disclosure 301-2	Goal 12: Responsible Consumption and Production
PCH-E4.3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	Disclosure 301-3	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly materials usage reflects the company's efforts to recycle materials from waste and create added value for the business. This also highlights the design and production of products that help maintain cost-effectiveness and maximize resource utilization benefits, ultimately aligning with the principles of a circular economy.

Reporting Approach

A company should report the following information:

- Total weight of all materials in kilograms
- Weight of materials classified by type, such as:

Types of resources used in production	Weight of materials (Kilograms)
Non-renewable materials	
Renewable materials	

Remark:

- 1) *Non-renewable materials refer to natural resources that are depleted or exhausted when used and may take a very long time, exceeding the human lifespan, to naturally regenerate or replace the portion that has been utilized. Examples of non-renewable materials include minerals, metals, natural gases, petroleum, and coal.*
- 2) *Renewable materials refer to materials derived from natural resources that are not depleted when used. They undergo processes of regeneration or replenishment in a relatively short timeframe, following natural cycles. Examples of renewable materials include biomass materials and wood.*

- Percentage of recycled input materials used in product development. For example, materials from plastic waste or wood scraps, etc., with calculation guidelines as follows:

$$\text{Percentage of recycled input materials used in product development} = \frac{\text{Total weight of recycled input materials used in product development}}{\text{Total weight of all materials}} \times 100$$

- Percentage of expired or deteriorated materials (reclaimed) that are reused in product development. For examples, old car tires, old vinyl cloth, etc., with calculation guidelines as follows:

$$\text{Percentage of expired or deteriorated materials (reclaimed) that are reused in product development} = \frac{\text{Total weight of expired or deteriorated materials (reclaimed) that are reused in product development}}{\text{Total weight of all materials}} \times 100$$

- Additional reference:
 - Organization for Economic Co-operation and Development (OECD) Renewable Material

Code	ESG Indicators	GRI Standards	SDGs
PCH-E5 Air Pollution			
PCH-E5.1	Volume of air pollution from business operations, such as: <ul style="list-style-type: none"> - Nitrogen Oxide (NO_x) - Sulfur Dioxide (SO_x) - Persistent Organic Pollutants (POP) - Volatile Organic Compounds (VOC) - Hazardous Air Pollutants (HAP) - Particulate Matter (PM) 	Disclosure 305-7	Goal 12: Responsible Consumption and Production

Rationale

- Reporting air pollution data reflects the company’s efforts to control and reduce air pollution from its business operations, which could impact the health of the surrounding communities. Therefore, if the company has effective management, the risks that leads to environmental law violations, and disputes with communities will be reduced.

Reporting Approach

A company should report the following information:

- Sources of air pollution emissions from business operations, along with summary of prevention measures and the air quality monitoring process conducted at least once a year.
- Results of air quality measurements compared to standard values, with units in milligrams per cubic meter (mg/m³) or parts per million (ppm). For example:

Pollution	Standard Value (mg/m ³ or ppm)	Measured Value (mg/m ³ or ppm)
Nitrogen Oxide (NO _x)		
Sulfur Dioxide (SO _x)		
Persistent Organic Pollutants (POP)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants (HAP)		
Particulate Matter (PM)		
Others		

- Air quality information that indicates the air pollution situation that may affect the health of the community in each area around the business facilities, based on the Air Quality Index (AQI).
- Additional references:
 - Handbook for Air Pollution Monitoring from Emissions, Volume 1 by Pollution Control Department
 - Document for Pollutant Emissions Calculation from Measurement Data by Pollution Control Department

Code	ESG Indicators	GRI Standards	SDGs
PCH-E6 Hydrocarbon Leakage			
PCH-E6.1	Number of incidents or cases of hydrocarbon leakage	Disclosure 306-3 (2016)	Goal 12: Responsible Consumption and Production
PCH-E6.2	Hydrocarbon leak management plan, including incident locations, types of chemicals involved, leak quantities, and containment and recovery measures	Disclosure 306-3 (2016)	Goal 12: Responsible Consumption and Production
PCH-E6.3	Assessment of severity and impacts resulting from hydrocarbon leakage incidents	Disclosure 306-3 (2016)	Goal 12: Responsible Consumption and Production

Rationale

- Information about hydrocarbon leakage reflects the management and prevention measures for hydrocarbon leaks, which have severe impacts on natural ecosystems and the health of living organisms in both the short and long term. It also results in economic damage to businesses and communities. If the company has continuous prevention and monitoring measures in place, it can reduce the risk and mitigate the severity of hydrocarbon leakage incidents.

Reporting Approach

A company should report the following information:

- Number of incidents or cases of hydrocarbon leakage resulting from business operations, from production to chemical transportation processes throughout the supply chain, including:

Leakage Incidents	No. of Cases (Cases)	Volume (Cubic Meter)
Leakage from the production process		
Leakage from land transport		
Leakage from water transportation		

Remark: Hydrocarbons refer to organic compounds primarily composed of hydrogen and carbon elements, such as oil, natural gas, including raw materials and petroleum products, etc., which are essential components of the petrochemical business.

- Summary of the management plan and various measures regarding the hydrocarbon leakage incidents, including incident locations, types of chemicals involved, leakage quantities, and containment and recovery measures.
- Assessment of the severity and impacts of hydrocarbon leakage incidents in terms of economics, environment, and health, as well as probabilities of legal actions or disputes with communities.

Code	ESG Indicators	GRI Standards	SDGs
PCH-E7 Climate Change Risks			
PCH-E7.1	Climate change risk assessment with explanation of potential impacts on business operations	Disclosure 201-2	Goal 13: Climate Action
PCH-E7.2	Goals, plans, and measures to mitigate climate change risks	Disclosure 201-2	Goal 13: Climate Action

Rationale

- Information on risks and adaptation measures in response to climate change reflects the company’s efforts to mitigate impacts of these risks and enhance business opportunities arising from such risks. Furthermore, it showcases the management’s preparedness and adaptability of the business during emergency situations caused by natural disasters, which can significantly affect business operations. Examples are droughts, floods, sea level changes, and extreme weather conditions. These events impact production factors, land allocation, transportation, etc.

Reporting Approach

A company should report the following information:

- Risk factors arising from climate change and significantly impacting business operations, such as:
 - Examples of physical risks, such as impacts on businesses from changes in sea levels, atmospheric temperatures, natural freshwater sources, storm occurrences, forest fires, and impact on employee health due to increased exposure to high temperatures and heat radiation, etc.
 - Examples of regulatory risks include international laws and agreements that require businesses to be accountable for greenhouse gas emissions through taxation mechanisms, which consequently lead to significantly higher production costs, etc.
 - Other examples of risks, such as changes in the energy industry, the increasing demand for environmentally friendly technologies, products, and services, which leads to continuous environmental trends, etc.
- Quantitative and qualitative targets to prepare the business for climate change.
- Plans and measures to mitigate risks from climate change. Examples are as follows:
 - Utilizing clean energy or renewable energy sources that do not emit greenhouse gases.
 - Increasing energy efficiency by using less resources.
 - Carbon offsetting.

Social Dimension



Code	ESG Indicators	GRI Standards	SDGs
PCH-S1 Local Employment			
PCH-S1.1	Policy and guidelines about local employment	Disclosure 202-2	Goal 8: Decent Work and Economic Growth
PCH-S1.2	Percentage of employees from local communities	Disclosure 202-2	Goal 8: Decent Work and Economic Growth

Rationale

- Reporting on local employment data reflects the role of businesses in strengthening the grassroots economy and the well-being of local communities. Higher local employment rates lead to increased income and consumption, enhancing the quality of life within the community. It fosters collaboration between businesses and communities while reducing the risk of labor shortages in the supply chain.

Reporting Approach

A company should report the following information:

- Information on policy and guidelines showing the importance of local employment and guidelines for recruitment of local workers.
- Percentage of employees from local communities.

$$\text{Percentage of employees from local communities} = \frac{\text{Total number of employees from local communities}}{\text{Total number of employees}} \times 100$$

Remark: Employees from local communities mean employees who were born or domiciled in the same area that the business operates. This is determined based on the business’s location in comparison to the employee’s citizenship registration documents, such as household registration, birth certificate, national identification card, and change of address notification, etc.

Code	ESG Indicators	GRI Standards	SDGs
PCH-S2 Respecting Diversity and Equality			
PCH-S2.1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
PCH-S2.2	Employee information categorized by gender and nationality	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
PCH-S2.3	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	Disclosure 406-1	Goal 8: Decent Work and Economic Growth

Rationale

- Information on the respect of diversity and equality reflects the diversity of employees within the organization and the efforts to protect the rights and equality of employees, without discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines regarding the respect for diversity and equality within the organization and the supply chain without discrimination based on gender, age, nationality, disability, religion, etc. Additionally, the company should demonstrate that it has monitoring mechanisms in place to ensure continuous adherence to this policy.
- Employee statistics categorized by gender and nationality.

Nationality	Total Number of Employees (People)		Number of Disabled Employees (People)	
	Female	Male	Female	Male
Thai				
Burmese				
Cambodian				
Laotian				
Others				

- Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures.

Code	ESG Indicators	GRI Standards	SDGs
PCH-S3 Promotion of Female Workforce			
PCH-S3.1	Policy and guidelines related to promoting gender equality in the workplace	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth
PCH-S3.2	Number of female employees categorized by employment level: - Senior management level - Management level - Staff level	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth

Rationale

- Information on promoting the female workforce within the workplace reflects the creation of equal opportunities for professional growth among personnel in the company, without gender-based discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines related to promoting the female workforce within the workplace.
- Female-to-male employee ratio.
- Number of female employees categorized by employment level.

Employment Level	Total Number of Employees (People)	
	Female	Male
Senior management level		
Management level		
Staff level		

Code	ESG Indicators	GRI Standards	SDGs
PCH-S4 Monitoring and Assessing Impacts on Communities			
PCH-S4.1	Monitoring and assessing impacts on communities from the company’s business operations	Disclosure 413-1	Goal 12: Responsible Consumption and Production
PCH-S4.2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	Disclosure 413-2	Goal 12: Responsible Consumption and Production

Rationale

- Information on monitoring and assessing impacts on communities highlights the risks associated with conducting business that could affect the quality of life for communities in terms of economics, society, and environment, both directly and indirectly. Once the company is aware of these issues, it has crucial information to establish prevention measures to mitigate the risks that could lead to human rights violations and disputes with communities, and potentially cause business interruption.

Reporting Approach

A company should report the following information:

- Summary of the results of monitoring and assessing impacts on communities from the company's business operations, highlighting risk factors and prevention measures.
- Summary of the outcomes of risk prevention measures or impacts that may have occurred to the communities in the past year.
- Number of disputes or complaints related to community rights violations, along with remediation and mitigation measures.

Governance and Economic Dimension



Code	ESG Indicators	GRI Standards	SDGs
PCH-G1 Cybersecurity and Personal Data Protection			
PCH-G1.1	Policy and guidelines on cybersecurity and personal data protection	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PCH-G1.2	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PCH-G1.3	Measures and guidelines related to personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PCH-G1.4	Percentage of employees who have been trained in cybersecurity and personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Code	ESG Indicators	GRI Standards	SDGs
PCH-G1.5	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
PCH-G1.6	Number of incidents or cases of personal data breaches, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Rationale

- Information related to cybersecurity management and personal data protection reflects the organization’s capabilities and effectiveness in managing information technology and security systems. It encompasses the organization’s data storage capabilities, leading to confidence in conducting business.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines that demonstrate the company’s management of technology security, information technology, and personal data in accordance with legal regulations and international standards.
- Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other standards, calculated as follows:

$$\text{Percentage of technology infrastructures certified with cybersecurity standards} = \frac{\text{Total number of technology infrastructures certified with cybersecurity standards}}{\text{Total number of technology infrastructures}} \times 100$$

- Percentage of employees who have been trained in cybersecurity and personal data usage.

$$\text{Percentage of employees trained in cybersecurity and personal data usage} = \frac{\text{Total employees trained in cybersecurity and personal data usage}}{\text{Total number of employees}} \times 100$$

- Number of incidents or cases of cyberattacks against the company, along with mitigation measures.
- Number of incidents or cases of personal data breaches, along with mitigation measures.
- Additional reference:
 - ISO 27001 is an internationally recognized standard for information security management systems.

Code	ESG Indicators	GRI Standards	SDGs
PCH-G2 Product Quality and Recall			
PCH-G2.1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Disclosure 416-1	Goal 12: Responsible Consumption and Production
PCH-G2.2	Product recall plan	Disclosure 416-2	Goal 12: Responsible Consumption and Production
PCH-G2.3	Number of cases or incidents of product recall, along with remediation and mitigation measures	Disclosure 416-2	Goal 12: Responsible Consumption and Production

Rationale

- Information about product quality and recall reflects the business’s commitment to develop and deliver quality and safe products to consumers in accordance with accepted standards. It demonstrates the process of continuous improvement of quality in production, as well as providing warranty and recalling products in the event of product errors, to maintain customer satisfaction and relationships.

Reporting Approach

A company should report the following information:

- Summary of product quality management policy and guidelines that demonstrate goals and measures to continuously control the quality of production processes and products in accordance with international standards, such as ISO 9001:2015, etc.
- Guidelines and duration of product warranties to instill customer confidence in the quality and standards of the products.
- Key summary of the product recall plan to illustrate the rapid, systematic, and efficient response procedures, especially in terms of communication and notification to customers, distributors, and all relevant parties of the supply chain related to the recalled products. This is to mitigate the severity and impact of product recall on consumers.
- Number of product recall cases or incidents that have a significant impact on the business, which may be determined by the extent of damage caused by the recalled products, such as recalled products with orders exceeding 1 million baht, etc., along with summary of information about the causes and risk issues that cause the recall. This is to establish prevention measures for future incidents.

Performance Summary:

ESG Metrics - Petrochemicals & Chemicals Sector

Environmental Dimension E							
Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PCH-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)							
PCH-E1.1	Disclosure 413-1	Disclosure of social and environmental impact assessment (SIA/EIA)	Yes/No				
PCH-E1.2	Disclosure 413-2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Yes/No				
PCH-E2 Environmentally Friendly Products							
PCH-E2.1	Disclosure 416-1	Policy and guidelines for preventing contamination or leakage from production processes	Yes/No				
PCH-E2.2	Disclosure 416-1	The life cycle impact assessment of products	Yes/No				
PCH-E2.3	Disclosure 416-1	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	%				
PCH-E3 Biodiversity and Cessation of Deforestation							
PCH-E3.1	Disclosure 304-1	Policy and guidelines regarding the conservation of biodiversity and cessation of deforestation, encompassing the company's business operations and supply chain	Yes/No				
PCH-E3.2	Disclosure 304-2	Assessment of the risks and impacts on biodiversity resulting from business operations	Yes/No				
PCH-E3.3	Disclosure 304-1	Number of the company's business areas with biodiversity conservation efforts	Square Meter				
PCH-E3.4	Disclosure 304-1	Number of forest areas conserved under the company's care	Square Meter				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PCH-E3.5	Disclosure 304-3	Diversity conservation plans or projects in business operations	Yes/No				
PCH-E3.6	Disclosure 304-3	Forest conservation plans or projects in business operations	Yes/No				
PCH-E4 Environmentally Friendly Materials							
PCH-E4.1	Disclosure 301-1	Total weight of all materials	Kilograms				
		Total weight of materials classified by type					
		- Non-renewable materials	Kilograms				
		- Renewable materials	Kilograms				
PCH-E4.2	Disclosure 301-2	Percentage of recycled input materials used in product development	%				
PCH-E4.3	Disclosure 301-3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	%				
PCH-E5 Air Pollution							
PCH-E5.1	Disclosure 305-7	Volume of air pollution from business operations					
		- Nitrogen Oxide (NO _x)	mg/m ³				
		- Sulfur Dioxide (SO _x)	mg/m ³				
		- Persistent Organic Pollutants (POP)	mg/m ³				
		- Volatile Organic Compounds (VOC)	mg/m ³				
		- Hazardous Air Pollutants (HAP)	mg/m ³				
		- Particulate Matter (PM)	mg/m ³				
		- Others	mg/m ³				
PCH-E6 Hydrocarbon Leakage							
PCH-E6.1	Disclosure 306-3 (2016)	Number of incidents or cases of hydrocarbon leakage					
		- Leakage from the production process	No. of cases				
		- Leakage from land transport	No. of cases				
		- Leakage from water transportation	No. of cases				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
Volume of hydrocarbon leakage							
		- Leakage from the production process	m ³				
		- Leakage from land transport	m ³				
		- Leakage from water transportation	m ³				
PCH-E6.2	Disclosure 306-3 (2016)	Hydrocarbon leak management plan	Yes/No				
PCH-E6.3	Disclosure 306-3 (2016)	Assessment of severity and impacts resulting from hydrocarbon leakage incidents	Yes/No				

PCH-E7 Climate Change Risks

PCH-E7.1	Disclosure 201-2	Climate change risk assessment with explanation of potential impacts on business operations	Yes/No				
PCH-E7.2	Disclosure 201-2	Goals, plans, and measures to mitigate climate change risks	Yes/No				

Social Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PCH-S1 Local Employment							
PCH-S1.1	Disclosure 202-2	Policy and guidelines about local employment	Yes/No				
PCH-S1.2	Disclosure 202-2	Percentage of employees from local communities	%				
PCH-S2 Respecting Diversity and Equality							
PCH-S2.1	Disclosure 405-1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Yes/No				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)		Previous 2 years (e.g., 2019)		Previous years (e.g., 2020)		Reporting year (e.g., 2021)	
				Female	Male	Female	Male	Female	Male	Female	Male
PCH-S2.2	Disclosure 405-1	Employee statistics categorized by gender and nationality									
		Total employees in the company	People								
		- Thai	People								
		- Burmese	People								
		- Cambodian	People								
		- Laotian	People								
		- Others	People								
PCH-S2.3	Disclosure 406-1	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	No. of cases								
PCH-S3 Promotion of Female Workforce											
PCH-S3.1	Disclosure 405-1	Policy and guidelines related to promoting gender equality in the workplace	Yes/No								
PCH-S3.2	Disclosure 405-1	Number of female employees categorized by employment level		Female	Male	Female	Male	Female	Male	Female	Male
		Total employees in the company	People								
		- Senior management level	People								
		- Management level	People								
		- Staff level	People								
PCH-S4 Monitoring and Assessing Impacts on Communities											
PCH-S4.1	Disclosure 413-1	Monitoring and assessing impacts on communities from the company's business operations	Yes/No								
PCH-S4.2	Disclosure 413-2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	No. of cases								



Governance and Economic Dimension

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
PCH-G1 Cybersecurity and Personal Data Protection							
PCH-G1.1	Disclosure 418-1	Policy and guidelines on cybersecurity and personal data protection	Yes/No				
PCH-G1.2	Disclosure 418-1	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	%				
PCH-G1.3	Disclosure 418-1	Measures and guidelines related to personal data usage	Yes/No				
PCH-G1.4	Disclosure 418-1	Percentage of employees who have been trained in cybersecurity and personal data usage	%				
PCH-G1.5	Disclosure 418-1	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	No. of cases				
PCH-G1.6	Disclosure 418-1	Number of incidents or cases of personal data breaches, along with mitigation measures	No. of cases				
PCH-G2 Product Quality and Recall							
PCH-G2.1	Disclosure 416-1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Yes/No				
PCH-G2.2	Disclosure 416-2	Product recall plan	Yes/No				
PCH-G2.3	Disclosure 416-2	Number of cases or incidents of product recall, along with remediation and mitigation measures	No. of cases				



Business Sector:

Steel and Metal Products



Environmental Dimension			E
Code	ESG Indicators	GRI Standards	SDGs
SME-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)			
SME-E1.1	Disclosure of social and environmental impact assessment (SIA/EIA)	Disclosure 413-1	Goal 12: Responsible Consumption and Production
SME-E1.2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Disclosure 413-2	Goal 12: Responsible Consumption and Production
<p>Rationale</p> <ul style="list-style-type: none"> Reporting on the analysis of social and environmental impacts (Social Impact Assessment: SIA/ Environmental Impact Assessment: EIA) demonstrates compliance with laws and the establishment of prevention measures to minimize the impact on communities and the environment resulting from the business’s project operations. Additionally, reports on social and environmental impact analyses serve as decision-making guidelines for project developers to efficiently execute related activities and build long-term confidence in customers. 			
<p>Reporting Approach</p> <p>A company should report the following information:</p> <ul style="list-style-type: none"> Summary of the impact assessment, monitoring process, and measures to reduce social and environmental impacts of the company, covering four aspects, including: <ol style="list-style-type: none"> Impact on human quality of life, including air and noise pollution, and changes in soil and water resources. Impact on living organisms in natural ecosystems, such as forest and marine resources, etc. Impact from land use and community benefit activities. Impact on community lifestyles, economic systems, culture, beliefs, aesthetics, and surrounding landscapes. 			

Code	ESG Indicators	GRI Standards	SDGs
SME-E2 Environmentally Friendly Products			
SME-E2.1	Policy and guidelines for preventing contamination or leakage from production processes	Disclosure 416-1	Goal 12: Responsible Consumption and Production
SME-E2.2	The life cycle impact assessment of products	Disclosure 416-1	Goal 12: Responsible Consumption and Production
SME-E2.3	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	Disclosure 416-1	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly products reflects the design and development of products to minimize environmental impacts, considering efficient resource usage and environmental effects. It also demonstrates efficiency in production, and being environmentally conscious throughout the product’s life cycle, which starts from the process of material selection, manufacturing, and packaging, to the process of proper product disposal. Effective implementation of these operations helps reduce waste generated from production processes. Furthermore, environmentally friendly products (eco products) not only contribute to environmental protection but also enhance value and competitiveness.

Reporting Approach

A company should report the following information:

- Key summary of policy, guidelines, and measures to prevent contamination or leakage from production processes that may impact the environment.
- Summary of information regarding the life cycle impact assessment of products. The scope of the assessment should encompass raw material selection, manufacturing, packaging, and the process of proper product disposal. The assessment should be conducted efficiently according to international standards, such as ISO 14040:2006, etc.
- Percentage of sales for environmentally friendly products (eco products) compared to total product sales, with the calculation guidelines as follows:

$$\text{Percentage of eco product sales} = \frac{\text{Total eco product sales}}{\text{Total product sales}} \times 100$$

- Additional reference:
 - ISO 14040:2006, an international standard for product life cycle assessment.

Code	ESG Indicators	GRI Standards	SDGs
SME-E3 Environmentally Friendly Materials			
SME-E3.1	Total weight of all materials classified by type, such as: - Non-renewable materials - Renewable materials	Disclosure 301-1	Goal 12: Responsible Consumption and Production
SME-E3.2	Percentage of recycled input materials used in product development	Disclosure 301-2	Goal 12: Responsible Consumption and Production
SME-E3.3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	Disclosure 301-3	Goal 12: Responsible Consumption and Production

Rationale

- Information about environmentally friendly materials usage reflects the company’s efforts to recycle materials from waste and create added value for the business. This also highlights the design and production of products that help maintain cost-effectiveness and maximize resource utilization benefits, ultimately aligning with the principles of a circular economy.

Reporting Approach

A company should report the following information:

- Total weight of all materials in kilograms
- Weight of materials classified by type, such as:

Types of resources used in production	Weight of materials (Kilograms)
Non-renewable materials	
Renewable materials	

Remark:

- 1) *Non-renewable materials refer to natural resources that are depleted or exhausted when used and may take a very long time, exceeding the human lifespan, to naturally regenerate or replace the portion that has been utilized. Examples of non-renewable materials include minerals, metals, natural gases, petroleum, and coal.*
- 2) *Renewable materials refer to materials derived from natural resources that are not depleted when used. They undergo processes of regeneration or replenishment in a relatively short timeframe, following natural cycles. Examples of renewable materials include biomass materials and wood.*

- Percentage of recycled input materials used in product development. For example, materials from plastic waste or wood scraps, etc., with calculation guidelines as follows:

$$\text{Percentage of recycled input materials used in product development} = \frac{\text{Total weight of recycled input materials used in product development}}{\text{Total weight of all materials}} \times 100$$

- Percentage of expired or deteriorated materials (reclaimed) that are reused in product development. For examples, old car tires, old vinyl cloth, etc., with calculation guidelines as follows:

$$\text{Percentage of expired or deteriorated materials (reclaimed) that are reused in product development} = \frac{\text{Total weight of expired or deteriorated materials (reclaimed) that are reused in product development}}{\text{Total weight of all materials}} \times 100$$

- Additional reference:
 - Organization for Economic Co-operation and Development (OECD) Renewable Material

Code	ESG Indicators	GRI Standards	SDGs
SME-E4 Air Pollution			
SME-E4.1	Volume of air pollution from business operations, such as: <ul style="list-style-type: none"> – Nitrogen Oxide (NO_x) – Sulfur Dioxide (SO_x) – Persistent Organic Pollutants (POP) – Volatile Organic Compounds (VOC) – Hazardous Air Pollutants (HAP) – Particulate Matter (PM) 	Disclosure 305-7	Goal 12: Responsible Consumption and Production

Rationale

- Reporting air pollution data reflects the company’s efforts to control and reduce air pollution from its business operations, which could impact the health of the surrounding communities. Therefore, if the company has effective management, the risks that leads to environmental law violations, and disputes with communities will be reduced.

Reporting Approach

A company should report the following information:

- Sources of air pollution emissions from business operations, along with summary of prevention measures and the air quality monitoring process conducted at least once a year.

- Results of air quality measurements compared to standard values, with units in milligrams per cubic meter (mg/m³) or parts per million (ppm). For example:

Pollution	Standard Value (mg/m ³ or ppm)	Measured Value (mg/m ³ or ppm)
Nitrogen Oxide (NO _x)		
Sulfur Dioxide (SO _x)		
Persistent Organic Pollutants (POP)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants (HAP)		
Particulate Matter (PM)		
Others		

- Air quality information that indicates the air pollution situation that may affect the health of the community in each area around the business facilities, based on the Air Quality Index (AQI).
- Additional references:
 - Handbook for Air Pollution Monitoring from Emissions, Volume 1 by Pollution Control Department
 - Document for Pollutant Emissions Calculation from Measurement Data by Pollution Control Department

Code	ESG Indicators	GRI Standards	SDGs
SME-E5 Climate Change Risks			
SME-E5.1	Climate change risk assessment with explanation of potential impacts on business operations	Disclosure 201-2	Goal 13: Climate Action
SME-E5.2	Goals, plans, and measures to mitigate climate change risks	Disclosure 201-2	Goal 13: Climate Action

Rationale

- Information on risks and adaptation measures in response to climate change reflects the company’s efforts to mitigate impacts of these risks and enhance business opportunities arising from such risks. Furthermore, it showcases the management’s preparedness and adaptability of the business during emergency situations caused by natural disasters, which can significantly affect business operations. Examples are droughts, floods, sea level changes, and extreme weather conditions. These events impact production factors, land allocation, transportation, etc.

Reporting Approach

A company should report the following information:

- Risk factors arising from climate change and significantly impacting business operations, such as:
 - Examples of physical risks, such as impacts on businesses from changes in sea levels, atmospheric temperatures, natural freshwater sources, storm occurrences, forest fires, and impact on employee health due to increased exposure to high temperatures and heat radiation, etc.
 - Examples of regulatory risks include international laws and agreements that require businesses to be accountable for greenhouse gas emissions through taxation mechanisms, which consequently lead to significantly higher production costs, etc.
 - Other examples of risks, such as changes in the energy industry, the increasing demand for environmentally friendly technologies, products, and services, which leads to continuous environmental trends, etc.
- Quantitative and qualitative targets to prepare the business for climate change.
- Plans and measures to mitigate risks from climate change. Examples are as follows:
 - Utilizing clean energy or renewable energy sources that do not emit greenhouse gases.
 - Increasing energy efficiency by using less resources.
 - Carbon offsetting.

Social Dimension



Code	ESG Indicators	GRI Standards	SDGs
SME-S1 Local Employment			
SME-S1.1	Policy and guidelines about local employment	Disclosure 202-2	Goal 8: Decent Work and Economic Growth
SME-S1.2	Percentage of employees from local communities	Disclosure 202-2	Goal 8: Decent Work and Economic Growth

Rationale

- Reporting on local employment data reflects the role of businesses in strengthening the grassroots economy and the well-being of local communities. Higher local employment rates lead to increased income and consumption, enhancing the quality of life within the community. It fosters collaboration between businesses and communities while reducing the risk of labor shortages in the supply chain.

Reporting Approach

A company should report the following information:

- Information on policy and guidelines showing the importance of local employment and guidelines for recruitment of local workers.
- Percentage of employees from local communities.

$$\text{Percentage of employees from local communities} = \frac{\text{Total number of employees from local communities}}{\text{Total number of employees}} \times 100$$

Remark: Employees from local communities mean employees who were born or domiciled in the same area that the business operates. This is determined based on the business’s location in comparison to the employee’s citizenship registration documents, such as household registration, birth certificate, national identification card, and change of address notification, etc.

Code	ESG Indicators	GRI Standards	SDGs
SME-S2 Respecting Diversity and Equality			
SME-S2.1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
SME-S2.2	Employee information categorized by gender and nationality	Disclosure 405-1	Goal 8: Decent Work and Economic Growth
SME-S2.3	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	Disclosure 406-1	Goal 8: Decent Work and Economic Growth

Rationale

- Information on the respect of diversity and equality reflects the diversity of employees within the organization and the efforts to protect the rights and equality of employees, without discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines regarding the respect for diversity and equality within the organization and the supply chain without discrimination based on gender, age, nationality, disability, religion, etc. Additionally, the company should demonstrate that it has monitoring mechanisms in place to ensure continuous adherence to this policy.

- Employee statistics categorized by gender and nationality.

Nationality	Total Number of Employees (People)		Number of Disabled Employees (People)	
	Female	Male	Female	Male
Thai				
Burmese				
Cambodian				
Laotian				
Others				

- Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures.

Code	ESG Indicators	GRI Standards	SDGs
SME-S3 Promotion of Female Workforce			
SME-S3.1	Policy and guidelines related to promoting gender equality in the workplace	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth
SME-S3.2	Number of female employees categorized by employment level: - Senior management level - Management level - Staff level	Disclosure 405-1	Goal 5: Gender Equality Goal 8: Decent Work and Economic Growth

Rationale

- Information on promoting the female workforce within the workplace reflects the creation of equal opportunities for professional growth among personnel in the company, without gender-based discrimination.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines related to promoting the female workforce within the workplace.
- Female-to-male employee ratio.
- Number of female employees categorized by employment level.

Employment Level	Total Number of Employees (People)	
	Female	Male
Senior management level		
Management level		
Staff level		

Code	ESG Indicators	GRI Standards	SDGs
SME-S4 Monitoring and Assessing Impacts on Communities			
SME-S4.1	Monitoring and assessing impacts on communities from the company's business operations	Disclosure 413-1	Goal 12: Responsible Consumption and Production
SME-S4.2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	Disclosure 413-2	Goal 12: Responsible Consumption and Production

Rationale

- Information on monitoring and assessing impacts on communities highlights the risks associated with conducting business that could affect the quality of life for communities in terms of economics, society, and environment, both directly and indirectly. Once the company is aware of these issues, it has crucial information to establish prevention measures to mitigate the risks that could lead to human rights violations and disputes with communities, and potentially cause business interruption.

Reporting Approach

A company should report the following information:

- Summary of the results of monitoring and assessing impacts on communities from the company's business operations, highlighting risk factors and prevention measures.
- Summary of the outcomes of risk prevention measures or impacts that may have occurred to the communities in the past year.
- Number of disputes or complaints related to community rights violations, along with remediation and mitigation measures.

Governance and Economic Dimension



Code	ESG Indicators	GRI Standards	SDGs
SME-G1 Cybersecurity and Personal Data Protection			
SME-G1.1	Policy and guidelines on cybersecurity and personal data protection	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
SME-G1.2	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Code	ESG Indicators	GRI Standards	SDGs
SME-G1.3	Measures and guidelines related to personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
SME-G1.4	Percentage of employees who have been trained in cybersecurity and personal data usage	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
SME-G1.5	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure
SME-G1.6	Number of incidents or cases of personal data breaches, along with mitigation measures	Disclosure 418-1	Goal 9: Industry, Innovation and Infrastructure

Rationale

- Information related to cybersecurity management and personal data protection reflects the organization's capabilities and effectiveness in managing information technology and security systems. It encompasses the organization's data storage capabilities, leading to confidence in conducting business.

Reporting Approach

A company should report the following information:

- Summary of policy and guidelines that demonstrate the company's management of technology security, information technology, and personal data in accordance with legal regulations and international standards.
- Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other standards, calculated as follows:

$$\text{Percentage of technology infrastructures certified with cybersecurity standards} = \frac{\text{Total number of technology infrastructures certified with cybersecurity standards}}{\text{Total number of technology infrastructures}} \times 100$$

- Percentage of employees who have been trained in cybersecurity and personal data usage.

$$\text{Percentage of employees trained in cybersecurity and personal data usage} = \frac{\text{Total employees trained in cybersecurity and personal data usage}}{\text{Total number of employees}} \times 100$$

- Number of incidents or cases of cyberattacks against the company, along with mitigation measures.
- Number of incidents or cases of personal data breaches, along with mitigation measures.
- Additional reference:
 - ISO 27001 is an internationally recognized standard for information security management systems.

Code	ESG Indicators	GRI Standards	SDGs
SME-G2 Product Quality and Recall			
SME-G2.1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Disclosure 416-1	Goal 12: Responsible Consumption and Production
SME-G2.2	Product warranty guidelines	-	Goal 12: Responsible Consumption and Production
SME-G2.3	Product recall plan	Disclosure 416-2	Goal 12: Responsible Consumption and Production
SME-G2.4	Number of cases or incidents of product recall, along with remediation and mitigation measures	Disclosure 416-2	Goal 12: Responsible Consumption and Production

Rationale

- Information about product quality and recall reflects the business's commitment to develop and deliver quality and safe products to consumers in accordance with accepted standards. It demonstrates the process of continuous improvement of quality in production, as well as providing warranty and recalling products in the event of product errors, to maintain customer satisfaction and relationships.

Reporting Approach

A company should report the following information:

- Summary of product quality management policy and guidelines that demonstrate goals and measures to continuously control the quality of production processes and products in accordance with international standards, such as ISO 9001:2015, etc.
- Guidelines and duration of product warranties to instill customer confidence in the quality and standards of the products.
- Key summary of the product recall plan to illustrate the rapid, systematic, and efficient response procedures, especially in terms of communication and notification to customers, distributors, and all relevant parties of the supply chain related to the recalled products. This is to mitigate the severity and impact of product recall on consumers.
- Number of product recall cases or incidents that have a significant impact on the business, which may be determined by the extent of damage caused by the recalled products, such as recalled products with orders exceeding 1 million baht, etc., along with summary of information about the causes and risk issues that cause the recall. This is to establish prevention measures for future incidents.

Performance Summary:
ESG Metrics - Steel and Metal Products Sector

Environmental Dimension



Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
SME-E1 Reporting on the Analysis of Social and Environmental Impacts (SIA/EIA)							
SME-E1.1	Disclosure 413-1	Disclosure of social and environmental impact assessment (SIA/EIA)	Yes/No				
SME-E1.2	Disclosure 413-2	Disclosure of the monitoring process of social and environmental impact assessment (SIA/EIA)	Yes/No				
SME-E2 Environmentally Friendly Products							
SME-E2.1	Disclosure 416-1	Policy and guidelines for preventing contamination or leakage from production processes	Yes/No				
SME-E2.2	Disclosure 416-1	The life cycle impact assessment of products	Yes/No				
SME-E2.3	Disclosure 416-1	Percentage of sales for environmentally friendly products (eco products) compared to total product sales	%				
SME-E3 Environmentally Friendly Materials							
SME-E3.1	Disclosure 301-1	Total weight of all materials	Kilograms				
		Total weight of materials classified by type					
		- Non-renewable materials	Kilograms				
		- Renewable materials	Kilograms				
SME-E3.2	Disclosure 301-2	Percentage of recycled input materials used in product development	%				
SME-E3.3	Disclosure 301-3	Percentage of expired or deteriorated materials (reclaimed) that are reused in product development	%				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
SME-E4 Air Pollution							
SME-E4.1	Disclosure 305-7	Volume of air pollution from business operations					
		- Nitrogen Oxide (NO _x)	mg/m ³				
		- Sulfur Dioxide (SO _x)	mg/m ³				
		- Persistent Organic Pollutants (POP)	mg/m ³				
		- Volatile Organic Compounds (VOC)	mg/m ³				
		- Hazardous Air Pollutants (HAP)	mg/m ³				
		- Particulate Matter (PM)	mg/m ³				
		- Others	mg/m ³				

SME-E5 Climate Change Risks							
SME-E5.1	Disclosure 201-2	Climate change risk assessment with explanation of potential impacts on business operations	Yes/No				
SME-E5.2	Disclosure 201-2	Goals, plans, and measures to mitigate climate change risks	Yes/No				

Social Dimension

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Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
SME-S1 Local Employment							
SME-S1.1	Disclosure 202-2	Policy and guidelines about local employment	Yes/No				
SME-S1.2	Disclosure 202-2	Percentage of employees from local communities	%				

SME-S2 Respecting Diversity and Equality							
SME-S2.1	Disclosure 405-1	Policy and guidelines regarding respecting diversity and equality within the organization and the supply chain, without discrimination based on gender, age, nationality, disability, religion, or other factors	Yes/No				

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)		Previous 2 years (e.g., 2019)		Previous years (e.g., 2020)		Reporting year (e.g., 2021)	
				Female	Male	Female	Male	Female	Male	Female	Male
SME-S2.2	Disclosure 405-1	Employee statistics categorized by gender and nationality									
		Total employees in the company	People								
		- Thai	People								
		- Burmese	People								
		- Cambodian	People								
		- Laotian	People								
		- Others	People								
SME-S2.3	Disclosure 406-1	Number of incidents or complaints related to violations of rights, equality, and unfair treatment of labor, along with remediation and mitigation measures	No. of cases								
SME-S3 Promotion of Female Workforce											
SME-S3.1	Disclosure 405-1	Policy and guidelines related to promoting gender equality in the workplace	Yes/No								
SME-S3.2	Disclosure 405-1	Number of female employees categorized by employment level		Female	Male	Female	Male	Female	Male	Female	Male
		Total employees in the company	People								
		- Senior management level	People								
		- Management level	People								
		- Staff level	People								
SME-S4 Monitoring and Assessing Impacts on Communities											
SME-S4.1	Disclosure 413-1	Monitoring and assessing impacts on communities from the company's business operations	Yes/No								
SME-S4.2	Disclosure 413-2	Number of disputes or complaints regarding community rights violations, along with remediation and mitigation measures	No. of cases								



Governance and Economic Dimension

Code	GRI Standards	ESG Indicators	Unit	Previous 3 years (e.g., 2018)	Previous 2 years (e.g., 2019)	Previous years (e.g., 2020)	Reporting year (e.g., 2021)
SME-G1 Cybersecurity and Personal Data Protection							
SME-G1.1	Disclosure 418-1	Policy and guidelines on cybersecurity and personal data protection	Yes/No				
SME-G1.2	Disclosure 418-1	Percentage of technology infrastructures that have been certified with cybersecurity standards, such as ISO 27001 or other relevant standards	%				
SME-G1.3	Disclosure 418-1	Measures and guidelines related to personal data usage	Yes/No				
SME-G1.4	Disclosure 418-1	Percentage of employees who have been trained in cybersecurity and personal data usage	%				
SME-G1.5	Disclosure 418-1	Number of incidents or cases of cyberattacks against the company, along with mitigation measures	No. of cases				
SME-G1.6	Disclosure 418-1	Number of incidents or cases of personal data breaches, along with mitigation measures	No. of cases				
SME-G2 Product Quality and Recall							
SME-G2.1	Disclosure 416-1	Policy and guidelines for product quality management according to international standards, such as ISO 9001:2015 or other standards	Yes/No				
SME-G2.2	-	Product warranty guidelines	Yes/No				
SME-G2.3	Disclosure 416-2	Product recall plan	Yes/No				
SME-G2.4	Disclosure 416-2	Number of cases or incidents of product recall, along with remediation and mitigation measures	No. of cases				





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