Sustainability in motion: Beyond compliance to value creation

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Speaker

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Agenda

1. Overview on sustainability
2. Sustainability regulatory landscape
3. Case study: Developing the Sarawak Sustainability Blueprint (SSB) 2030

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1 Overview on sustainability

Global sustainability landscape

2024 global clean energy investment hit **US$2t**, boosting renewables and energy efficiency.

Cited report shows **88%** of global **companies** regard sustainability as a long-term value creator.

Only **6.9%** of the **106 billion tons** of materials used by the global economy come from recycled sources.

Global renewable capacity expanded by **582 GW**, primarily from solar and wind.

Transitioning the built environment to circular practices could abate up to **4 gigatons** of carbon dioxide (CO_2) and unlock **US$360 billion** in annual net profits by 2050.

Clean energy spending overtakes oil and gas spending.

Unilever plans to use **25% recycled plastic** in its packaging by 2025.

10,000 companies now committing to the Science-Based Target initiative (SBTi).

European Central Bank (ECB) to introduce a **"climate factor"** in lending operations.

Sources: BANKING.VISION, 2025 | IEA World Energy Investment, 2024 | Morgan Stanley, 2025 | NGFS, 2024 | Climate Group, 2024 | Unilever, 2024 | World Economic Forum, 2025 | The Financial Analyst, 2025 | The Guardian, 2025

Regionally, ASEAN is committed to mitigating the impact of climate change and advancing sustainability

Philippines

- Reduction and avoidance of greenhouse gas (GHG) emissions by 75% for the period 2020-2030 for agriculture, waste, industry, transport and energy sectors.
- Local governments and grassroots organizations are setting up eco-brick projects, zero-waste stores and composting hubs to tackle waste at the community and individual levels.

Malaysia

- Reduce CO_2 intensity against gross domestic product (GDP) by 45% by 2030 and be net zero by 2050.
- Introduced the Circular Economy Blueprint for Solid Waste (2025-2035) which offers guidance on the development of a circular economy with the goal of reaching a 40% national recycling rate by 2025.

Indonesia

- Reduce 29% of total GHG emissions by 2030, attain net zero emissions in Forestry and Other Land Use (FOLU) by 2030.
- Launched the Circular Economy Roadmap and National Action Plan (2025-2045) which aims to transform Indonesia's economy by 2045 through a shift from linear to circular.

Vietnam

- Reduce all GHG emissions by 43.5% from business-as-usual (BAU) scenario by 2030 and be net zero by 2050.
- Adopted a national circular economy model aiming for 85% of plastic waste to be reused, recycled and treated.

Thailand

- Reduce GHG emissions by 20% from the projected BAU level by 2030.
- Achieve carbon neutrality by 2050 and a net zero GHG emission target in 2065.
- Introduced the National Waste Management Action Plan (2023-2027) which targets to reduce plastic that goes into landfill by 100% in 2027.

Singapore

- Reduce emission intensity by 36% from 2005 levels by 2030 and be net zero by 2050.
- Introduced a carbon tax of S$5 per ton of CO_2 in 2019, set to increase to S$25 per ton in 2024/25 and S$45 in 2026/27.
- Launched the inaugural Zero Waste Masterplan in 2019 and set an additional target to reduce the amount of waste sent to the landfill each day by 30% by 2030.

Sources: Republic of the Philippines DOF, 2024 | Ministry of Economy, My CCUS | SDG Malaysia, 2025 | Ministry of Agriculture and Environment Vietnam, 2025 | UNFCC, 2022 | Ministry of Sustainability and the Environment Singapore, 2024

How does sustainability relate to the manufacturing sector?

Context

Malaysia has introduced the various plans, such as the National ESG Industry Framework, the New Industrial Master Plan (NIMP) and the Chemical Industry Roadmap to promote sustainable practices in manufacturing.

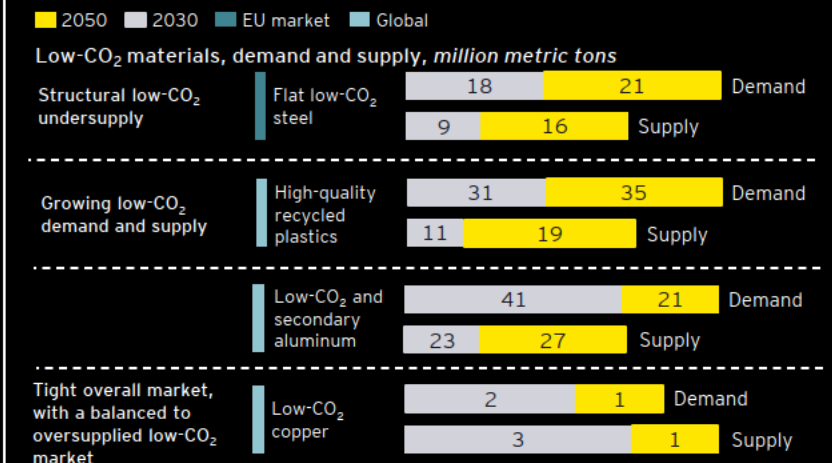
EU implemented the **Carbon Border Adjustment Mechanism (CBAM)** on imported goods, such as steel, cement and iron. [1]

Malaysia's Budget 2025 announcement introduces a **carbon tax on cement, steel and energy industries** by 2026. [2]

The construction and manufacturing sectors combined contribute approximately **57% of global carbon emissions.** [3]

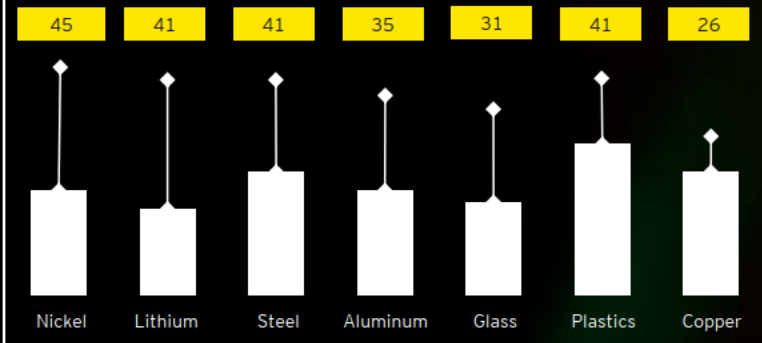
Outlook [4]

Demand and supply of sustainable materials by 2025 and 2030



Buyers are expecting to significantly increase their purchases of green materials.

Average share of green materials procurement volume (%, percentage points)



What this means for manufacturers

What manufacturers can do to be sustainable:

- Transition to renewable energy and improve energy efficiency.
- Improve material efficiency and source responsibly.
- Leverage emerging technologies. E.g., Internet of Things (IoT) and artificial intelligence (AI).
- Adopt circular economy models.

Sustainable manufacturing will help:

- Reduce potential carbon tax liabilities.
- Lower operational costs.
- Unlock new revenue streams from markets and consumers that prioritize sustainable products.
- Stronger supply chain resilience and investor confidence.

Sources: [1]European Commission - Carbon Border Adjustment Mechanism (CBAM) | [2]The Star, 2025 | [3]One Click LCA (2025) | [4]McKinsey, Materials Trends and outlook (2024)

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Sustainability regulatory landscape

The National Sustainability Reporting Framework (NSRF) will begin implementation in 2025, with the proposed reasonable assurance to follow two years later

Applicable entities		Timeline					
		2025	2026	2027	2028	2029	2030
Group 1	Main Market listed issuers with market capitalization of RM2 billion and above.	International Financial Reporting Standards (IFRS) S1 and S2		Full adoption IFRS S1 and S2 Scope 3 GHG emissions disclosures			
Group 2	Main Market listed issuers (other than listed issuers in Group 1).		IFRS S1 and S2		Full adoption IFRS S1 and S2 Scope 3 GHG emissions disclosures		
Group 3	▪ ACE Market listed issuers ▪ Non-listed companies (NLCos) with annual revenue of RM2 billion and above.			IFRS S1 and S2			Full adoption IFRS S1 and S2 Scope 3 GHG emissions disclosures
Assurance *Assurance framework will be subject to further consultation		▪ Aim for reasonable assurance for Scope 1 and Scope 2 greenhouse gas (GHG) emissions starting 2027. ▪ Accounting and non-accounting practitioners.					
Location of disclosures and timing of reporting		Applicable entities shall adhere to their respective regulator's requirements on location and timing of reporting.					

Reliefs and exemptions to facilitate adoption

Additional transition reliefs commencing from the first annual reporting period of the respective applicable entities	Group 1 and 2	Group 3
Permissible to disclose information on only climate-related risks and opportunities (in accordance with IFRS S2)	Two years	Three years
Permissible to focus climate-related disclosures specifically on principal business segments		
Permissible to not disclose Scope 3 emissions, except for categories already required by respective regulators		

Large NLCos whose holding company:

- Already reports using the International Sustainability Standards Board (ISSB)-aligned standards or equivalent standards, such as the European Sustainability Reporting Standards (ESRS), may leverage the holding company's sustainability- and climate-related disclosures.
- Reports using other international standards and frameworks may be given exemption from reporting for three reporting periods, subject to the policy decision of the Registrar.

Note:
1 The framework for sustainability assurance including the assurance providers, will be announced after further consultation with relevant stakeholders.
2 Annual reporting periods beginning on or after 1 January 20XX (e.g., 2025 refers to annual reports that cover period from 1 January to 31 December 2025).
3 The threshold is calculated based on consolidated group revenue of RM2 billion or more for two consecutive financial years preceding the current financial year. In the absence of group level revenue, the threshold will be measured at the company level. This is intended to align with the entity's existing financial reporting practices.
4 Additional guidance on the standards and frameworks that will be accepted for the exemptions may be issued.

The core content of the IFRS Sustainability Disclosure Standards builds on TCFD's recommendations

Focuses on the information needs to help investors make informed decisions.

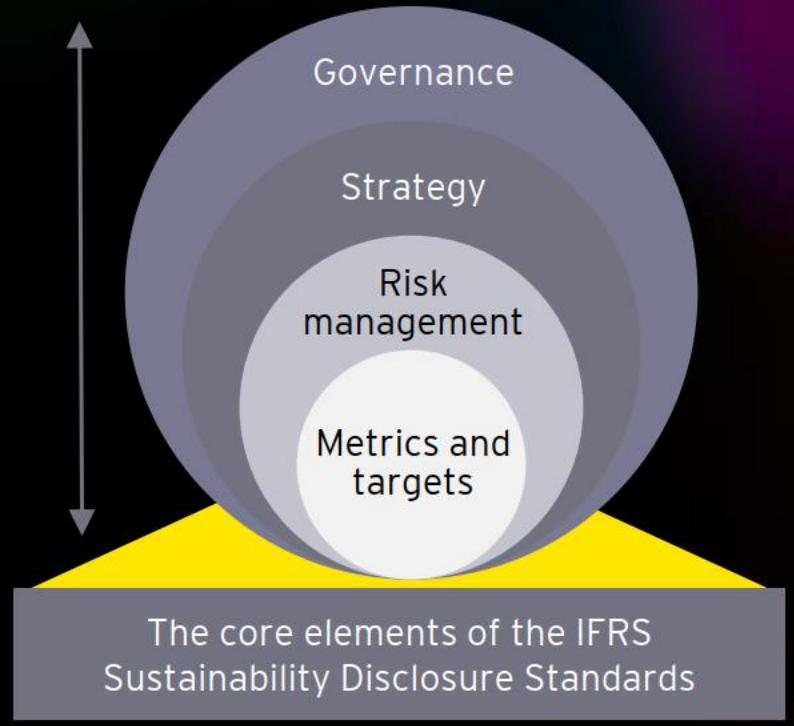
IFRS S1:
General Requirements Standard

IFRS S2:
Climate-related Disclosures

IFRS SX — Ongoing research

IFRS SX — Ongoing research

Other topic-based industry-specific requirements expected in the future (e.g., biodiversity, ecosystems and ecosystem services (BEES), human capital)



Governance

The governance processes, controls and procedures a reporting entity uses to monitor sustainability- and climate-related risks and opportunities (SRROs and CRROs).

Strategy

How an entity's strategy addresses significant SRROs and CRROs.

Risk management

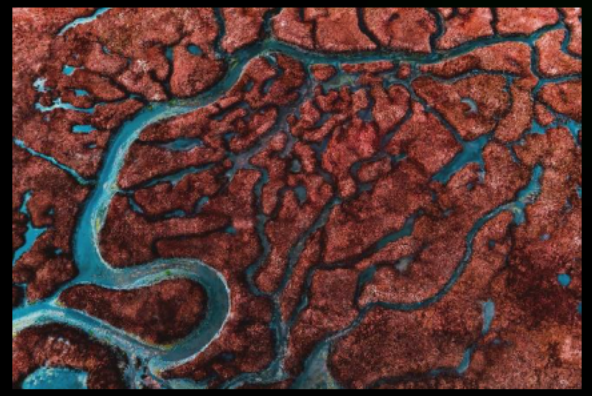
How sustainability and climate-related risks are identified, assessed, managed and mitigated.

Metrics and targets

Information used to manage and monitor the entity's performance in relation to SRROs and CRROs over time.

An overview of IFRS S2: Climate-related Disclosures

Key aspects of IFRS S2



1. Focuses on the disclosure of CRROs that is useful to primary users of general-purpose financial reports, including physical and transition risks.
2. Fully incorporates TCFD recommendations and builds upon its pillars.
3. Required to be applied in conjunction with IFRS S1.
4. Requires companies to refer to and consider the applicability of cross-industry metric categories using Industry-based Guidance on Implementing IFRS S2.

Scope of IFRS S2

Climate-related risks (Physical risks + Transition risks) + **Climate-related opportunities**

Physical risks	**Acute risks:** Weather related (e.g., floods)
	Chronic risks: Longer-term climatic shifts (e.g., temperature changes, sea level rise)
Transition risks	Regulatory, technological, market and reputational
Opportunities	Arise from efforts to mitigate and adapt

These CRROs could carry financial implications for an entity.

Industry-based Guidance on Implementing IFRS S2

What are the requirements under IFRS S2?

Entities are required to "refer to and consider the applicability of" industry-based disclosure topics when identifying CRROs.

Are these topics new?

No, the disclosure topics largely draw upon existing Sustainability Accounting Standards Board (SASB) Standards, which now falls under the remit of the ISSB.

Where is this guidance located?

Can be accessed in IFRS website.

Illustrative example: List of SRROs and CRROs for the construction materials sector and its key metrics based on SASB Standards maintained under ISSB

1 List of topics relevant to the sector

- Greenhouse gas emissions (GHG)
- Air quality
- Energy management
- Water management
- Waste management
- Workforce health and safety

2 List of sustainability-related risk and opportunities (SRROs) and climate-related risk and opportunities (CRROs)

Risks	Opportunities
Increase in operational costs (E.g., due to introduction of carbon pricing).	Reduce costs and emissions through carbon sequestration and renewables.
Higher costs due to emissions from fuel combustion and production processes.	Cost savings through technological improvements to manage emissions.
Increase in costs and GHG emissions due to energy-intense production.	Diversifying energy sources to reduce costs and ensure energy reliability.
Production disruptions and higher costs due to water scarcity and rising prices.	Adopt water conservation technologies to reduces costs and operational risks.
Regulatory and operating cost risks from hazardous waste generation.	Reduce compliance cost and risk through recycling by-products.
Health and safety risks from industry hazards increases compensation costs.	Strengthening health and safety management to reduce costs.

3 Example: Key metrics of a Netherlands construction materials company

Metrics	Reported figure
Gross global Scope 1 emissions	27,237,619 tons
NOx (excluding N2O)	38,459 tons
Total energy consumed	49.5 TWh
Total water withdrawn	104,849 thousand m3
Amount of waste generated	2.5 million tons
Number of reported cases of silicosis	Disclosed efforts to minimize workers' exposure to crystalline silica.

**Topics and metrics under respective topics are non-exhaustive*

Source: CRH 2024 Sustainability Performance Report

ISSB seeks to address sustainability- and climate-related information gaps impacting an entity's ability to deliver financial value

An entity's SRROs and CRROs arise from the entity's interactions throughout its value chain.

An entity's ability to deliver financial value is inextricably linked to:

Its stakeholders:
With whom the entity works with and serves through its products and/or services.

Society:
In which the entity operates based on its Social License to Operate (SLO).

Natural resources:
Upon which the entity draws upon and extracts from to run its business.

These interactions take place within an interdependent system where:

The entity is **dependent on resources and relationships** to generate cash flow.	The entity **affects these resources and relationships** through its activities and outputs.

Therefore, information on SRROs and CRROS is useful to primary users because it relates to the entity's ability to generate cash flow over the short, medium and long term.

Example illustrating the importance of sustainability-related financial information

Context

A beverage entity might need to disclose risks associated with water use, especially in areas where water is scarce.

Sustainability risks to the entity

- How its use of water affects the supply available to meet its operational needs.
- How overconsumption of water could lead to risks of reputational damage and loss of customers, or the imposition of taxes or limits on the use of the resource.
- How these risks have been assessed throughout the supply chain.

Financial risks to the entity

This could increase operating cost and impact ability to generate revenue.

Impact to primary users (i.e., investors)

Negatively impacts financial performance, growth forecasts, valuations and returns on investment.

Communicating value through the six capitals of the integrated reporting framework

An integrated report provides concise communication about how an organization's strategy, governance, performance and prospects, in context of its external environment, lead to the creation of value in the short, medium and long term.

Financial capital

The pool of funds that is available to an organization for use in the production of goods or the provision of services.

Manufactured capital

Manufactured physical objects that are available for an organization for use in the production of goods or the provision of services.

Intellectual capital

Organizational and knowledge-based intangibles.

Human capital

People's competencies, capabilities and experience and their motivations to innovate.

Social and relationship capital

The institutions and the relationships within and between communities, groups of stakeholders and other networks and the ability to share information to enhance individual and collective well-being.

Natural capital

All renewable and non-renewable environmental resources and processes that provide goods or services that support the past, current or future prosperity of an organization.

Value for organizations

- Holistic strategic insight and decision-making
- Enhanced risk management
- Improved stakeholder relationships
- Stronger brand and competitive edge

Value for stakeholders

- Enhanced decision-making
- Enhanced transparency and trust
- Ensures long-term stakeholder value

3

Case study: Developing the Sarawak Sustainability Blueprint (SSB) 2030

The SSB 2030 marks a significant milestone in Sarawak's sustainable development journey

Sarawak Sustainability Blueprint (SSB) 2030

10 strategic thrusts	48 strategies	111 action plans

The SSB 2030 framework

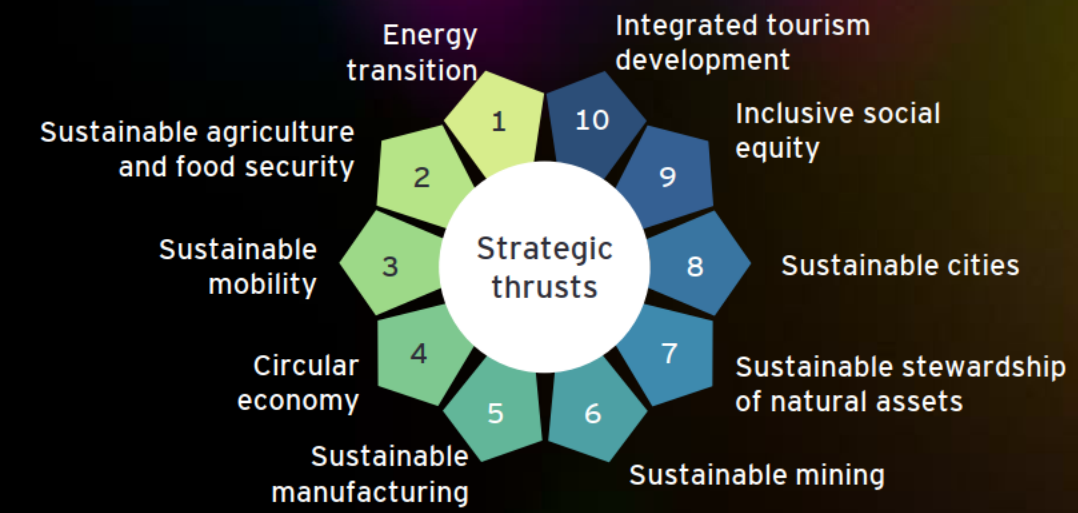
1 Purpose

To lead Sarawak's green economy transformation, driving a sustainable, prosperous and resilient future

2 Goals

- Economic growth and prosperity
- Environmental stewardship
- Healthy, resilient and inclusive community

3 Strategic thrusts *(strategies, action plans, metrics and targets)*



4 Key enablers

- Policy and regulations
- Financial support
- Digitalization, technology and infrastructure
- Human capacity and capability
- Strategic partnerships

The SSB 2030 was developed though engagement sessions with 47 stakeholders, with Ministry of Energy and Environmental Sustainability (MEESty) serving as a key partner

13 Sarawak ministries

2 Federal ministries

26 Sarawak government agencies, regulators, statutory bodies and local authorities

7 Private sector organizations and associations

Key engagement sessions

Workshops

14 August 2024

Prioritization workshop

To validate Sarawak's current sustainability, focus areas, develop the purpose and vision statement and gather insights on the strategies and action plans.

25 October 2024

Syndication workshop

To validate preliminary strategic thrust and formulate the implementation roadmap.

Sarawak Sustainability Insights Conference

25 October 2024

The conference unveiled the SSB 2030 and aimed to foster dialogue and gather insights on the 10 strategic thrusts through public consultation.

This event united policymakers, industry leaders and visionaries dedicated to advancing sustainable economy initiatives for Sarawak.

SSB 2030 launch

29 May 2025

The launch of the SSB 2030 represented a key step in formalizing Sarawak's sustainability agenda.

It provided a long-term strategic roadmap to support Sarawak's transition toward a green economy and intended to guide coordinated action across sectors.

The strategies and action plans within the SSB 2030 reflect prioritized efforts that will guide the implementation and monitoring of key initiatives

10 strategic thrusts (STs), 48 strategies

ST1: Energy transition

1.1 Diversify energy systems

1.2 Scale alternative low-carbon solution

1.3 Spur sustainable end-use energy consumption

1.4 Upgrade grid capabilities

1.5 Position Sarawak as a regional green energy powerhouse

ST2: Sustainable agriculture and food security

2.1 Increase adoption and access to modern farming and fishery technologies

2.2 Promote sustainable land and water management practices

2.3 Transition to low-emission, energy-efficient technologies and renewable sources

2.4 Promote circularity

2.5 Support smallholders in adopting sustainable practices

ST3: Sustainable mobility

3.1 Transition to low-emission vehicles and transport modes (land, marine, air)

3.2 Promote adoption of alternative fuel

3.3 Transition to low-emission, energy-efficient technologies and renewable sources at transportation hubs

3.4 Increase access and usage of public transportation

ST4: Circular economy

4.1 Promote sustainable consumption

4.2 Encourage waste segregation and recycling

4.3 Enhance waste treatment infrastructure and processes

4.4 Improve resource recovery and circulation

4.5 Promote sustainable design

ST5: Sustainable manufacturing

5.1 Transition to low-emission, energy-efficient technologies and renewable sources

5.2 Promote adoption of emerging technologies

5.3 Shift toward green infrastructure

5.4 Promote circularity

5.5 Establish responsible supply chain and operations

ST6: Sustainable mining

6.1 Transition to low-emission, energy-efficient technologies and renewable sources

6.2 Promote circularity and water conservation

6.3 Establish responsible business operations

*ST7: Sustainable stewardship of natural assets**

7.1 Strengthen terrestrial and marine conservation efforts

7.2 Strengthen sustainable land and marine resource management

7.3 Enhance terrestrial and marine restoration efforts

7.4 Strengthen the output of forest products

7.5 Strengthen social forestry

7.6 Strengthen urban ecosystems

7.7 Improve water management

ST8: Sustainable cities

8.1 Accelerate transition to green buildings

8.2 Promote sustainable construction practices

8.3 Implement sustainable urban design

ST9: Inclusive social equity

9.1 Universal access to essential needs

9.2 Build inclusive communities

9.3 Improve senior care and services

9.4 Foster skill growth and increase employment opportunities

9.5 Increase accessibility and affordability of healthcare for all

9.6 Provide access to quality education and lifelong learning for all

ST10: Integrated tourism development

10.1 Enhance cultural experiences and promote local arts

10.2 Prioritize ecotourism and geotourism

10.3 Empower indigenous and local communities

10.4 Advocate sustainable event practices

10.5 Position Sarawak as a premier health tourism destination

*Note: * In ST7: Sustainable Stewardship of Natural Assets, "natural assets" refer to both terrestrial and marine environments.*

ST4: Circular economy is in response to the increasing push for responsible consumption by accelerating the need to shift to a circular economy model

STRATEGIC THRUST 4: CIRCULAR ECONOMY

STRATEGIES	ACTION PLANS
4.1 Promote sustainable consumption	4.1.1 Phase out single-use plastic disposables. 4.1.2 Expand production of biodegradable and compostable products for consumption. 4.1.3 Promote reduction of food wastage at source. 4.1.4 Promote a culture to repurpose and reuse in the community.
4.2 Encourage waste segregation and recycling	4.2.1 Expand waste recycling programs and education for e-waste, common recyclables and industrial waste. 4.2.2 Introduce food waste collection and segregation programs for households, schools and businesses. 4.2.3 Increase waste recycling facilities.
4.3 Enhance waste treatment infrastructure and processes	4.3.1 Upgrade solid waste management infrastructure with the adoption of technologies. 4.3.2 Expand facilities within the integrated waste management system to process and treat various waste streams. 4.3.3 Improve management and treatment of scheduled waste. 4.3.4 Explore food waste treatment technologies. 4.3.5 Expand domestic wastewater and sludge treatment.
4.4 Improve resource recovery and circulation	4.4.1 Implement extended producer responsibility (EPR) mechanisms for plastics, packaging and e-waste. 4.4.2 Scale waste-to-energy technologies. 4.4.3 Promote industrial symbiosis for sustainable resource management. 4.4.4 Explore reuse of treated wastewater and sludge.
4.5 Promote sustainable design	4.5.1 Spur products to be more durable and repairable to increase lifespan. 4.5.2 Spur the maximization of post-consumer recycled (PCR) materials into products over virgin materials. 4.5.3 Encourage green labelling of products.

ENABLERS

- Policy and regulations
- Financial support
- Digitalization, technology and infrastructure
- Human capacity and capability
- Strategic partnerships

INTENDED OUTPUTS

- **Waste reduction**
  - Local authorities to reduce single-use plastic by 2030.
  - 5% reduction in food waste by 2030.
  - Reduction in the amount of municipal waste sent to landfills/open dumpsites to 5% or less of the total amount of municipal waste generated by 2035.
- **Improved recycling rates**
  - Alignment with the 40% national recycling rate of waste by 2025.
  - Increased recycling programs by 10%.
- **Waste treatment and management facilities**
  - Upgraded landfills to sanitary landfills by 2035.
  - Five centralized sewerage systems for all major cities and five septic sludge treatment plants for smaller towns developed by 2030.
- **Improved resource recovery**
  - Increased plastic recycling rates by 20% within five years.
  - Doubled e-waste collection rates within five years.
  - 90% of valuable materials recovered from e-waste by 2040.
- **Sustainable products**
  - 30% of packaging made from recycled content by 2030.
  - 100% recyclable or reuseable packaging by 2040.

GOALS AND INTENDED KEY OUTCOMES

Goal 1: Economic growth and prosperity
- Contribution to GDP.
- Job creation.
- New market opportunities for sustainable and recycled products.

Goal 2: Environmental stewardship
- CO_2 emissions reduction.
- Pollution reduction.
- Improved resource efficiency.

Goal 3: Healthy, resilient and inclusive community
- Improved public health and quality of life.

ST5: Sustainable manufacturing is in response to the demand for responsible production, while accelerating the transition to methods that reduce environmental impact

STRATEGIC THRUST 5: SUSTAINABLE MANUFACTURING

STRATEGIES	ACTION PLANS
5.1 Transition to low emissions, energy efficient technologies and renewable sources	5.1.1 Enhance adoption of energy-efficient and low-emission machinery, vehicles and renewable energy sources.
5.2 Promote adoption of emerging technologies	5.2.1 Explore technology application opportunities and implementation in hard-to-abate industries, such as cement, steel and aluminum (e.g., CCUS, hydrogen, inert anodes).
5.3 Shift toward green infrastructure	5.3.1 Accelerate the development of new eco-industrial parks and upscale transformation of traditional industrial estates.
5.4 Promote circularity	5.4.1 Increase facilities and technologies for recycling and remanufacturing process (e.g., material recovery facilities, sorting and recycling technologies).
5.5 Establish responsible supply chain and operations	5.5.1 Promote responsible sourcing of raw materials. 5.5.2 Foster fair labor practices within operations.

ENABLERS

- Policy and regulations
- Financial support
- Digitalization, technology and infrastructure
- Human capacity and capability
- Strategic partnerships

INTENDED OUTPUTS

- **Sustainable products** (e.g., Green-certified products, eco-friendly materials).
- **Low emissions and resource efficient technologies and facilities.**
- **Eco-industrial parks.**
- **Increased resource productivity.**
- **Increased used rate of circular materials.**
- **Reduced industrial waste.**
- **Increased in organizations/ suppliers meeting sustainability standards.**

GOALS AND INTENDED KEY OUTCOMES

Goal 1: Economic growth and prosperity
- Contribution to GDP.
- Job creation.
- New market opportunities for sustainable products.

Goal 2: Environmental stewardship
- CO_2 emissions reduction.
- Improved resource efficiency.

Goal 3: Healthy, resilient and inclusive community
- Improved workforce and community well-being.

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