Technical Talk: ESG Awareness for Engineers – Driving Sustainable Impact

By

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He is a committee member of eETD Session 2025/2026.

The "ESG for Engineers – Driving Sustainable Impact" webinar was successfully organized by the IEM Penang Branch in collaboration with the Electronic Engineering Technical Division. The webinar was conducted online via Zoom on 26 March 2026 from 6.30 pm to 8.30 pm. This evening virtual talk was attended by 30 participants including the speaker, moderator and IEM Penang Branch Secretariat. Participants showed interest in the topic and gained greater awareness of ESG-related challenges and opportunities within the engineering and industrial sectors.

The session featured Dr Gwee Sai Ling as the invited speaker, who shared valuable insights on Environmental, Social, and Governance (ESG) practices and their growing importance in the engineering industry. The webinar aimed to raise awareness among engineers and industry professionals regarding ESG principles, sustainability reporting frameworks, and practical approaches to integrating sustainable practices into engineering and project management activities.

During the webinar, Dr Gwee Sai Ling delivered a comprehensive presentation on ESG principles and sustainability practices relevant to engineers and industry stakeholders. The session emphasized that ESG is becoming increasingly important due to growing environmental concerns, regulatory requirements, investor expectations, and stakeholder demands as shown in Figure 1.

The speaker explained the meaning of ESG, covering the Environmental, Social, and Governance pillars and how these elements influence organizational sustainability and long-term value creation. Topics such as climate change, carbon emissions, waste management, responsible sourcing, human rights, governance practices, and community engagement were discussed extensively.

The webinar also highlighted current sustainability challenges faced globally and in Malaysia, including climate risks, pollution, increasing greenhouse gas emissions, and the need for responsible industrial development as shown in Figure 2. Regulatory frameworks and sustainability reporting requirements such as Bursa Malaysia Sustainability Reporting Guidelines, IFRS S1 and S2, Global Reporting Initiative (GRI), and ISO sustainability standards were introduced to participants as shown in Figure 3.

In addition, the speaker shared practical approaches for organizations to begin their ESG journey through sustainability assessments, SWOT analysis, gap analysis, action planning, and ESG integration into governance and operations. The P5 Sustainability Framework and Sustainable Development Goals (SDGs) were also presented as useful references for sustainability implementation as shown in Figure 4.

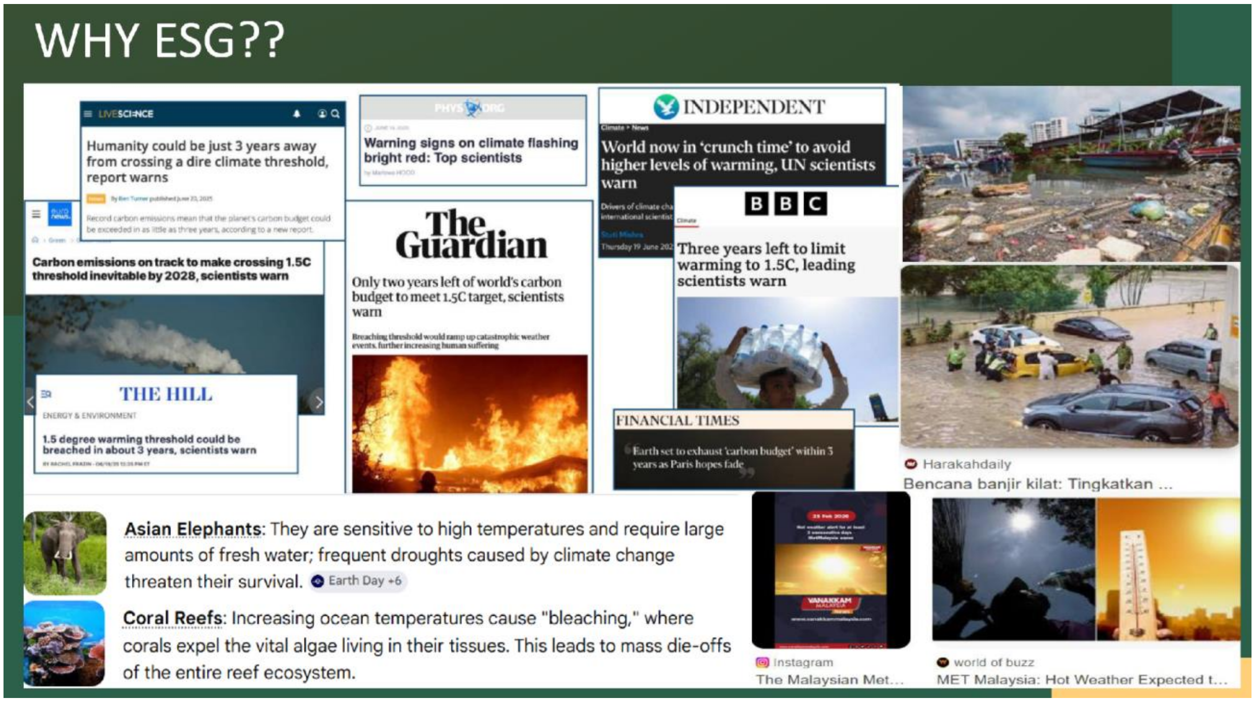

Figure 1: The Important of ESG

Figure 2: ESG Challenges in Malaysia

Bursa Malaysia Sustainability Reporting Guide and Toolkits

TABLE OF THEMES AND INDICATORS

Themes	Definition	Indicators	Guidance on sector applicability	References (to the Toolkits and external references)
Economic				
Procurement practices	Spending on local suppliers at significant location of operations.	Percentage of the procurement budget used for significant locations of operation spent on suppliers local to that operation	All sectors	Refer to: • Toolkit: Themes and Indicators - Procurement Practices • GRI: 204-1 • SDGs:
Community investment	Voluntary contributions made by an organisation to enhance socio-economic benefits and create a positive social impact.	Total amount invested in the community where the target beneficiaries are external to the entity (e.g. not-for-profit organisations)	All sectors	Refer to: • Toolkit: Themes and Indicators - Community Investment • GRI: 201-1 • SDGs:
Indirect economic impact	Indirect economic impacts are additional consequences of the direct impact of financial transactions and the flow of money between an organisation and its stakeholders.[45]	Report the current or expected impacts on communities and local economies - both relevant positive and negative impacts	All sectors	Refer to: • Toolkit: Themes and Indicators - Indirect Economic Impact • GRI: 203-1 • SDGs:
Environmental				
Emissions	Emissions refer to the discharge of environmentally hazardous substances (e.g. dust, dark smoke, emissions with metallic compounds) into the atmosphere. (This definition is in accordance with the schedules as provided in the Environmental Quality Act (Clean Air) Regulations 2014). Emissions also encompasses discharge of greenhouse gas (e.g. carbon dioxide (CO2), methane, nitrous oxide, etc.).	Scope 1 emissions in tonnes of CO_2e	• Construction and real estate • Consumer goods • Manufacturing • Oil & gas • Plantation • Telecommunications • Utilities	Refer to: • Toolkit: Themes and Indicators - Emissions • GRI: 305-1 • http://www.ghgprotocol.org/ • Environmental Quality Act (Clean Air) Regulations 2014 • TCFD Recommendations • SDGs: • Palm oil producers could also refer to http://www.rspo.org/certification/palm-ghg-calculator
Social				
Diversity	Diversity, specifically in the workforce, management and the Board is characterized by the gender, age, etc.	The percentage of employees per employee category in each of the following diversity categories: (a) gender; (b) age group; (c) ethnicity; and (d) disability	All sectors	Refer to: • Toolkit: Themes and Indicators - Diversity • GRI: 405-1 • SDGs:
		The percentage of directors in each of the following diversity categories: (a) gender; (b) age group; (c) ethnicity; and (d) disability	All sectors	Refer to: • Toolkit: Themes and Indicators - Diversity • GRI: 405-1 • SDGs:
		Ratio of foreign to local hire of low-skilled workers	• Construction and real estate • Consumer goods • Manufacturing • Oil & gas • Plantation • Telecommunications • Utilities	Refer to: • Toolkit: Themes and Indicators - Diversity • International Labour Organisation • SDGs:

Figure 3: Bursa Malaysia Sustainability Reporting Guide and Toolkits

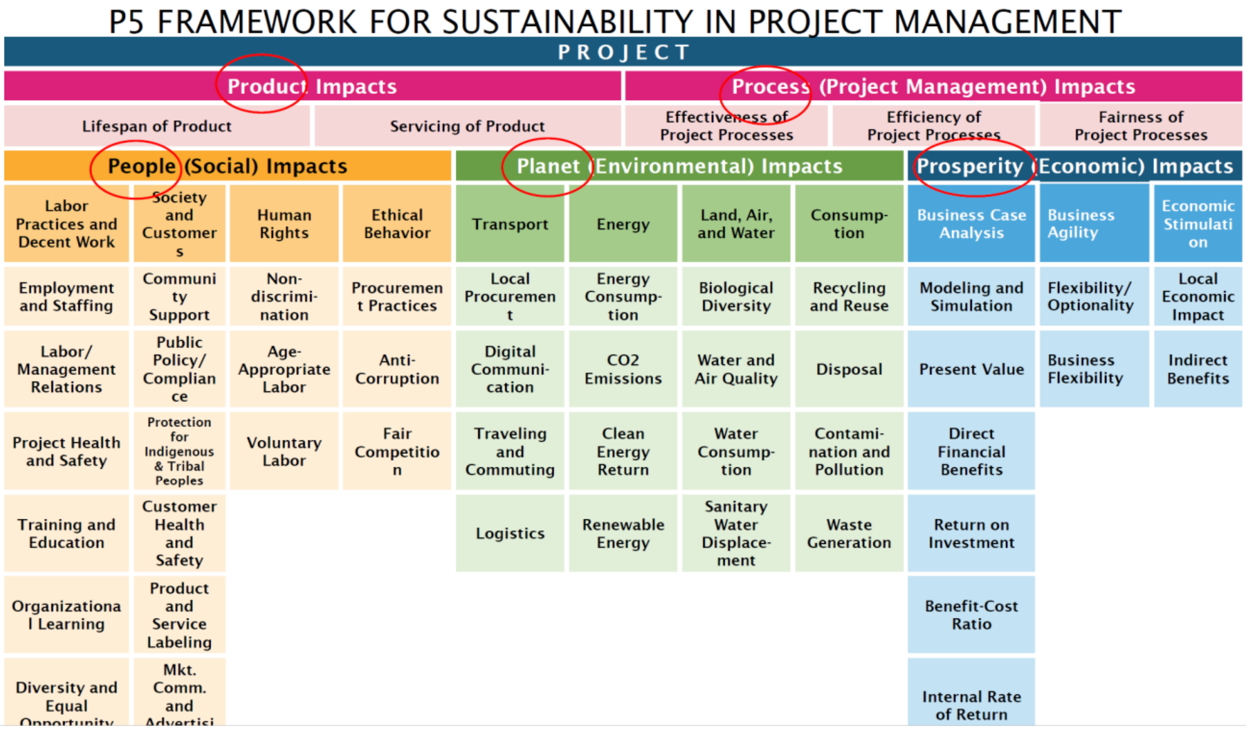

Figure 4: P5 Model for Sustainability Impact

The webinar concluded with recommendations on embedding sustainability into organizational culture through employee engagement, energy efficiency initiatives, transparent reporting, and measurable sustainability goals. Dr Gwee has also shared the ESG best practices by ViTrox Technologies. For more details, may visit the link: [https://vitrox.com/esg/.](https://vitrox.com/esg/) At the end of the talk, Dr. Yeap has presented the e-certificate to Dr. Gwee on behalf of IEM Penang Branch and eETD as shown in Figure 4 and the group photo is as shown in Figure 5.

Figure 4: Presentation of Certificate of Appreciation

Figure 5: Group Photo of the Evening Virtual Talk