



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.

WHY ESG??

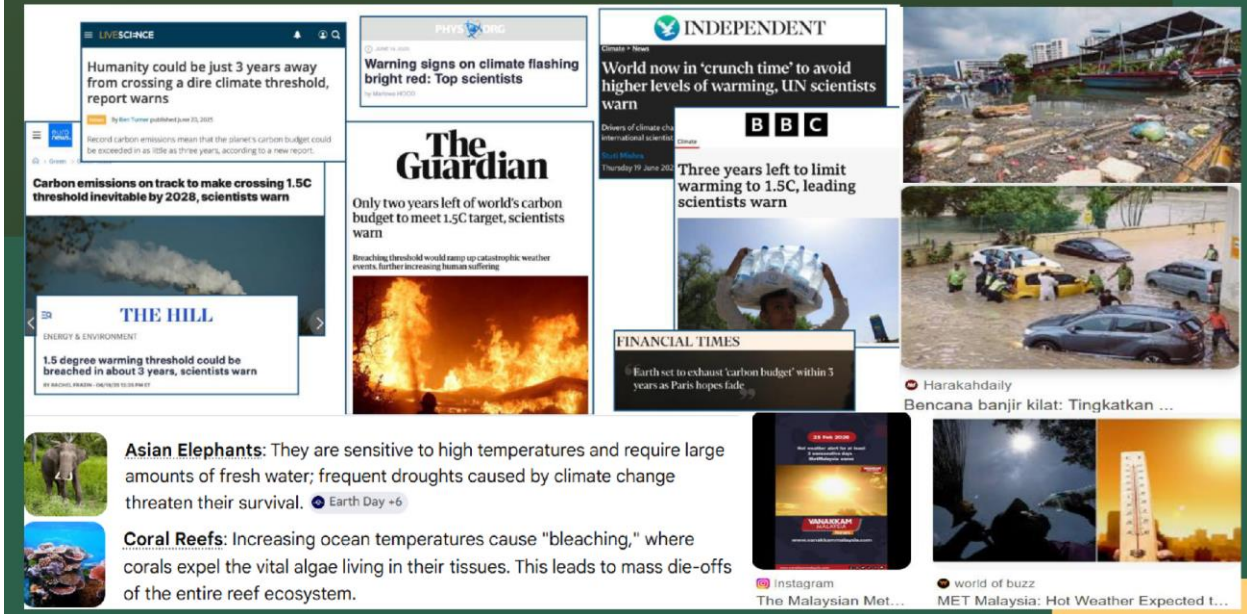


Figure 1: The Important of ESG

What About the current ESG issues in Malaysia??



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:     
Themes	Definition	Indicators	Guidance on sector applicability	References (to the Toolkits and external references)
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 (CO ₂), methane, nitrous oxide, etc.).	Scope 1 emissions in tonnes of CO ₂ e	- 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
Themes	Definition	Indicators	Guidance on sector applicability	References (to the Toolkits and external references)
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 The percentage of directors in each of the following diversity categories: (a) gender; (b) age group; (c) ethnicity; and (d) disability Ratio of foreign to local hire of low-skilled workers	All sectors All sectors - Construction and real estate - Consumer goods - Manufacturing - Oil & gas - Plantation - Telecommunications - Utilities	Refer to: • Toolkit: Themes and Indicators - Diversity • GRI: 405-1 • SDGs:  Refer to: • Toolkit: Themes and Indicators - Diversity • GRI: 405-1 • SDGs:  Refer to: • Toolkit: Themes and Indicators - Diversity • International Labour Organisation • SDGs: 

Figure 3: Bursa Malaysia Sustainability Reporting Guide and Toolkits

P5 FRAMEWORK FOR SUSTAINABILITY IN PROJECT MANAGEMENT

PROJECT										
Product Impacts				Process (Project Management) Impacts						
Lifespan of Product		Servicing of Product		Effectiveness of Project Processes		Efficiency of Project Processes		Fairness of Project Processes		
People (Social) Impacts				Planet (Environmental) Impacts				Prosperity (Economic) Impacts		
Labor Practices and Decent Work	Society and Customers	Human Rights	Ethical Behavior	Transport	Energy	Land, Air, and Water	Consumption	Business Case Analysis	Business Agility	Economic Stimulation
Employment and Staffing	Community Support	Non-discrimination	Procurement Practices	Local Procurement	Energy Consumption	Biological Diversity	Recycling and Reuse	Modeling and Simulation	Flexibility/Optionality	Local Economic Impact
Labor/Management Relations	Public Policy/Compliance	Age-Appropriate Labor	Anti-Corruption	Digital Communication	CO2 Emissions	Water and Air Quality	Disposal	Present Value	Business Flexibility	Indirect Benefits
Project Health and Safety	Protection for Indigenous & Tribal Peoples	Voluntary Labor	Fair Competition	Traveling and Commuting	Clean Energy Return	Water Consumption	Contamination and Pollution	Direct Financial Benefits		
Training and Education	Customer Health and Safety			Logistics	Renewable Energy	Sanitary Water Displacement	Waste Generation	Return on Investment		
Organizational Learning	Product and Service Labeling							Benefit-Cost Ratio		
Diversity and Equal Opportunity	Mkt. Comm. and Advertising							Internal Rate of Return		

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/>. 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

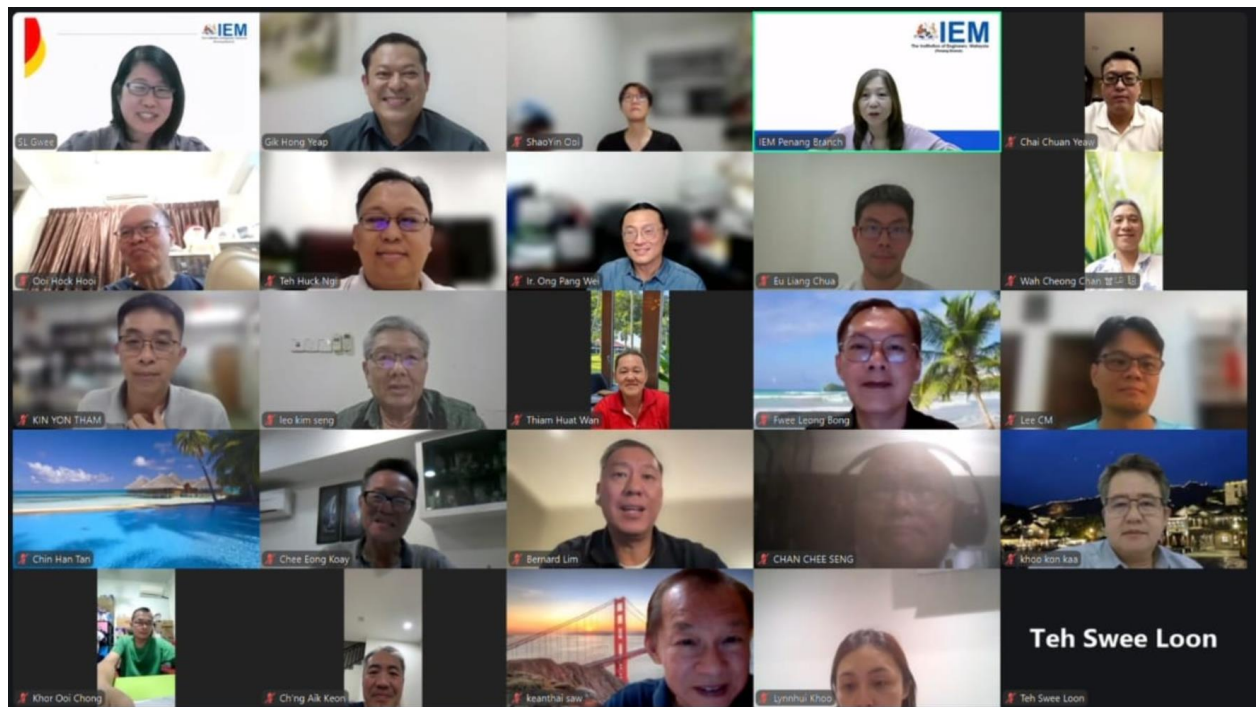


Figure 5: Group Photo of the Evening Virtual Talk