
Embedding ESG principles into Investment, Corporate strategy, and Policy reform

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Meranti Green Steel Thailand
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Why ESG by design?

- ESG is a core principle of **Meranti Green Steel's** business model, not an add-on
- Investors recognize ESG's impact on value-fulfilling it is our fiduciary duty.

Steel industry landscape:

- Global and regional expectations: decarbonization, supply chain transparency, and social impact.
- Expose and counter **Greenwashing** in the industry.

Meranti's positioning:

- Our vision is **"To create a world where development and nature can be in balance"**.
- As a new entrant, MGS can embed ESG into our DNA instead of retrofitting
- Meranti Green Steel signals a new era of clean, connected, and competitive industrialization

Nature

- **Earth (Pathwi)**: Represents solidity, stability, and cohesion.
- **Water (Apo)**: Represents fluidity, cohesion, and moisture.
- **Fire (Tejo)**: Represents heat and energy, metabolism
- **Air (Vayo)**: Represents movement and growth.
- **Space (Akasa)**: Represents openness and emptiness.

Development

- **Personal Growth**: To elevate and transcend to a higher level
- **Organizational Growth**: Financial independence to disseminate opportunities to society and the community
- **Country's Growth**: To support the nation-building exercise for a higher purpose.

“To create a world where development and nature can be in balance”



- **Sufficiency Economy Philosophy** seeks balanced, stable development at all levels, emphasizing the middle path.
- **Moderation** - Not too much, not too little - is a core Eastern Principle- Pragmatic approach of decarbonization
- **Reasonableness** requires that the choices we make must be justifiable by legal principles, moral values, or social norms- Endorsement from the Rayong province community
- **Self-immunity** requires resilience against risks through sound risk management- Commercial sustainability with a split business model.

Sufficiency Economy



After having secured a firm foundation, they can then gradually work and build a prosperous life, climbing a higher economic ladder.

- His Majesty King Bhumibol Adulyadej

THAILAND SDG SCORE CARD

Thailand

East and South Asia



BACK OVERVIEW INDICATORS FACT SHEET POLICY EFFORTS

SDG Index Rank

43 /167

SDG Index Score



Spillover Score



- Thailand has ranked first among all ASEAN countries for the last 7 years.
- In top quartile at Global Rank

SDG Dashboards and Trends

Click on a goal to view more information.



Dashboards: ● SDG achieved ● Challenges remain ● Significant challenges remain ● Major challenges remain ● Information unavailable

Trends: ↑ On track or maintaining SDG achievement ↗ Moderately improving → Stagnating ↓ Decreasing ** Trend information unavailable

17 Goals and 179 Targets

THAILAND SDG SCORE CARD

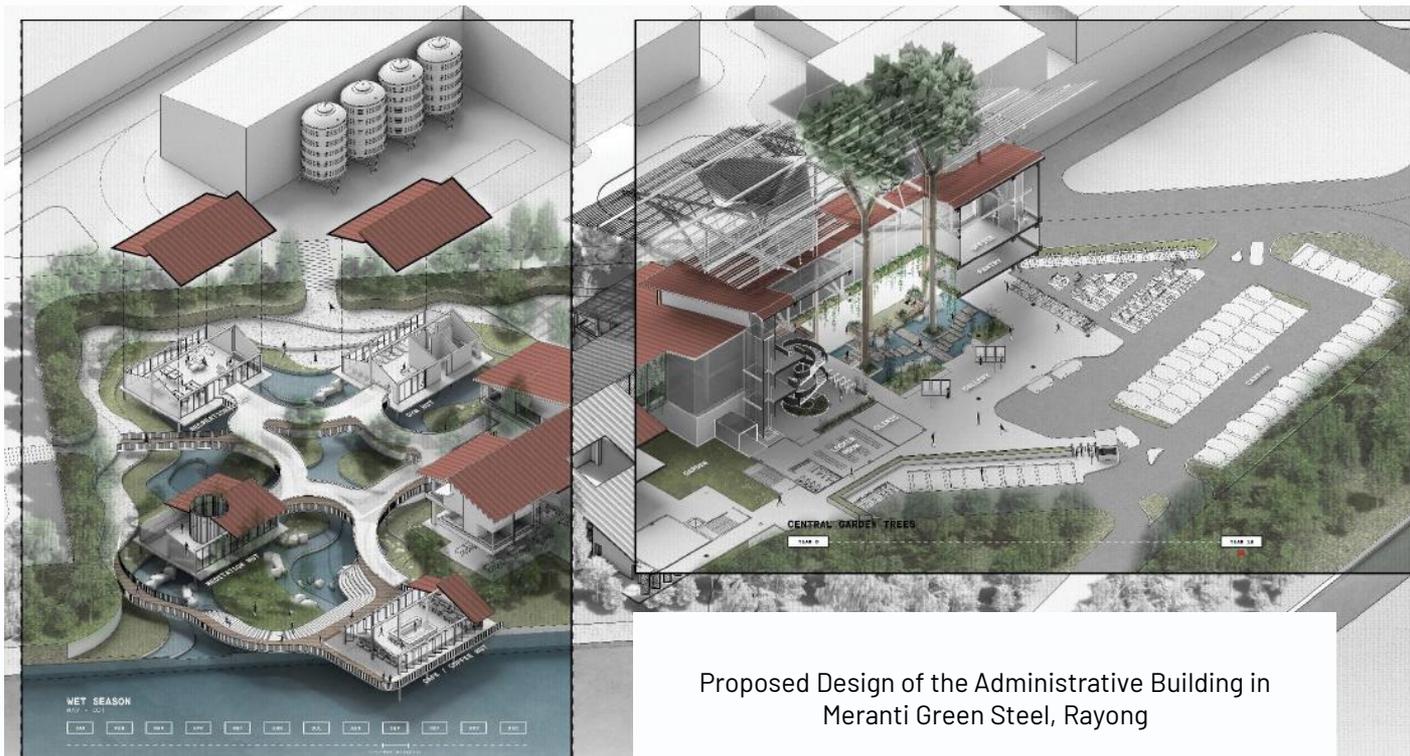
Thailand

Performance by indicator

SDG	Indicator	Value	Year	Rating	Trend
SDG1 – No Poverty	Poverty headcount ratio at \$2.15/day (%)	0.6	2025	●	↑
	Poverty headcount ratio at \$3.65/day (%)	0.9	2025	●	↑
SDG2 – Zero Hunger	Prevalence of undernourishment (%)	5.6	2022	●	↑
	Prevalence of stunting in children under 5 years of age (%)	12.4	2022	●	↓
	Prevalence of wasting in children under 5 years of age (%)	7.2	2022	●	↓
	Minimum dietary diversity among children aged 6–23 months (%)	72.1	2022	●	●
SDG3 – Good Health and Well-Being	Prevalence of obesity, BMI ≥ 30 (% of adult population)	15.4	2022	●	↓
	Human Tropic Level (best 2–3 worst)	2.2	2022	●	→
	Cereal yield (tonnes per hectare of harvested land)	3.1	2022	●	↑
	Sustainable Nitrogen Management Index (best 0–1.41 worst)	0.8	2018	●	↑
SDG5 – Gender Equality	Demand for family planning satisfied by modern methods (% of females aged 15 to 49)	89.1	2024	●	→
	Ratio of female-to-male mean years of education received (%)	97.4	2022	●	↑
	Ratio of female-to-male labor force participation rate (%)	78.8	2024	●	↑
	Seats held by women in national parliament (%)	19.6	2025	●	↗
SDG6 – Clean Water and Sanitation	Population using at least basic drinking water services (%)	100.0	2022	●	↑
	Population using at least basic sanitation services (%)	99.0	2022	●	↑
	Freshwater withdrawal (% of available freshwater resources)	23.0	2022	●	↑
	Anthropogenic wastewater that receives treatment (%)	18.1	2015	●	●
SDG7 – Affordable and Clean Energy	Scarce water consumption embodied in imports (m³ H₂O eq/capita)	866.3	2024	●	↓
	Population with access to electricity (%)	99.9	2022	●	↑
	Population with access to clean fuels and technology for cooking (%)	86.1	2022	●	↑
	CO₂ emissions from fuel combustion per total electricity output (MtCO₂/TWh)	1.3	2023	●	↗
SDG8 – Decent Work and Economic Growth	Renewable energy share in total final energy consumption (%)	15.8	2021	●	→
	Adjusted GDP growth index (worst 0–100 best)	65.5	2023	●	●
	Victims of modern slavery (per 1,000 population)	5.7	2022	●	●
	Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	95.6	2021	●	↑
SDG9 – Industry, Innovation and Infrastructure	Unemployment rate (% of total labor force, ages 15+)	0.6	2025	●	→
	Fundamental labor rights are effectively guaranteed (worst 0–1 best)	0.55	2023	●	↓
	Fatal work-related accidents embodied in imports (per million population)	0.7	2018	●	→
	Victims of modern slavery embodied in imports (per 100,000 population)	27.7	2018	●	●
SDG10 – Reduced Inequalities	Gini coefficient	34.9	2021	●	→
	Palma ratio	1.4	2021	●	→
	Proportion of urban population living in slums (%)	7.3	2019	●	↑
	Annual mean concentration of PM2.5 (µg/m³)	25.3	2023	●	↓
SDG11 – Sustainable Cities and Communities	Access to improved water source, piped (% of urban population)	92.5	2022	●	●
	Population with convenient access to public transport in cities (%)	26.5	2020	●	●
	Municipal solid waste (kg/capita/day)	1.2	2020	●	●
	Electronic waste that is not recycled (kg/capita)	10.5	2022	●	●
SDG12 – Responsible Consumption and Production	Production-based air pollution (DALYs per 1,000 population)	2.4	2024	●	→
	Air pollution associated with imports (DALYs per 1,000 population)	3.5	2024	●	→
	Production-based nitrogen emissions (kg/capita)	42.7	2024	●	→
	Nitrogen emissions associated with imports (kg/capita)	11.3	2024	●	→
SDG13 – Climate Action	Exports of plastic waste (kg/capita)	1.0	2024	●	↑
	CO₂ emissions from fossil fuel combustion and cement production (tCO₂/capita)	3.7	2023	●	→
	GHG emissions embodied in imports (tCO₂/capita)	2.1	2024	●	→
	CO₂ emissions embodied in fossil fuel exports (tonnes/capita)	0.0	2024	●	●
SDG14 – Life Below Water	Mean area that is protected in marine sites important to biodiversity (%)	44.0	2023	●	→
	Ocean Health Index: Clean Waters score (worst 0–100 best)	62.4	2024	●	→
	Fish caught from overexploited or collapsed stocks (% of total catch)	46.3	2018	●	↗
	Fish caught by trawling or dredging (%)	37.4	2019	●	↓
SDG15 – Life on Land	Fish caught that are then discarded (%)	1.4	2019	●	↑
	Marine biodiversity threats embodied in imports (per million population)	0.1	2018	●	●
	Mean area that is protected in terrestrial sites important to biodiversity (%)	68.0	2023	●	→
	Mean area that is protected in freshwater sites important to biodiversity (%)	36.3	2023	●	→
SDG16 – Peace, Justice and Strong Institutions	Red List Index of species survival (worst 0–1 best)	0.76	2023	●	↓
	Permanent deforestation (% of forest area, 3-year average)	0.2	2023	●	↑
	Imported deforestation (m²/capita)	4.9	2022	●	↑
	Homicides (per 100,000 population)	4.8	2011	●	●
SDG17 – Partnerships for the Goals	Crime is effectively controlled (worst 0–1 best)	0.79	2023	●	→
	Unsented detainees (% of prison population)	4.9	2022	●	↑
	Birth registrations with civil authority (% of children under age 5)	99.8	2022	●	●
	Corruption Perceptions Index (worst 0–100 best)	34.0	2024	●	↓
SDG18 – Exports of Major Conventional Weapons	Children involved in child labor (%)	●	●	●	●
	Exports of major conventional weapons (TIV constant million USD per 100,000 population)	0.0	2024	●	●
	Press Freedom Index (worst 0–100 best)	56.7	2025	●	↓
	Access to and affordability of justice (worst 0–1 best)	0.60	2023	●	↓
SDG19 – Timeliness of Administrative Proceedings	Timeliness of administrative proceedings (worst 0–1 best)	0.43	2023	●	↓
	Expatriations are lawful and adequately compensated (worst 0–1 best)	0.46	2023	●	↓
	Government spending on health and education (% of GDP)	6.4	2023	●	↓
	For high-income and all OECD DAC countries: International concessional public finance, including official development assistance (% of GNI)	●	●	●	●
SDG20 – Government Revenue Excluding Grants	Other countries: Government revenue excluding grants (% of GDP)	20.0	2023	●	↓
	Corporate Tax Haven Score (best 0–100 worst)	*	0	2024	●
	Shifted profits of multinationals (US\$ billion)	*	0.0	2021	●
	Statistical Performance Index (worst 0–100 best)	81.1	2023	●	↑
SDG21 – Index of Countries' Support to UN-based Multilateralism	Index of countries' support to UN-based multilateralism (worst 0–100 best)	79.4	2025	●	●

MGS DESIGN APPROACH ALIGNED WITH SDG FRAMEWORK

GOALS	Descriptions	Indicators	MGS's Intervention during Design
SDG 3	Good Health and Well Being	● Traffic deaths (per 100,000 population) 25.4	<ul style="list-style-type: none"> 4.5 km conveyor for transfer of HBI eliminates 200 truck trips daily.
SDG 6	Clean and Water sanitation	● Anthropogenic wastewater that receives treatment (%) 18.1	<ul style="list-style-type: none"> Uses the IRPC wastewater facility to ensure 100% compliance.
SDG 8	Decent work and economic Growth	● Fundamental labor rights are effectively guaranteed (worst 0-1 best) 0.55	<ul style="list-style-type: none"> Work ethic principles guarantee labor rights and world-class facilities.
SDG 9	Infrastructure Innovation and Industry	● Expenditure on research and development (% of GDP) 1.2	<ul style="list-style-type: none"> Committed to > 1 % of spend on research and development for the industry.
SDG 11	Sustainable Cities and Communities	● Annual mean concentration of PM2.5 ($\mu\text{g}/\text{m}^3$) 25.3	<ul style="list-style-type: none"> Dedusting system designed using CFD (Computational Fluid dynamics) to optimize emission control
SDG 13	Climate Action	<ul style="list-style-type: none"> ● GHG emissions embodied in imports (tCO₂/capita) 2.1 ● CO₂ emissions from fossil fuel combustion and cement production (tCO₂/capita) 3.7 	<ul style="list-style-type: none"> Substitutes >1 Mt/yr of flat steel imports, improving CO₂ metrics.. Project planned for 100% renewable energy.
SDG 17	Partnership for sustainable development	● Government spending on health and education (% of GDP) 6.4	<ul style="list-style-type: none"> Supporting universities through education, scholarships, and jobs.



Attributes: Overall building performance

- Spatial Quality
- Thermal quality
- Air Quality
- Acoustic Quality
- Visual Quality
- Structural integrity

FELT LEADERSHIP APPROACH IN SAFETY GOVERNANCE

- **Logistics & Transportation:** HBI conveyor and Conveyor from the port to the plant, and a Dedicated flyover along with government authorities
- **Man- Machine Interface:** Best in class technological interventions in OEM Design. Finished goods yard with automatic evacuation and loading.
- **Fool-Proof Designing in Cranes:** All material movement cranes are proactively designed to avoid unsafe operations, which include anti-sway detection, anti-collision, free-fall detection, etc.
- **Process Safety Management:** Cause and Consequence can be eliminated or mitigated with the help of the **“Bow and Tie model”**. Each technical element is validated during front-end engineering.



There is no better policy in a society than pursuing the health and Safety of its people.

– Ralph Nader

Carbon emissions control:

- Strategic design aligned with long-term values, plus pragmatic hydrogen transition over 15 years.
- Dedusting system uses advanced NO_x control, achieving levels below regulation.
- PCF model includes all materials and Scope 1,2, and 3 as per global standards.

Carbon Roadmap (kg CO₂/t steel)

600 → 200

Energy Use:

- First-time use of Q1 patent technology in EAF with 320 tons tapping volume, which enables the feasibility of various kinds of Renewable energy input.

Waste Management:

- All waste, including slag and refractories, is recycled at approved facilities.

Biodiversity:

- Biodiversity is assessed to protect local flora and fauna.

The Environmental pillar focuses on a company's impact on the planet, including issues like carbon emissions, energy use, and waste management.

Workforce & Community:

- Commitment to local employment, skills development, and fair labor practices.
- Community consultations within a 10 km radius to improve the quality of life.

Health & Safety:

- “Zero harm” culture: EHS by design, fostering interdependence.
- Fume system meets European dioxin standards.

Diversity, Equity, and Inclusion (DEI):

- DEI has been embedded since inception.
- Embraces local culture, working with IRPC to address real community concerns.





Integrity & Ethics:

- Integrity & ethics: anti-corruption, responsible sourcing, compliance.
- Vendors must declare carbon footprints.



Supply chain ESG integration:

- Supply chain: traceability of green iron, raw materials, and logistics to ESG standards.



Stakeholder trust:

- Stakeholder trust: investor, regulator, customer assurance via verified Product carbon footprint per coil.



ESG risk management:

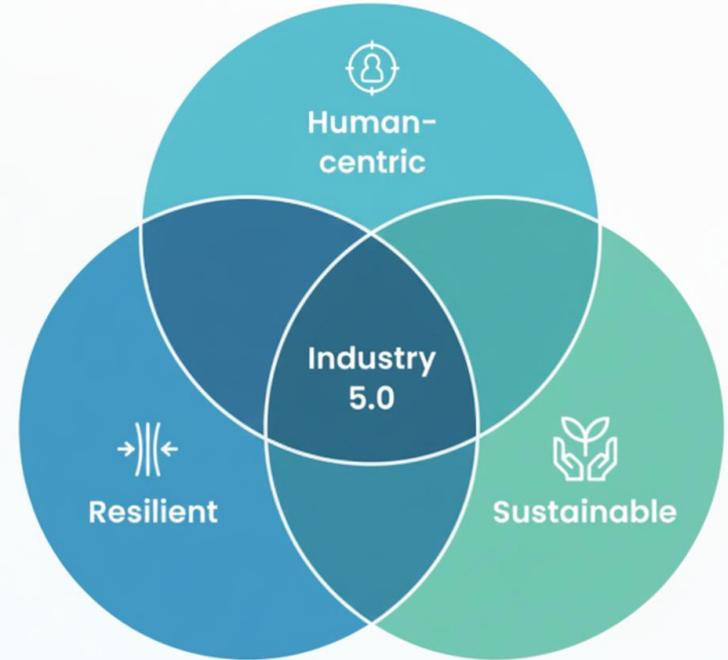
- ESG embedded in enterprise risk, ensuring climate/social/regulatory resilience.



Policies and Standards:

- Policies align with global standards (GRI, SASB, TCFD, ISSB, SBTi).

- ESG requires digital transformation. Industry 5.0 drives ESG adoption.
- Industry 5.0 looks beyond efficiency, reinforcing the industry's role in society.
- Process intelligence uses data to reveal process insights and improvements.
- Automation improves safety, reduces fatigue, and supports learning.
- ESG reporting integrated into Level 3 Danieli + ERP with transparency and checks.
- Proactive alerts enable timely footprint control.



This approach involves directing capital toward projects and businesses that have **positive sustainability outcomes**, such as renewable energy, social inclusion, and climate resilience.

How differently we are operating.

- Develop 1 GW+ of renewable energy assets (2500GWh annually) by 2031 through solar, wind, and energy storage projects.
- With these innovations, we aim to save **nearly 4 million tons of CO₂ annually**. Planting 200 million Trees a year or neutralizing all vehicular traffic in Singapore
- Evaluating a company's impact on people, including its labor practices, diversity, and inclusion policies. Our initial engagement with the local university, KMUT for future ready workforce.



SUMMARY AND CONCLUSION

- MGS: a new era of clean, connected, globally competitive industry with ESG in its DNA.
- Research and innovation drive a sustainable, human-centric, resilient industry – through stakeholder collaboration..
- In automation, safety comes before productivity and efficiency.
- Nature and development can coexist – requiring a **holistic approach across policymakers, industry, and communities.**



**Earth is not just our environment. We are the Earth, and Earth is us.
We have always been one with the earth.**

– Thich Nhat Hanh

THANK YOU FOR YOUR ATTENTION



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