

TEGH SUSTAINABILITY EXCELENC

Thai Eastern Group Holdings PCL

Presentation for **Sustainability Awards 2025** by SET





คุณเฉลิม โกกนุทาภรณ์
ประธานเจ้าหน้าที่บริหาร



คุณสินีนาฏ โกกนุทาภรณ์
กรรมการผู้จัดการ



คุณเกริกกุล โกกนุทาภรณ์
ประธานเจ้าหน้าที่บริหาร
ฝ่ายปฏิบัติการ-ด้านยางพารา
และปาล์มน้ำมัน



คุณวงศ์กฤษณ์ เจียมศรีพงษ์
ประธานเจ้าหน้าที่บริหาร
ฝ่ายกลยุทธ์องค์กร



ดร.กมลทิพย์ โกมลยุทธ
แพทย์
ประธานเจ้าหน้าที่บริหาร
ฝ่ายการเงินและการบัญชี

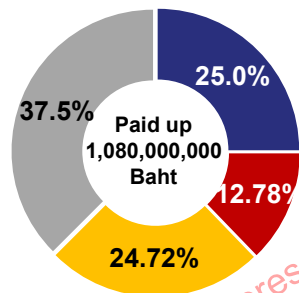


คุณศิริวรรณ โกกนุทาภรณ์
ผู้อำนวยการ
ฝ่ายทรัพยากรบุคคล



คุณพรทิพย์ วงศ์จิรัฐติกาล
ผู้อำนวยการฝ่ายการตลาด

Company	Thai Eastern Group Holdings Public Company Limited
Ticker	TEGH
Type of Business	The Company operates as holding company with three core businesses. The three core businesses are following: (1) Rubber business (2) Palm oil business (3) Renewable energy and organic waste management
Secondary Market	The Stock Exchange of Thailand ("SET")
Industry	Agro and Food Industry
Dividend policy	Pay dividends at a rate of not less than 40% of net profit after income tax and legal reserves



Shareholding Structure (as of 20 Mar 2024)

- TEG ASSET CO., LTD.
- SK INTERTRADE PTE. LTD
- Family Individual
- Investor

Remark: TEG ASSET CO., LTD. is wholly owned by Kokanutaporn Family.

SK INTERTRADE PTE. LTD. is holding company, established under the laws of Singapore, and held by K Ventures Company Limited. And K Ventures Company Limited is wholly owned by Kokanutaporn Family.



Our Products and Services

1 Manufactures and Distributes Natural Rubber

2 Manufactures and Distributes Crude Palm Oil

3 Renewable Energy Business and Organic Waste Management

1 Block Rubber

Industrial Grade and Premium Grade



STR 10

STR 20 / STR 20 (FSC)



CV Rubber

Compound Rubber



2 Concentrated Latex

Industrial Grade

- o High Ammonia (HA)
- o Medium Ammonia (MA)
- o Low ammonia (LA)

Premium Grade

- o Ultra Low Ammonia Latex
- o Sustainable Product : Organic Latex (GOLS)
- o EUDR



1 Crude Palm Oil

2 Palm Kernel



3 Crude Palm Kernel Oil

4 Kernel Cake



5 By Product

Decanter Cake

Shell



Empty Fruit Bunch: EFB

Palm Fiber



1 Organic Waste Management (OWM)

- Solid Organic Waste
- Liquid Organic Waste



2 Production and Distribution of Biogas



3 Production and Distribution of Electricity from Biogas



Board Structure

Board of Directors

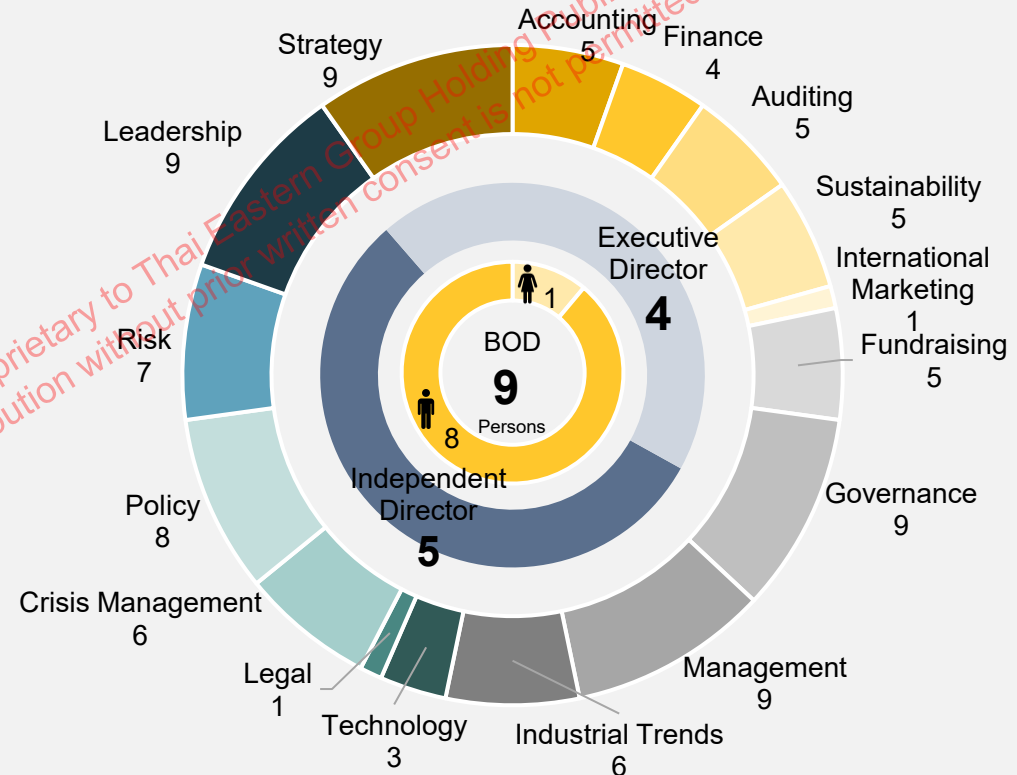
Audit and Corporate Governance Committee

Risk and Sustainability Management Committee

Nomination and Remuneration Committee

Executives Directors

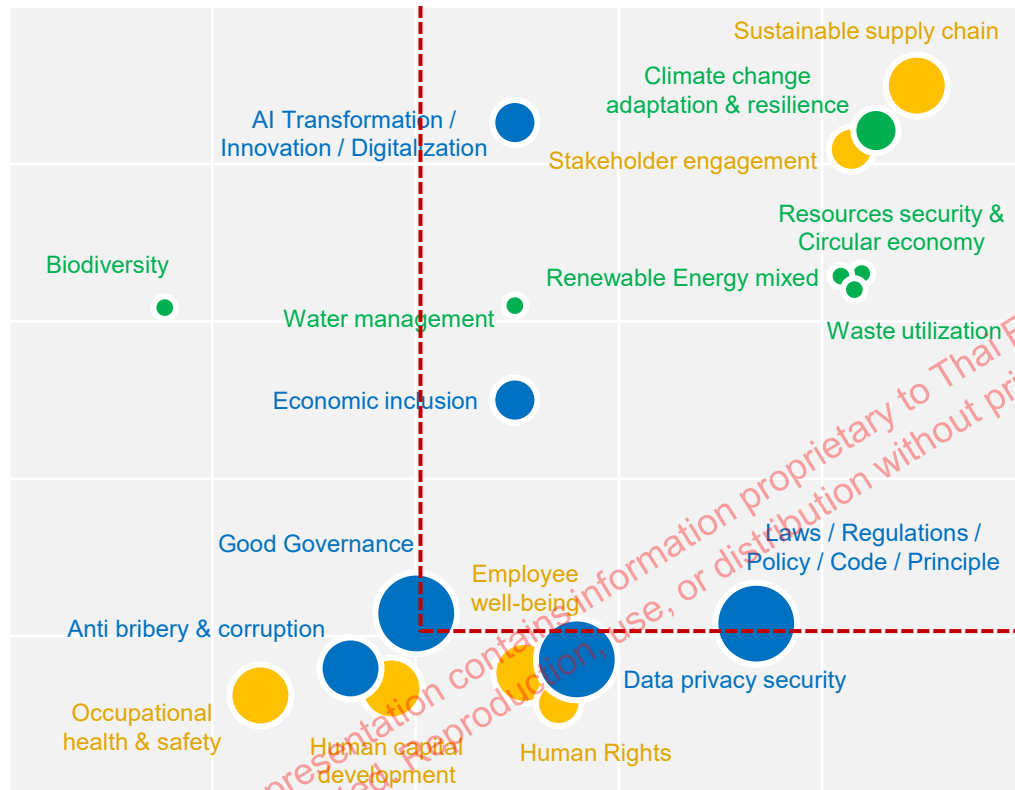
Diversity Expertise



2025 TEGH Double Materiality



Impact Materiality



Financial Materiality

Environment (6 issues)

- Climate change adaptation & resilience
- Resources security & Circular economy
- Renewable Energy mixed
- Water management
- Waste utilization
- Biodiversity

Social (6 issues)

- Sustainable supply chain
- Stakeholder engagement
- Human Rights
- Employee well-being
- Occupational health & safety
- Human capital development

Governance (6 issues)

- AI Transformation / Innovation / Digitalization
- Good Governance
- Economic inclusion
- Laws / Regulations / Policy / Code / Principle
- Data privacy security
- Anti bribery & corruption

Key



Environmental



Social



Governance

Relevance to TEGH's Stakeholder



High



Medium



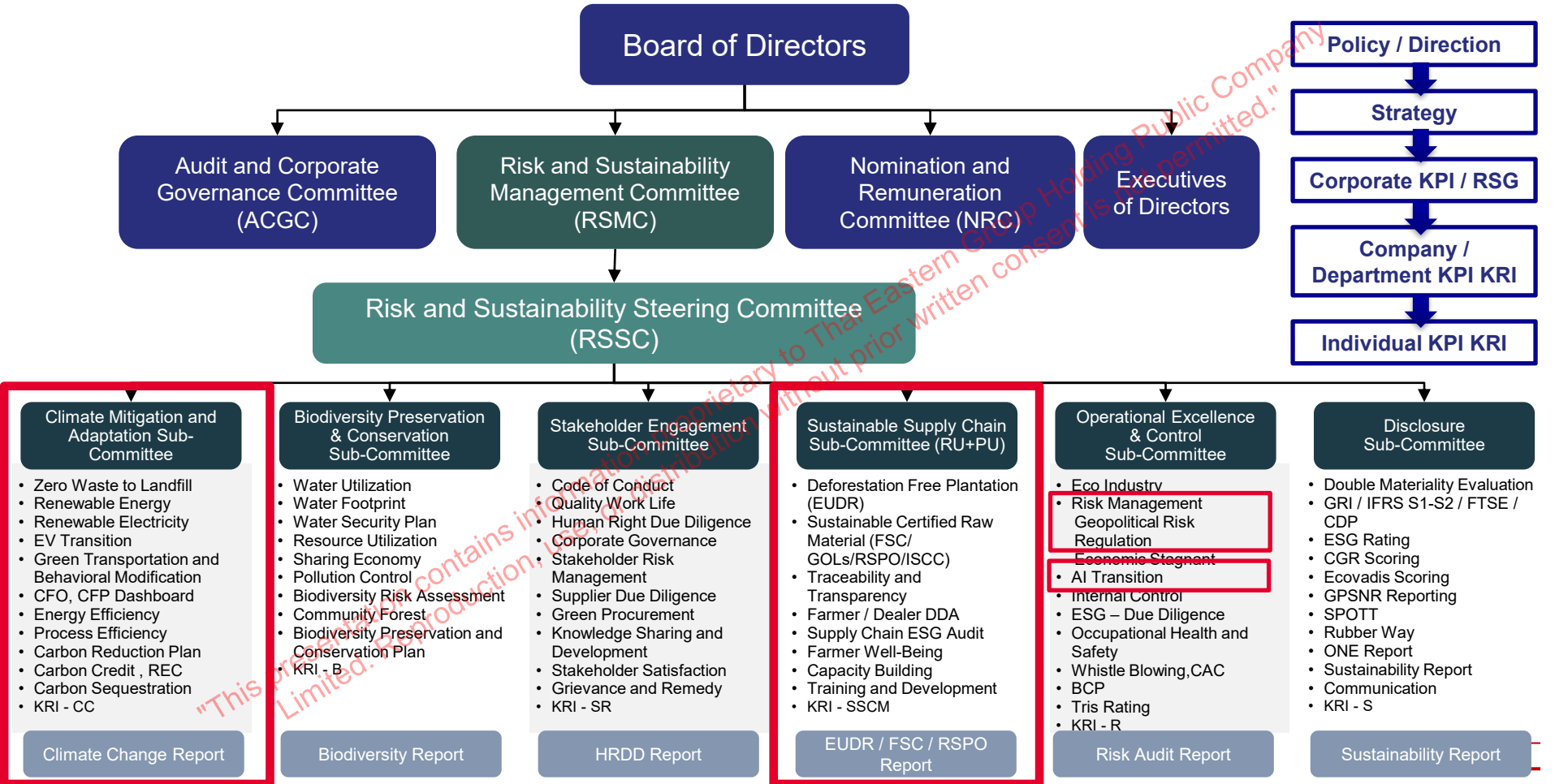
Low



Very Low

Strictly Private & Confidential

Corporate Governance, Risk, Sustainability Committee





01

Sustainability Strategy

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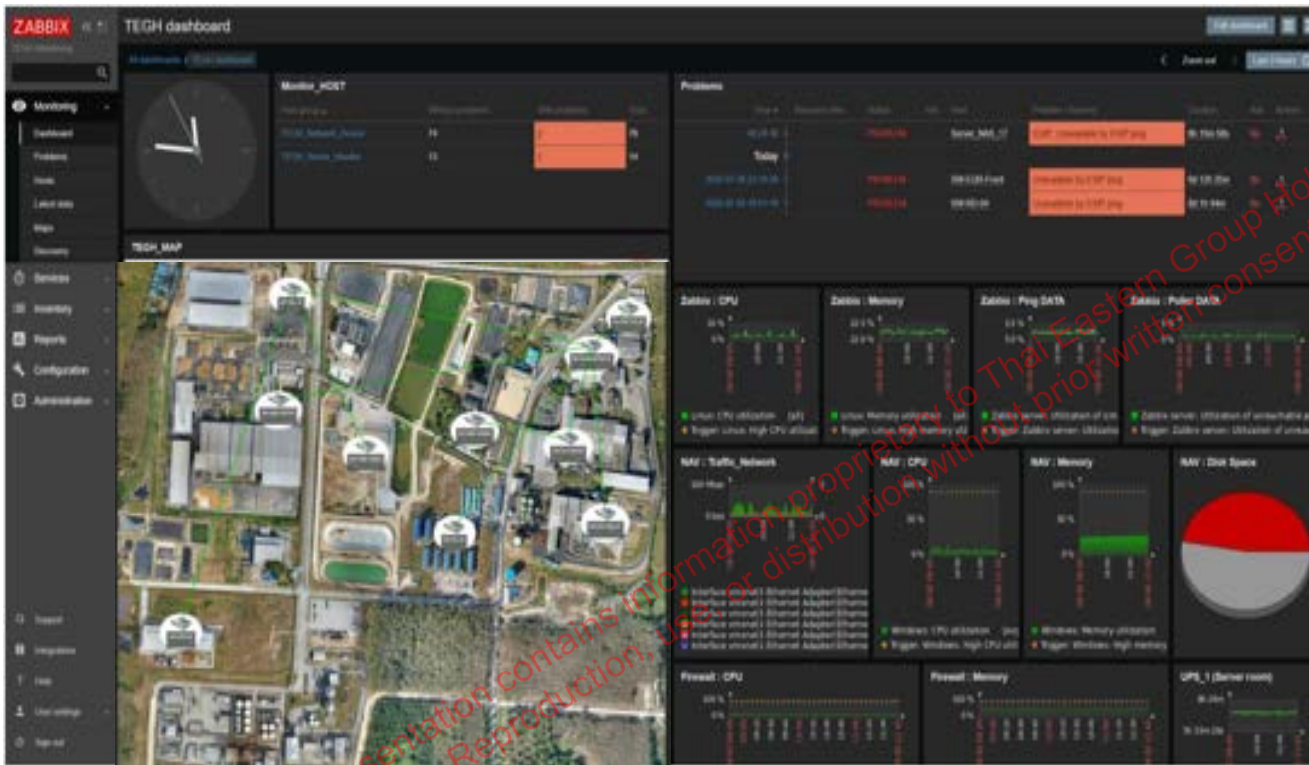
Automations



Robotics

Realtime IT Monitoring

- Online System monitoring and alert.
- Increase efficiency by using AI for preventive maintenance
- Reduce System downtime
- Centralized Problem-solving and Data Management
- Save Cost of System Investment 3,000,000 baht/year



ศูนย์วิจัยและพัฒนา
(Laboratory R&D Center)

Process / Product

New Business

Digitalization

**AI Transformation /
Innovation**

Laboratory
R&D
Center

02

Sustainable Supply Chain

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Our Value Chain



- 1 Raw Material Sourcing and Handling**
 - Farmers
 - Dealers
 - Logistics
 - Community
 - Government (RAOT)
 - Staff
- 2 Other Material Procurement**
 - Suppliers
 - Logistics
 - Community
 - Government
 - Staff
- 3 Operation and Production**
 - Suppliers
 - Investor
 - Banking
 - Community
 - Government / Regulator
 - Staff
- 4 Shipment and Delivery Service**
 - Suppliers
 - Logistics / Shipping
 - Community
 - Government
 - Staff
- 5 Sales, Marketing and Customer Relations**
 - Customers
 - Community
 - Government / Regulator
 - Staff

UPSTREAM

INTERNAL OPERATION

DOWNSTREAM

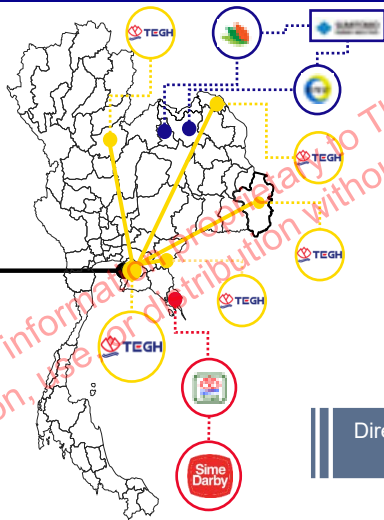
73,500 ไร่
820,000 ไร่



Unit	2024
Rai	551,828



Unit	2024
Rai	25,678



Direct Sales
98%



EUDR Traceability 100%

4.68% Share of
Thailand NR Production
4.98 M Ton

10.13% Share of
Thailand STR Production
2.21 M Ton

19.47% Share of
Thailand's NR Consumption
1.20 M Ton

World Class Customers > 95%

Project Background

EUROPEAN GREEN DEAL

Fit for 55

Reduce **55%** GHG emissions by 2030 (compared to 1990)



CO2 emissions standards for cars and vans

0 emission of new cars by 2035



Carbon Border Adjustment Mechanism (CBAM)

Effective Jan 2026



ReFuel EU Aviation Regulation

2% in 2025, 6% in 2030, 20% in 2035, 34% in 2040, 42% in 2045, 70% in 2050



Regulation on Land Use, Forestry and Agriculture (LULUCF)

FLAG, Biodiversity



Emission Trading System (ETS)

55% reduction by 2030 net zero by 2050



Renewable Energy Directive

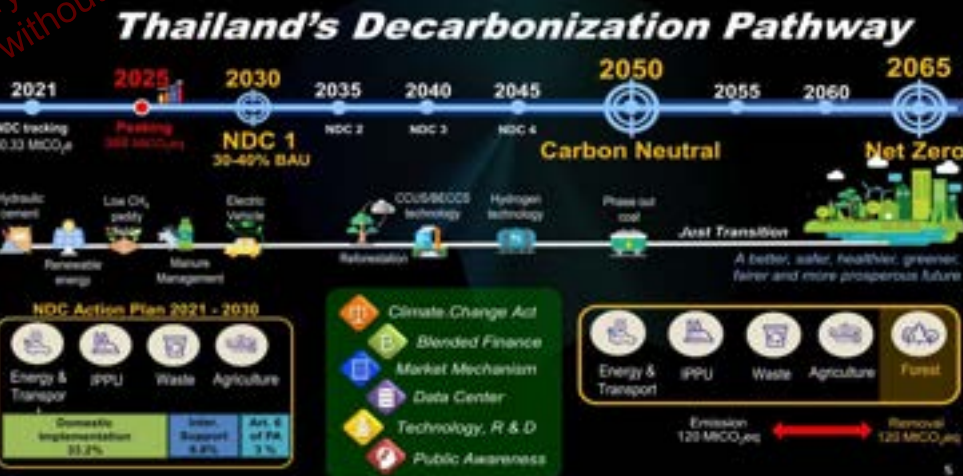
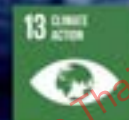
RE mix 40% by 2030



FuelEU Maritime Regulation

2% in 2025 80% by 2050

Thailand Climate Change Act



Information Collections



44,607
Farmers



48,868
Plots



485,524
rai



97
Cooperatives



334
Auction Markets

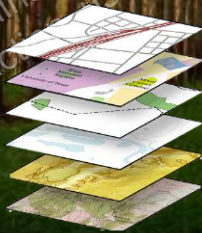


Deforestation-Free

Cut-off date:

31 December 2020

(GPSNR : 1 April 2019)



- Global Forest Watch
- Forest Area 2020
- Forest Monitoring
 - Kor Thor Chor (KTC)
 - GISTDA
- Global Forest Change Data (tree cover loss) (Hansen)

Legal Compliance



Land use rights



Environmental Protection



Forest-related regulations



Labour rights



Human rights



Third Parties' rights



Principle of FPIC



Tax, Anti-Corruption



Since **April 2024**

NATURAL
RUBBER



289
g CO₂e / kg



7.35
Nm³ / ton



Since
April 2019



100%



30%



80%



Strictly Private & Confidential



Concentrated

Natural Latex



139
g CO₂e / kg



2.01
Nm³ / ton



Since
April 2019

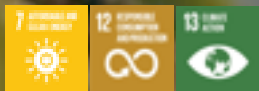


100%



600
kWh





Sustainable Crude Palm Oil



6.90
Nm3 / ton



Since
April 2019



100%



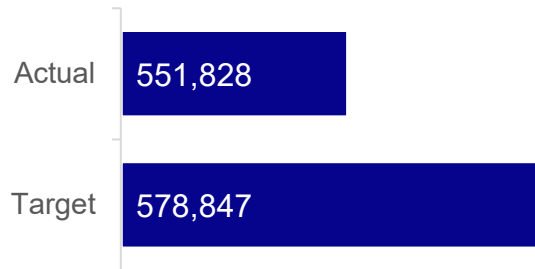
92.86%



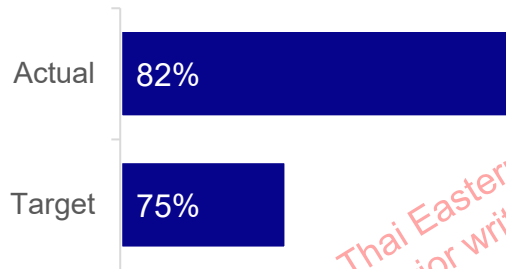
2024 Natural Rubber Supply Chain Outcomes (FSC/USDA/EUDR)



Registered sustainable Plantation (Rai)

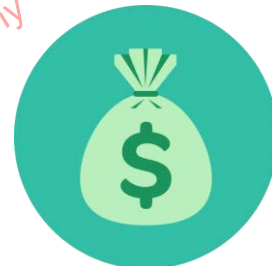


Product Traceability (%)



Farmer Engagement

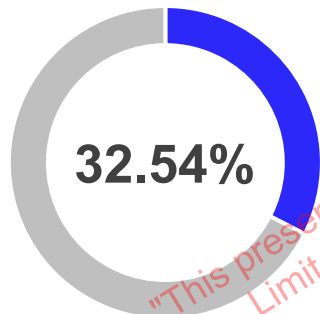
46,922 persons



Farmer Well-Being

107.14 MB

% Sustainable Raw Material

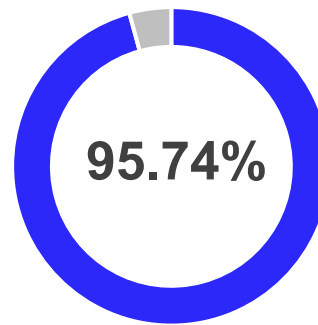


FSC/USDA/EUDR Sales Vol.

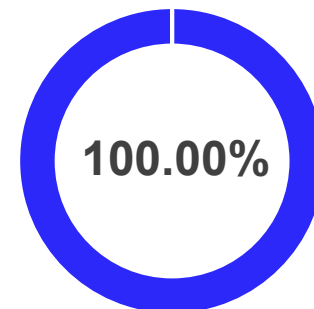


57,671 Ton

Farmer' Satisfaction

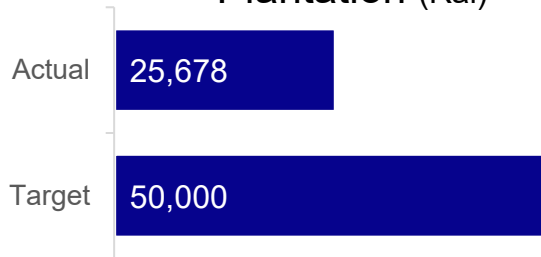


Deforestation-Free (Due Diligence)

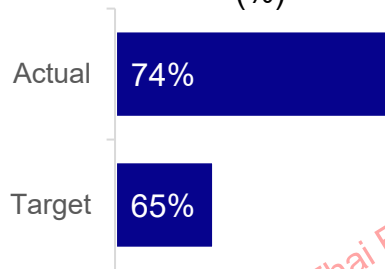


2024 Oil Palm Supply Chain Outcomes (RSPO/EUDR)

Registered sustainable Plantation (Rai)



Product Traceability (%)



Farmer Engagement

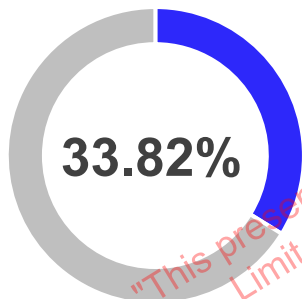
575 persons



Farmer Well-Being

8.63 MB

% Sustainable Raw Material

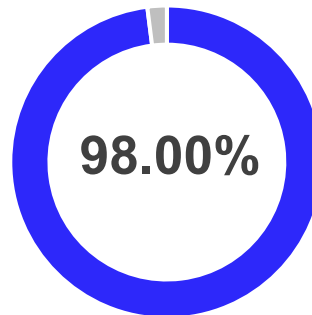


RSPO/EUDR Sales Vol.

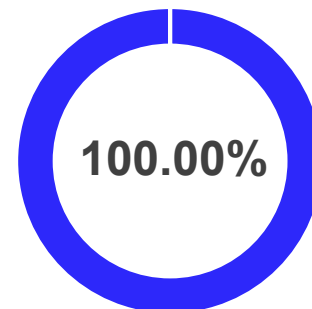


5,465 Ton

Farmer' Satisfaction



Deforestation-Free (Due Diligence)



Results		Unit	2023	2024		
Output	 Participating Farmers (FSC+RSPO+GOLs+EUDR)	farmers	32,105	47,497 +48.0%		
	 Certified Area (FSC+RSPO+GOLs+EUDR)	rai	457,400	577,506 +26.3%		
	 Certified Raw Material (FSC+RSPO+GOLs+EUDR)	Ton	60,032	145,421 +142.2%		
Outcome	 Increased Farmer's Income (FSC+RSPO+GOLs+EUDR)	Million THB	35.9	115.74 +222.4%		
	 Economic Value of Supporting Local Products	Million THB	4.1	33.7 +722.0%		
	 CAC membership	stars				
Support policy and SGDs						



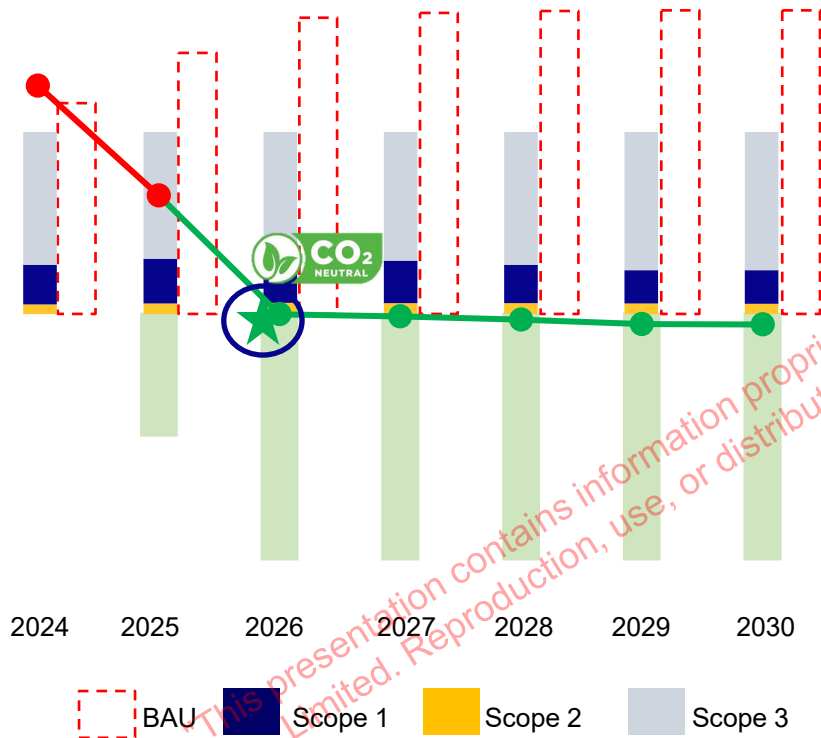
The Value of
Sustainable Supply
Chains Management

03

Climate Transition

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TEGH Carbon Neutral Pathway 2030 (Scope 1+2+3)



GHG Emission (1+2+3)

100%

GHG Reduction Plan (Scope 1+2+3)



EV Transition

Science Base Target Aligned



2024 - 2025 (Base Year & Setup) 2026 - 2029 (Implementation)

- Step I: Select a Base year (Based Year 2024)
- Step II: Set Climate Change Policy & Strategic & Committee
 - Establish Climate Change Committee
 - Green Procurement
- Step III Review GHG emission
 - Single Consolidate approach :EQR, TEI, TER, EPO, TETSO, TEBP
 - Scope 3 (15 cats) to cover 67% : incl Cat 1 (Buying RM and Service), Cat 3, Cat 4, Cat 5, Cat 7, Cat 9
- Step IV: Set Target boundaries
 - Near Term: Scope 1+ Scope 2 min 95% coverage, Scope 3 min 67% coverage (If Scope 3 $\geq$ 40% of total emission)
 - Long Term: Scope 1 + Scope 2 min 95% coverage, Scope 3 min 90% coverage.
- Step V: Choose target year
- Step VI: Set a Project Reduction CO2 emission Plan
 - Increasing Energy Efficiency
 - EV Transition & Hybrid pilot fleet
 - Electricity form Solar Rooftop , Biogas and Biomass Project substitute PEA ($\geq$ 50%)
 - Biogas substitute LPG ($\geq$ 95%)
 - Carbon sink & Regenerative agriculture (50,000 rai)

2030 (Carbon Neutrality)

- Scope1+2 Reduce 42% from Based year
- Scope3 Reduce 25% from Based year
- 100% Renewable Energy
- 100% EV Transition
- Regenerative Agriculture
- Carbon Sequestration
- Process Efficiency & Energy Efficiency
- Community Forest >200 rais
- **Carbon Neutrality**

2040 (Low-carbon Operations)

- 100% Renewable Electricity
- CCS & CCU Project
- Green Transportation & Behavioral Modification
 - Logistic Transition,
 - Green Freight Network ,
 - Smart Fleet Management & Route Optimization ,
 - Green Logistics Incentives

2050 (Net Zero Carbon)

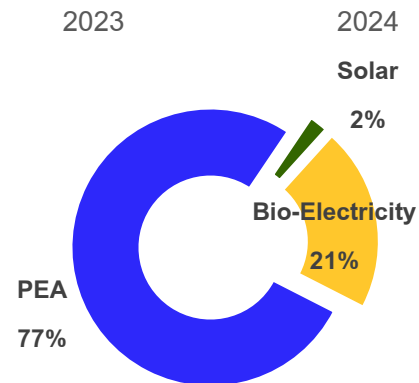
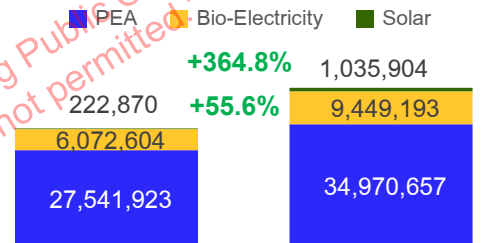
- Scope1+2+3 Reduce 90% from Based year
- 10% Carbon offset
- **Net Zero Carbon**

Scope	Method
Scope 1+2	Absolute Reduction
Scope 3	Absolute Intensity (Commodity, Power, Energy)

Climate Mitigation Project : Solar Cell 3.5 MW



Energy Consumption (kWh)



Energy Consumption by segmentation

Climate Mitigation Project : Waste to Energy



Fuel Oil
0.04%

LPG
7.75%

PEA
23.29%

Renewable energy
68.96%



Renewable Energy Certificate

โครงการผลิตไฟฟ้า 4MW จาก Biogas



I-Ver

โครงการปรับปรุงระบบบำบัดน้ำเสีย เพื่อนำไปผลิตก๊าซชีวภาพ

Sustainable Shift by Green Transition



		Results	Unit	2023	2024
Output		Water consumption reduction	Million Nm3	1.48	1.47 -0.7%
		Renewable Energy Substitution Rate	%	81.5	79.6 -2.3%
		Green Electricity consumption Rate	%	30.2	29.10 -3.6%
Outcome		Reduce to Landfill (SOW)	ton	311,000	447,987 +44.0%
		External Fuel cost reduction	Million THB	> 70	> 80
		Pollution reduction (compare STD.)	%	> 98	> 98
		CO2 emission reduction (compare industry avg.)	tonCO2e	120,761	224,794 +86.1%
		Number of Complaint	issue	0	0
		Support policy and SGDs			



5 มี.ย. 2024 14:29:22

ตำบลหนองไผ่

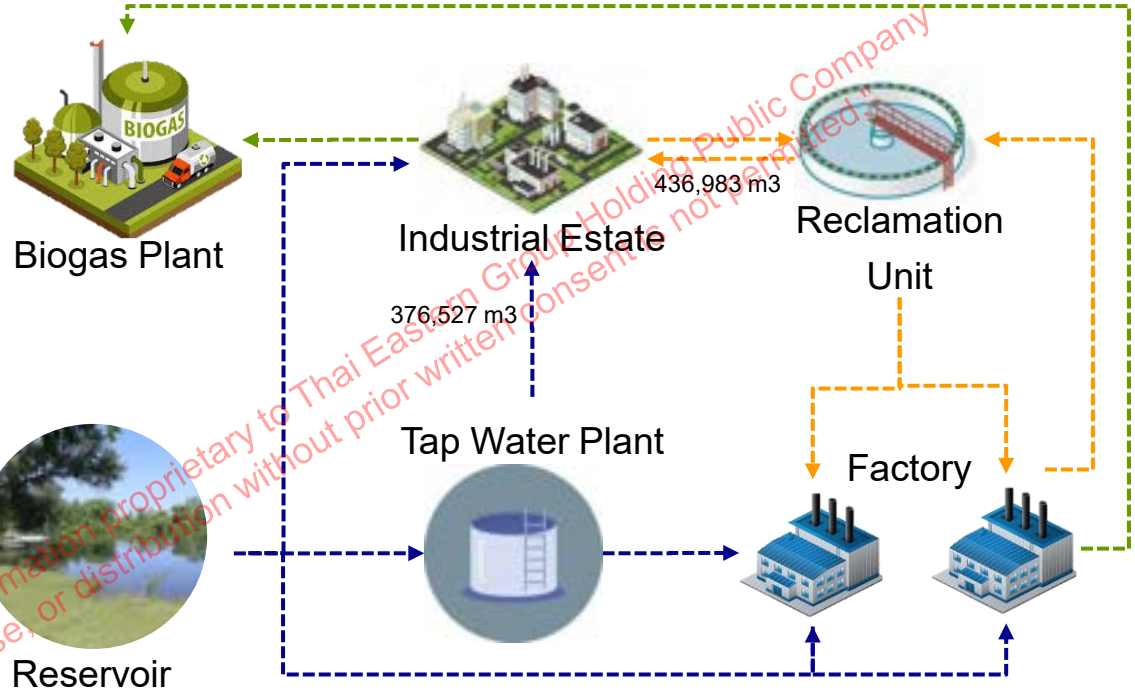
04

Climate Adaptation

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Rubber and Palm
Plantation



Water Security

>18
months

Water Recycle Rate

>90%

COD/BOD Removal Rate

>90%

Water Footprint

7 m³/Ton

Industry 18 m³/Ton

ZERO
Discharge

Biodiversity Preservation and Conservation



	Plankton +Others 64 species		Fish 13 species		Plant/Tree 141 species		Bird 73 species		Amphibians 12 species		Reptiles 23 species		Mammals 12 species
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**Water
Management**



**Soil
Regeneration**



**Precision
Agriculture**



**Smart
Farming**



ช่วยปรับปรุงโครงสร้างดิน
เสริมธาตุอาหาร NPK ช่วย
ให้พืชเจริญเติบโตได้ดี
ประหยัดต้นทุนปุ๋ย

ธาตุอาหารซัลเฟอร์ ที่เป็นธาตุ
อาหารรองที่จำเป็นสำหรับพืช
ปรับโครงสร้างดินให้มีความ
ร่วนซุย น้ำซึมได้ดี
ช่วยลดความเค็มในดินลง

ปรับสภาพดินให้มีความร่วน
ซุย มีแร่ธาตุ NPK และ OM
สูง ช่วยการเจริญเติบโตของ
พืชได้ดี ช่วยเพิ่ม Carbon
Sequestration ในดินได้

ช่วยยับยั้งเชื้อการเนโคโรมาที่
เป็นอันตรายต่อพืช และมีธาตุ
แคลเซียม โพแทสเซียม
ฟอสฟอรัสและแมกนีเซียม ที่
สำคัญต่อการเติบโตของพืช



Decarbonization to Low Carbon Economy



		Results	Unit	2023	2024
Output		CO2 emission (scope 1+2+3)	tonCO2e	75,702	75,853 +0.2%
		CO2 intensity reduction (STR) (compare 2016)	tonCO2e/kg	0.2516	0.2471 -1.8%
		CPF of Block rubber (STR)	gCO2e/kg	289	289
		CO2 credit (T-ver)	tonCO2e	51,732	53,110 +2.7%
Outcome		I-REC	REC	9,635	12,907 +34.0%
		Additional Revenue from Carbon credit traded	THB	1,627,967	1,552,500 -4.6%
	Regulatory Compliance		Improved Sustainable Brand Image		Engagement of Employees and Stakeholders
	Enhanced Competitiveness				
Support policy and SGDs		EU Green Deal		CBAM	Taxonomy
		Climate Change Act		BCG SUSTAINABLE DEVELOPMENT GOALS	

05

Summary

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2024 Performance



SET Best Sustainability Awards



Net Zero by Science Based Target project



SET ESG DNA Certification



Excellent in AGM Checklist

Excellent in GC Scoring



Apollo Gold Partner Award 2024



LESS Project approved



T-ver Project approved



TCC Best Awards 2024



Green Industry Level 5 (Green Network)



Thailand Labour Management Excellence Award



TLCA Executive Development Program (EDP)



Zero Accident Campaign



CALO Certification



CSR-DIW Continuous & CSR DIW Award

Renewable Energy

TEGH's Circularity Model help support company energy transition from LPG to Bio Energy with the substitution rate of:

79.8%

Deforestation Free

Since Apr 2019, TEGH had cutoff any raw material supply from unidentified right of use area to comply with EUDR.

100%

Ecovadis Rating

Global platform that provides sustainability ratings and assessments to evaluate on sustainability practices and performance standards.



Decarbonization

TEGH Symbiosis model that support the collaboration among the group of company can help reduce carbon emission (Compare to industry standard)

224,794

tonCO₂e CO2 Emission Reduction

Sustainable Supply Chain

The company supports rubber farmers in obtaining FSC certification and RSPO certification to promote sustainable materials.

79,893 Rai

SET ESG Rating

TEGH is recognized as one of the best performers in ESG practices among Thai listed companies, according to the Stock Exchange of Thailand's assessment framework.



Water Storage

TEGH creates own water reservoir to secure water consumption.

18 months

Farmers' Well Being

The company promotes additional income generation for farmers through sustainable rubber and oil palm plantations model.

194.95 Million Baht

Biodiversity Conservation

TEGH helps protection, conservation and management of biodiversity for future generations of:

338 Species



TEGH Climate Resilience

(ความพร้อมในการรับมือการเปลี่ยนแปลงสภาพภูมิอากาศ)

	+1.5 c	+2 c	+3 c	+4 c
Average Length of Draught	2 Months	4 Months	10 Months	? Months
Sea Level Increase	55 cm	62 cm	700 cm	1,000 cm
Flora & Fauna Extinction Risk (ความเสี่ยงต่อการสูญพันธุ์ของพืช สัตว์ ห้างถิ่น)	9%	10-20%	20-30%	40%



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TEGH Case : From Sustainability DNA to a Strategically Sustainability Approach: The Role of Governance within an ESG Framework

[Asian Case Research Journal Vol. 29, No. 02, pp. 179-202 \(2025\)](#)

<https://www.worldscientific.com/doi/10.1142/S0218927525500087>

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Questions and Answer

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Appendix

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Value Chain: The value chain represents the entire process involved in creating, producing, and delivering a product or service. It encompasses everything from raw material sourcing to production, distribution, and waste management.