



TEGH Sustainable Supply Chain Management Transformation for **EUDR** Compliance

Thai Eastern Group Holdings PCL

Presentation for **Supply Chain Management Awards 2025** by SET





คุณเฉลิม โกกนุทาภรณ์
ประธานเจ้าหน้าที่บริหาร



คุณสินีนุช โกกนุทาภรณ์
กรรมการผู้จัดการ



คุณเกริกกุล โกกนุทาภรณ์
ประธานเจ้าหน้าที่บริหาร
ฝ่ายปฏิบัติการ-ด้านยางพาราและ
ปาล์มน้ำมัน



คุณวงศ์กฤษณ์ เจียมศรีพงษ์
ประธานเจ้าหน้าที่บริหาร
ฝ่ายกลยุทธ์องค์กร

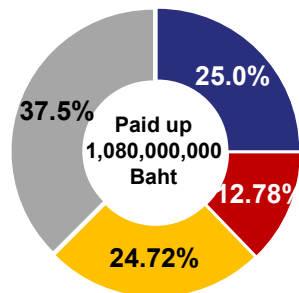


คุณศิริวรรณ โกกนุทาภรณ์
ผู้อำนวยการ
ฝ่ายทรัพยากรบุคคล



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

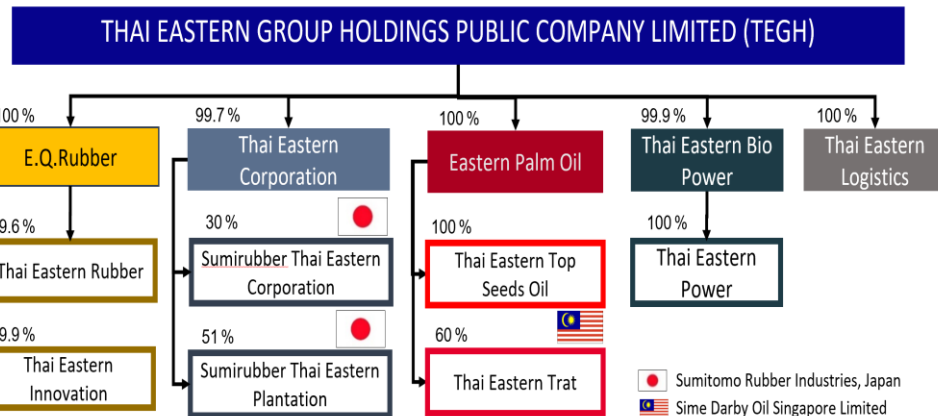


Shareholding Structure (as of 20 Mar 2024)

- 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

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



Premium Grade

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



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

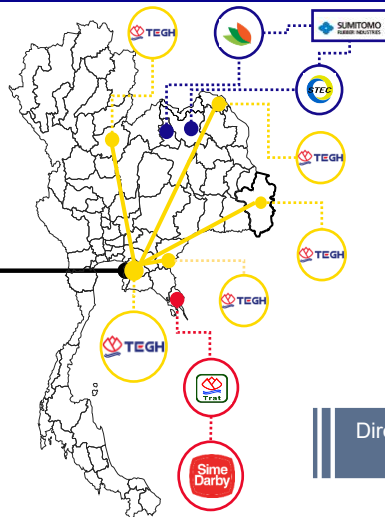
DOWNSTREAM



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%

Strictly Private & Confidential

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

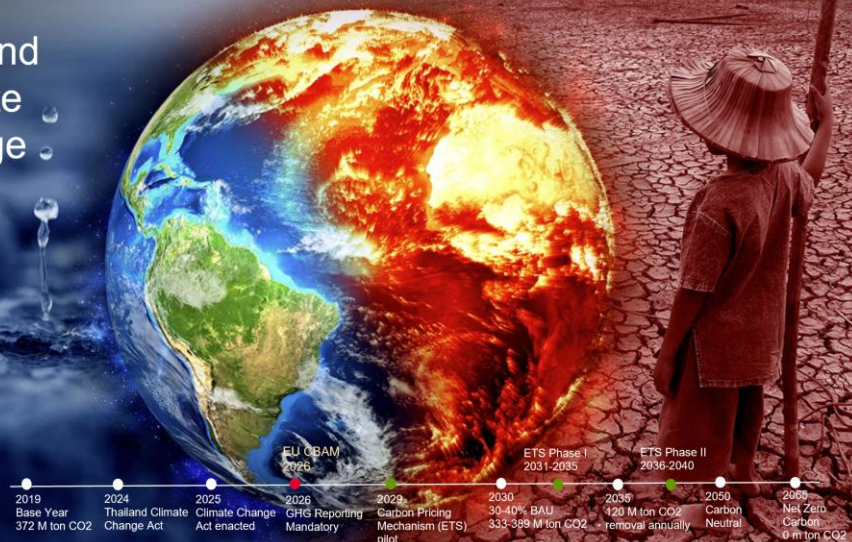


Renewable Energy Directive
RE mix 40% by 2030

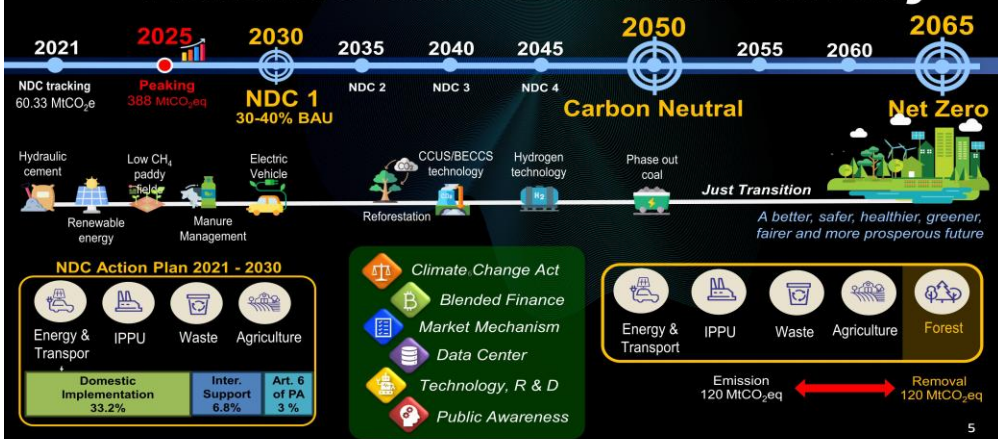


FuelEU Maritime Regulation
2% in 2025 80% by 2050

Thailand Climate Change Act



Thailand's Decarbonization Pathway



EU Deforestation Regulation

Effective from 29 December 2025

EUDR

EU Deforestation Regulation



Which commodities are affected?



Palm Oil



Cocoa



Soy



Coffee



Beef & Leather



Wood



Furniture



Rubber



Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023

GENERAL

Minimise the EU's contribution to deforestation and forest degradation worldwide

(thus reducing global deforestation and forest degradation as well as greenhouse gas emissions and biodiversity loss)

Specific

Minimise risk that products from supply chains responsible for deforestation / forest degradation are placed on the EU market or exported from it

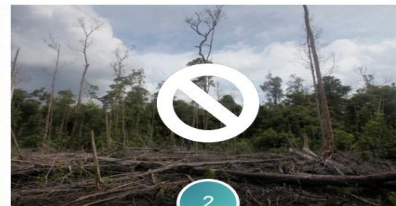
Increase EU demand for and trade in legal and 'deforestation free' commodities and products

กฎระเบียบ EU Deforestation Free Production Regulation (EUDR)



1

เป็นพื้นที่ถูกกฎหมายตาม
ประเทศผู้ผลิต



2

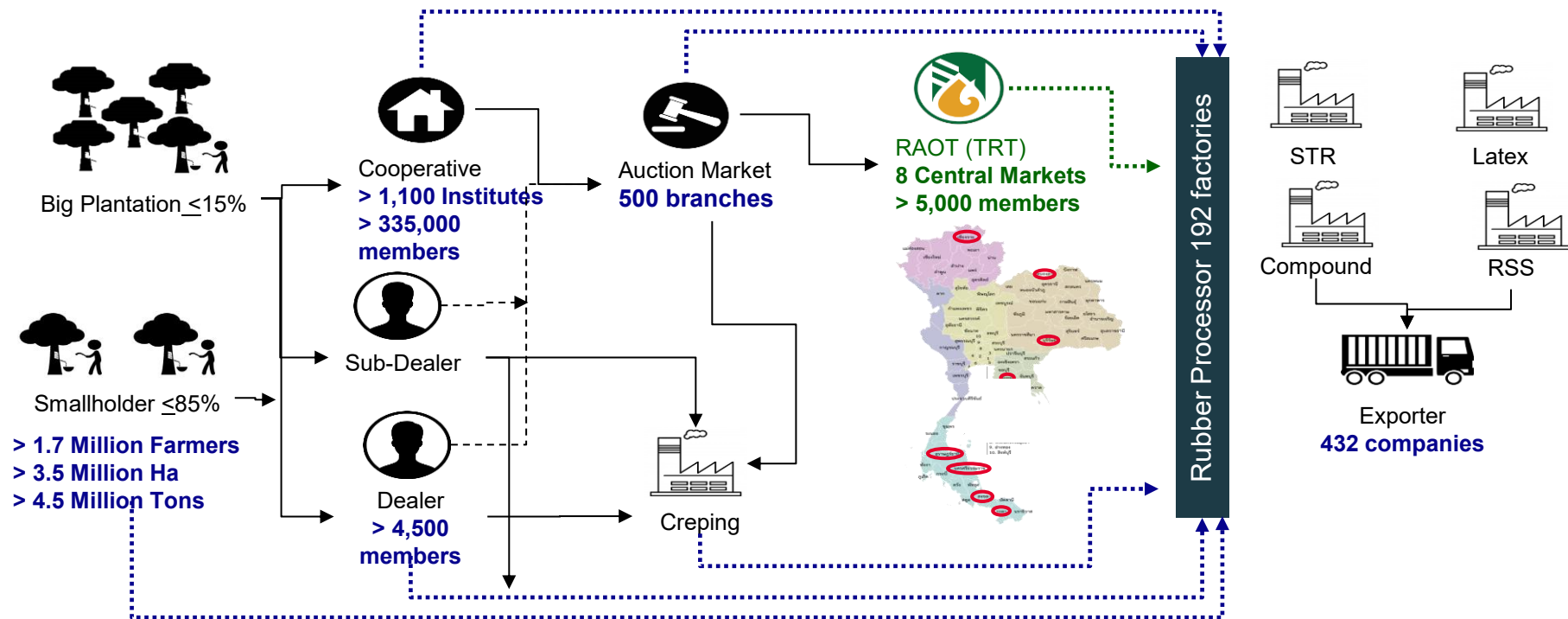
ปลอดจากการทำลายป่า



3

ผ่านกระบวนการ Due Diligence (DD)
หรือการตรวจสอบความถูกต้องตลอดห่วง
โซ่การผลิต (Supply Chain)

Thailand Stakeholders in Natural Rubber Supply Chain



Thailand's Trade of EUDR Commodities

Crops	Value of Exports from Thailand to EU (USD)	Exports to EU as share of Thailand's total exports of EUDR Commodities (%)	Thailand's imports of EUDR commodities (USD)
Rubber	1,732,830,000	11.45%	1,510,083,003

Deforestation Regulation (EUDR)

The EU Deforestation-free Regulation (EUDR) is the new EU initiative to limit deforestation caused by forestry and agricultural activities all over the world. The new regulation will see new mandatory due diligence requirements for EU businesses due in 2024, massively expanding upon the scope of, and eventually replacing, the EU Timber Regulation (EUTR).

Project Timeline

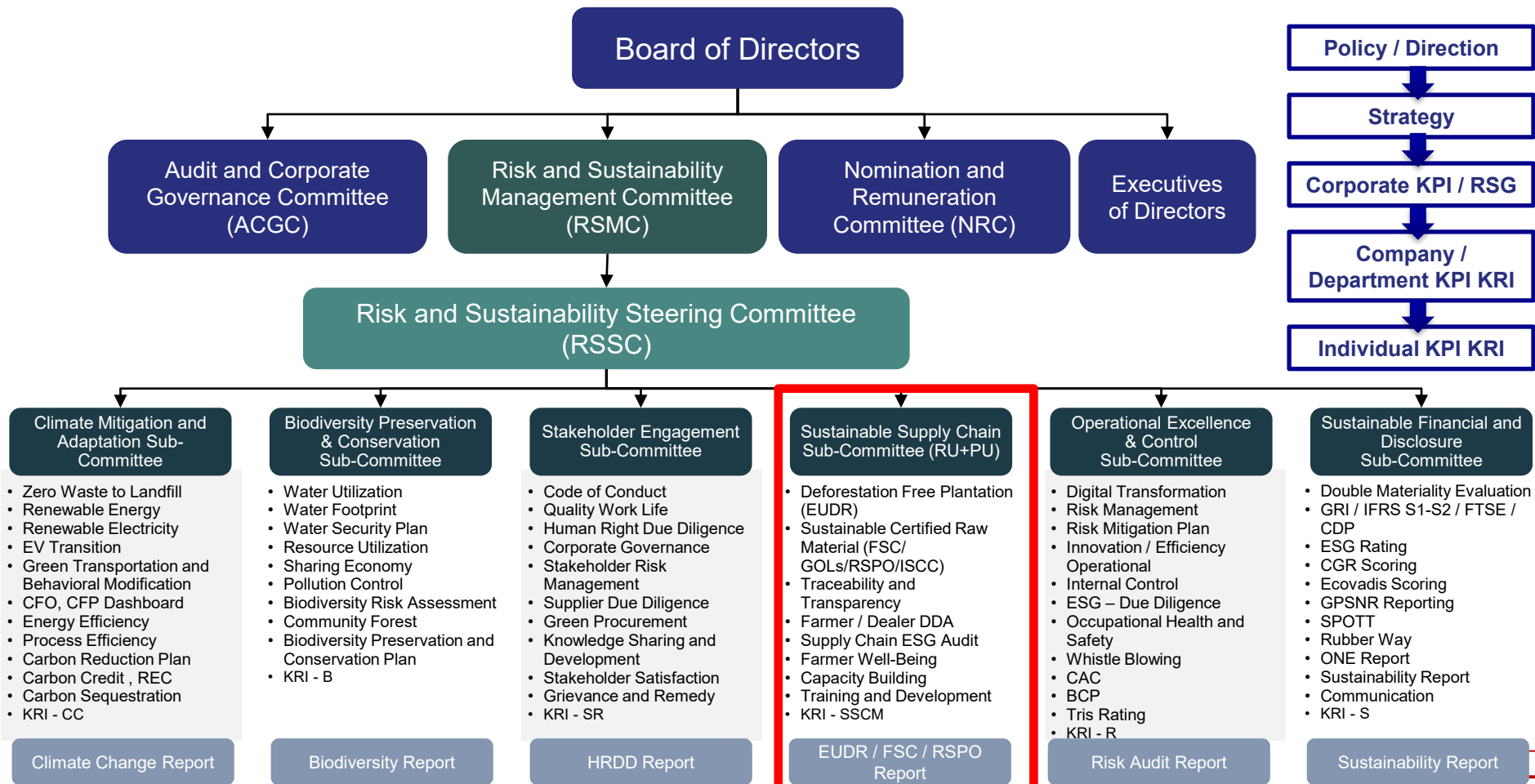


 **485,524 rai**
EUDR compliant

 **Target 250,000 MT**
to EU by 2025



Corporate Governance, Risk, Sustainability Committee 2025



Sufficient Economy

THAI
EASTERN
SYMBIOSIS



Water Management

- Water Utilization
- Reuse/Recycle water
- Tap Water System
- Reservoir Storage Capacity
- Wastewater Treatment
- Zero Discharge
- Sustainable Water Management
- Nutrient Solution

Energy Management

- Energy Efficiency
- Renewable & Clean Energy
- Bio Hythane
- Low Carbon Economy
- Self Sustainable Energy
- Waste to Energy
- CCU
- Eco Factory

Waste Management

- Resource Utilization
- 3R, 5R, 10R
- Green Manufacturing
- Zero Waste
- Zero to landfill
- Sharing Economy
- Waste to Value
- Pollution Control
- End of Life Product Responsibility
- Circular Design

Supply Chain Management

- Good Agricultural Practice (GAP)
- (FSC/ GOLs/RSPO)
- Rubber Way, GPSNR
- **EUDR Compliant**
- Deforestation Free
- Product Traceability
- Supplier Code of Conduct
- Handling & Logistic Management
- Traceability

Quality of Life

- Human Right
- Health and Safety
- Community Support
- Scholarship
- Work Integrated learning
- Housing
- Recreation Area
- Nursing and
- Emergency Unit
- Environment

Good Governance

- Land Use, Risk Mapping
- Due Diligence -ESG
- Biodiversity Conservation
- Risk Management
- Climate Change
- Anti Corruption
- Code of Conduct
- Transparency
- Legal Compliance
- Internal Audit

BCG
Economy

Bio Economy

Circular Economy

Green Economy

KEY
RESULT
INDEX
2024

Water Recycle Rate
81.3%
Zero Discharge

Biogas Substitution
79.6%
Renewable Electricity
29.1%

447,987 Ton
Reduce Landfill (SOW)
224,794
tonCO₂e
CO₂ Emission Reduction

Certified Sustainable
Materials Plantation
573,843 rais
Supplier Engagement on
Sustainable Policy
100%

Farmer -QOL Improvement
44,697
household
Labor Satisfaction
95.7%

Deforestation Free
(cut of Y2020)
100%
172 Species
compare to 2024

SUSTAINABLE
DEVELOPMENT
GOALS



United Nations
Global Compact

1. Establishing SSCM System



SSCM Stakeholders : Raw Materials, Suppliers, Manufacturers, Distributors , Retailers , Customers

2. Communication

Supplier's Code of Conduct	Policy / Due Diligence Statement	Management Process : QP SSCM	Training Activities : Supplier/ Staff
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3. Suppliers' Selection Criteria / Supply Chain Evaluation Topics

Health & Safety	Working Conditions	Freedom of Association	Forced / Child labor	ESG	Non-discrimination
Environmental Compliance	Economic (Single Source/Financial)	Bribery & Corruption	Transparency & integrity		

4. Monitoring Suppliers

Direct Supply Chain Risk	Indirect Supply Chain Risk	Business Innovation
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Information Collections



44,607
Farmers



48,868
Plots



485,524
rai



97
Cooperatives



334
Auction Markets

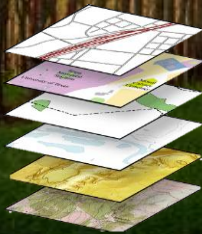


Deforestation-Free

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

Deforestation-Free Supply Chain
Our Cut-off Date : 1 APRIL 2019

Supply Chain Segregation

Traceability to farm level with polygon data

- < 4 ha : at least one latitude and longitude point
- >4 ha : Polygons, sufficient latitude and longitude points to describe the perimeter of each plot of land



Farmer Data

Legal Compliance

- ✓ Land use rights
- ✓ Environmental Protection
- ✓ Forest related regulations
- ✓ Labour rights
- ✓ Human rights
- ✓ Third Parties' rights
- ✓ Principle of FPIC
- ✓ Tax, Anti-Corruption

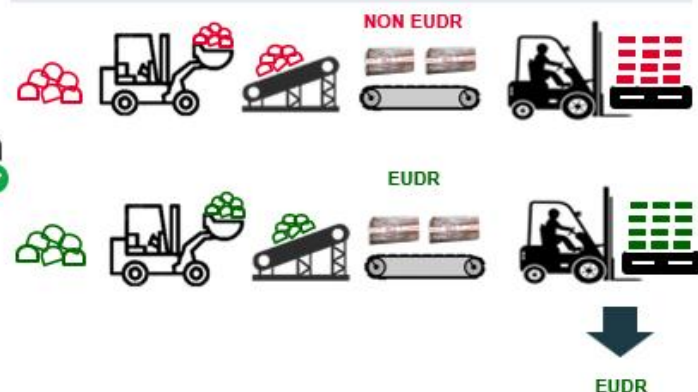
Risk Mitigation
(Article 11)

Risk Assessment
(Article 10)

Supply Chain Segregation



Production Process Segregation



Non-EU Exporter
Due Diligence Statement



Country Risk Inspection:

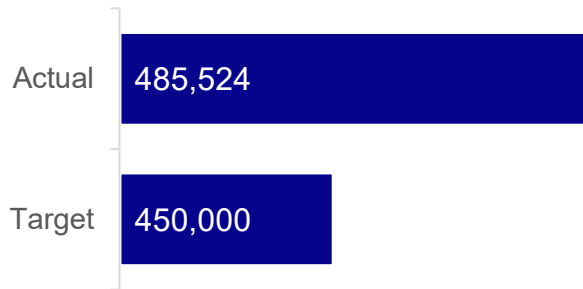
High risk	9%
Standard risk	3%
Low Risk	1%



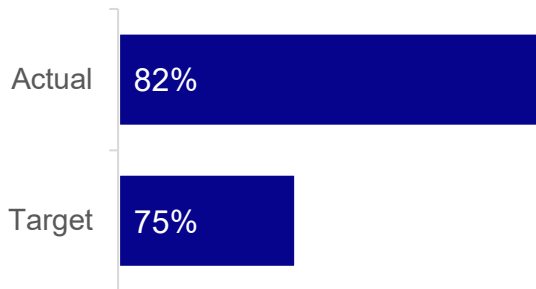
Traceability

2024 Natural Rubber Supply Chain Outcomes (EUDR)

Registered sustainable Plantation (Rai)



Product Traceability (%)



Farmer Engagement

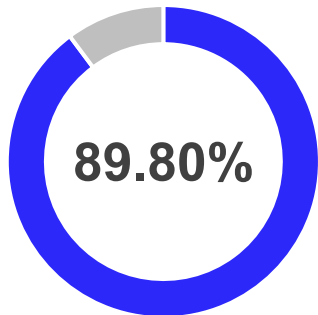
44,607 persons



Farmer Well-Being

51.74 MB

EUDR-Compliant Raw Material

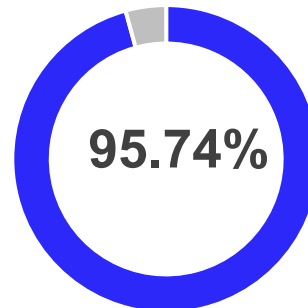


EUDR Sales Vol.

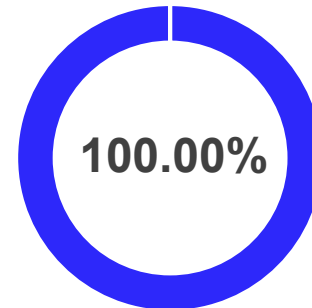


51,734 Ton

Farmer' Satisfaction



Deforestation-Free (Due Diligence)



Qualitative and Quantitative Target & Results : Company & Farmer



Issue	KPI	Unit	Target 2024	Actual 2024	Target Strategic Project	% Completion
Governance & Traceability	Registered EUDR Plantation*	Rai	≥ 450,000	485,524	≥ 676,000	100.00% 8%
	Traceability Adoption*	%	≥ 75%	82%	≥ 100%	100.00% 9%
	SSCM System Updates	times/year	4	4	4	100.00%
	Deforestation-Free (Due Diligence)*	%	100	100	100	100.00%
	EUDR Country Benchmarking	Risk level	Low risk	Low risk	Low risk	n/a
Social & Farmer Engagement	Farmers Engagement*	persons	≥ 37,500	44,607	50,000	100.00% 19%
	Farmer/Dealer Satisfaction	%	95%	95.74%	98%	100.00% 13%
	Farmer's Workshops & Trainings*	times/year	10	21	30	100.00% 110%
	Farmer well-being*	million THB	50	51.74	80	100.00% 3%
Environmental & Compliance	EUDR-Compliant Raw Material	%	≥ 85%	89.8%	100%	100.00% 20%
	EUDR-Compliant Rubber Sales*	Tons	≥ 50,000	51,734	≥ 74,200	100.00% 3%
	3rd Party Audits Compliant	times	5	9	20	100.00% 80%
	Deforestation-Free Verified	Rai	≥ 450,000	421,432	≥ 550,000	94% 6%
	Risk Mitigation Plan Support	Cases	≤ 7,000	4,176	≤ 15,000	60% 40%



Since April 2024

NATURAL RUBBER

 **289**
g CO₂e / kg

 **7.35**
Nm3 / ton

 Since **April 2019**

 **100%**

 **30%**

 **80%**





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%





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



ช่วยยับยั้งเชื้อการโรเนดอร์มาที่
เป็นอันตรายต่อพืช และมีธาตุ
แคลเซียม โพแทสเซียม
ฟอสฟอรัสและแมกนีเซียม ที่
สำคัญต่อการเติบโตของพืช



Capacity Building of Supply Chain Engagement toward Local Farmer

Plantation Services for Second-Generation Farmers

Offering management services for young farmers who wish to retain land ownership but outsource plantation operations.

Carbon Sequestration Partnership Program

Engaging with **50,000 farmers** in initiatives to enhance carbon capture and promote climate-aligned farming practices. Resilience Plan to Support farmers to take care of well being



Sustainable Plantation Training



Promoting Cocoa Cultivation among Farmers in Rubber Plantations



Project Information

- Participants: 25 farmers members of the FSC program in Koh Chan Subdistrict, Koh Chan District, Chonburi Province.
- Activity: Cultivation of 18,760 cocoa trees intercropped in rubber plantations, covering a total area of approximately 280 rai.

Outcome

- Increased Income for Farmers: Farmers earn an additional 30,000 THB per month.
- Benefits to the Company: An increase of 300 tons of FSC-grade raw materials per year.



The Value of Sustainable Supply Chains Management

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					
     						

2024 Performance



รายได้รวม
16,844 ล้านบาท

↑ 39% (YoY)

กำไรขั้นต้น
1,791 ล้านบาท

↑ 63% (YoY)

กำไรสุทธิ
556 ล้านบาท

↑ 159% (YoY)



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



I-REC STANDARD



CSR-DIW Continuous & CSR DIW Award

Question & Answers



Appendix

“Empowering the Low Carbon Value Chain”



Empowering: action, influence, and support actively to drive positive change.

Low Carbon: emphasizes environmental consciousness by reducing carbon emissions, promoting renewable energy, and minimizing the ecological footprint throughout the supply chain.

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.