



Forest Management Plan

แผนการบริหารสวนป่า

AGRIAC Global Co.,Ltd

2024-2025



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1. Introduction

Agriac Global Co., Ltd. is dedicated to managing its rubber plantations and forest areas with a commitment to sustainability. The Forest Management Plan reflects our ongoing efforts to balance environmental conservation, community engagement, and economic viability. We aim to uphold the highest standards of forest management, in line with FSC (Forest Stewardship Council) principles and international regulations, such as the European Union Deforestation Regulation (EUDR).

1.1 Overview of Agriac's Forest Management

We recognize that sustainable forest management requires a collaborative approach. Our 2024-2025 Forest Management Plan reflects this commitment by outlining a strategy developed in close cooperation with our smallholder partners, local communities, and relevant government agencies. This plan prioritizes environmental protection, social equity, and economic viability, ensuring compliance with FSC and EUDR standards. Through transparent communication and participatory decision-making, we aim to achieve measurable progress in all three areas.

We committed to leading the way in sustainable rubber plantation and forest management in Southern Thailand. Our 2024 Forest Management Plan builds upon our 2023 successes while proactively addressing identified non-conformances from the previous audit. This plan details a comprehensive strategy developed in close collaboration with our smallholder partners, local communities, and relevant government agencies to achieve ambitious, measurable targets in environmental stewardship, social equity, and economic viability.

Management Unit Description

Agriac operates under an FSC Forest Management (FM) certification with a Type I Group structure, which involves shared legal responsibility between the group management and its members. The management model follows the SLIMF (Small and



Low Intensity Management Forest) approach, focusing primarily on the harvesting of Non-Timber Forest Products (NTFP), particularly natural rubber, from smallholder plantations. Timber extraction is not a core activity, with an average annual timber harvest of less than 5,000 m³ over a five-year period.

The scope of Agriac's FSC certification applies to a GROUP FMU-SLIMF (Small and Low Intensity Forest) management unit. Additionally, Agriac applies for the FSC standard for smallholders in Thailand, which applies specifically to individual plantation units that are less than 20 hectares in size. These units can include woodlots, orchards, agroforestry systems, boundary trees, or small groups of trees. The standard also applies to smallholders producing both timber and Non-Timber Forest Products (NTFPs), such as latex rubber, seeds, fruits, and more.

A smallholder in this context is defined as an individual, family, or community managing these forest areas, and they may be part of a group certification. The certification enables these smallholders to access FSC-certified markets while demonstrating their commitment to sustainable forest management practices. Timber harvesting within these smallholder units is regulated to ensure compliance with SLIMF standards, with timber extraction limited to ensure sustainability.

An MU can include multiple smallholder plantations within a province, provided they adhere to FSC's definition of smallholder size (less than 20 hectares per unit) therefore in 2025 here is total 19 MU in 2025 operation



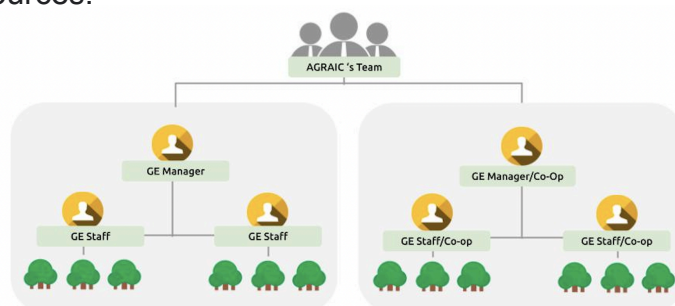
No	Management Unit
1	Nakorn Si Thammarat
2	Srisaket
3	Surat Thani
4	Trang
5	Chumpon
6	Patthalung
7	Krabi
8	Yala
9	Nara Thiwat
10	Nongkhai
11	Phangnga
12	Loei
13	Songkhla
14	Pattani
15	Rayong
16	Prajuab Kirikhan
17	Surin
18	Phuket
19	Ubon Ratchatani



1.1.1 Management Focus

The certification follows a Type I Group structure, which emphasizes shared responsibilities between the group management and its members in managing forest plantations sustainably. The primary focus remains on the responsible production of natural rubber, while timber extraction, when it occurs, remains minimal and strictly regulated according to FSC standards.

Agriac's operations comply with the FSC Forest Stewardship Standard for Thailand and the FSC Smallholder Standard. These standards ensure that forest management practices support biodiversity, maintain high conservation values, and adhere to social and environmental sustainability requirements. Through this framework, Agriac helps smallholders sustainably manage their plantations while contributing to the protection of Thailand's natural resources.



1.2 Purpose and Scope of the Management Plan

The company operates with a strong foundation in sustainability, guided by three key principles: environmental, social, and economic. These principles are outlined as follows:

1. Environmental Management

Forest management must prioritize environmental protection, comply with relevant laws and international agreements, and maintain the balance of biodiversity. This includes protecting natural resources such as wildlife, forests, and water, and ensuring the proper use, storage, and disposal of chemicals like pesticides and fertilizers.

2. Social Management

The company is committed to helping local communities benefit from forest management in the long term. This involves adhering to laws and agreements, ensuring safety, listening to the concerns of communities, smallholders, contractors, and stakeholders, while also providing education and collaboration opportunities for all involved sectors.



3. Economic Management

Forest management should generate fair and sustainable economic returns, focusing primarily on income from latex, with secondary revenue from rubberwood. The goal is to ensure efficiency and fairness in forest operations, while maintaining transparency and sustainability.

Thai Laws and Regulations Involved with FSC Activities under EUDR (European Union Deforestation Regulation)

1. Land Tenure, Management, and Harvesting Rights

- National Reserved Forests Act, B.E. 2507 (No. 4) B.E. 2559
- Forest Plantation Act, B.E. 2535 (No. 2) B.E. 2558
- Forest Act, B.E. 2484 (No. 8) B.E. 2562
- National Land Policy Committee Act, B.E. 2562 (2019)
- Rubber Authority of Thailand Act, B.E. 2558 (2015)
- Land and Buildings Tax Act, B.E. 2562 (2019)
- “Ratchaphatsadu” Land Act, B.E. 2518 (1975)
- Community Forest Act, B.E. 2562 (2019)
- Land Lease for Agriculture Act, B.E. 2524 (1981)FSC-STD-THA-01-2024 EN ...

2. Concession Licenses & Harvesting Permits

- National Reserved Forests Act B.E. 2507 (No. 4) B.E. 2559
- Rubber Authority of Thailand Act, B.E. 2558 (2015)
- Forest Plantation Act, B.E. 2535 (No. 2) B.E. 2558
- Community Forest Act B.E. 2562 (2019)FSC-STD-THA-01-2024 EN ...

3. Management Planning & Environmental Protection

- National Park Act, B.E. 2562 (2019)
- Community Forest Act, B.E. 2562 (2019)
- Enhancement and Conservation of the National Environmental Quality Act, B.E. 2535 (1992)
- Land Excavation and Land Filling Act, B.E. 2543FSC-STD-THA-01-2024 EN ...

4. Protected Sites, Species & Biodiversity

- National Park Act, B.E. 2562 (2019)
- Wildlife Conservation and Protection Act, B.E. 2562 (2019)
- Marine and Coastal Resources Management Promotion Act, B.E. 2558 (2015)
- Plant Variety Protection Act B.E. 2542 (1999)



- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)FSC-STD-THA-01-2024 EN

5. Social & Labor Laws

- Core labor rights are covered under the **ILO Declaration on Fundamental Principles and Rights at Work (1998)**, which is recognized in FSC standards (e.g., child labor, forced labor, discrimination, freedom of association)FSC-STD-THA-01-2024 EN

6. Due Diligence and Trade Requirements

- Business Registration Act, B.E. 2499 (1956)
- Export and Import of Goods Act, B.E. 2522 (No. 2) B.E. 2558
- Revenue Code Amendment Act (No. 47) B.E. 2561 (2018)FSC-STD-RAP-THA-01-2024

7. Ecosystem Services & Related Rights

- Community Forest Act, B.E. 2562 (2019)
- Enhancement and Conservation of the National Environmental Quality Act, B.E. 2535 (1992)
- National Park Act, B.E. 2562 (2019)
- Wildlife Conservation and Protection Act B.E. 2562 (2019)FSC-STD-RAP-THA-01-2024

8. International Treaties & Agreements

- CITES (Washington Convention)
- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)
- International Labour Organization (ILO) ConventionsFSC-STD-THA-01-2024 EN

1.3 Key Highlights for Agriac's 2024-2025 Management Plan

1. Enhanced APP-005 Plantation Inspection Report

- **Environmental Highlights:** Biodiversity and ecosystem monitoring to protect high-conservation-value areas, soil and water conservation measures, and responsible chemical and waste management practices.



- **Social Highlights:** Community awareness by respecting cultural sites, improved welfare tracking for workers and families on-site, and enhanced safety through accident logging.
- **Economic Highlights:** Improved fertilizer calculations based on productive area, pest and disease control measures for cost-effective management, and resource efficiency for sustainable production.
- 2. **Enhanced EUDR Compliance within TRAZTRU System**
 - **Traceability and Transparency:** Full traceability from farm to export to meet EUDR due diligence standards.
 - **Deforestation and Land-Use Monitoring:** Satellite and GIS integration for real-time deforestation tracking.
 - **Compliance Documentation:** Automated EUDR-compliant reports and secure storage for regulatory audits.
 - **Risk Assessment :** Report for evaluating environmental and social compliance risks across plantations.
- 3. **Strategic Stakeholder Collaboration**
 - Focus on partnerships for sustainability skills development, soil and fertilizer improvement, sustainable harvesting practices, and carbon credit exploration in rubber plantations.
 - Collaboration in GIS and satellite imagery to enhance data layers and alignment with FSC and EUDR regulations.
- 4. **FSC Standards Update**
 - Compliance with **FSC-STD-THA-01-2024 EN** and **FSC-STD-RAP-THA-01-2024 Plantations EN**, effective May 1, 2024, for smallholder plantations in Thailand.
 - Integration of FSC Principles & Criteria Version 5-2, reinforcing sustainable management, social responsibility, and compliance.
- 5. **Addition of New Products**
 - **Eco Harvest Honey:** Provides income diversification, enhances biodiversity, and supports ecosystem health in FSC-certified rubber plantations.
 - **Trang Pepper:** Cultivated during non-tapping months for additional income, aligning with FSC guidelines for land efficiency and sustainability.
- 6. **Expanded Operational Area and define Management Unit by province perspective**

The following table summarizes the operational areas, detailing the total area in hectares (ha) and rai, and the number of Forest Management Units (FMUs)



under management across key provinces. It is important to note that Northeast is the latest addition to our operations as a new recruit area.

No	Management Unit	Number of FMU	Total Area (Rai)	Total Area (HA)	Operation Area (Rai)	Operation Area (HA)
1	Nakorn Si Thammarat	2,682	21,544.56	3,447.13	19,262	3,081.86
2	Srisaket	2,049	21,981.44	3,517.03	16,955	2,712.83
3	Surat Thani	1,878	25,400.88	4,064.14	21,557	3,449.04
4	Trang	1,126	9,824.31	1,571.89	8,128	1,300.41
5	Chumpon	728	8,842.56	1,414.81	7,522	1,203.52
6	Patthalung	721	4,668.19	746.91	3,920	627.13
7	Krabi	528	5,686.44	909.83	4,098	655.75
8	Yala	491	2,625.13	420.02	2,624	419.89
9	Nara Thiwat	391	1,526.50	244.24	1,527	244.35
10	Nongkhai	377	5,378.19	860.51	3,913	626.08
11	Phangnga	200	2,657.13	425.14	2,196	351.36
12	Loei	172	3,522.94	563.67	3,434	549.51
13	Songkhla	134	877.38	140.38	877	140.36
14	Pattani	131	748.38	119.74	748	119.72
15	Rayong	117	3,192.94	510.87	2,481	396.98
16	Prajuab Kirikhan	35	602.00	96.32	518	82.88
17	Surin	29	277.88	44.46	274	43.89
18	Phuket	6	35.00	5.60	29	4.64
19	Ubon Ratchatani	4	82.56	13.21	60	9.60
	Total	11,799.00	119,474.38	19,115.90	100,123.75	16,019.80



2. Scope of Forest Management

This management plan applies to all forest and rubber plantation areas under Agriac's. Our approach integrates sustainable rubber production with forest conservation efforts, working in collaboration with smallholders, local communities, government authorities and other Stakeholders .

2.1 Overview

- The forest management area encompasses FSC-certified rubber plantations managed under a **Type I Group FMU-SLIMF** model, specifically catering to smallholders in Thailand.
- Operations align with updated FSC standards, including **FSC-STD-THA-01-2024 EN** and **FSC-STD-RAP-THA-01-2024 Plantations EN**. These standards govern smallholder practices, focusing on environmental, social, and economic sustainability while ensuring compliance with EUDR regulations.
- MU this year will be grouped as per provincial area.

2.2 Forest Land Composition

- **Rubber Plantations:** The primary area, dedicated to sustainable rubber production, covers rubber plantations managed under FSC certification.

Number of FMU	total area (HA)	Total area (rai)	Operation Area (Rai)	Operation Area (HA)	Number of smallholders	No of MU
11,799	19,115.90	119,474.38	100,123.75	16,019.80	8,957	19

- **Dual-Use Zones:** Smallholders are encouraged to utilize plantation corners for supplementary NTFP cultivation, such as **Eco Harvest Honey** and **Trang Pepper**, enhancing land productivity and biodiversity without disrupting primary operations.

2.3 Management Objectives and Certification Standards

- The management plan addresses sustainable forest stewardship in line with the **Principles & Criteria Version 5-2**, emphasizing biodiversity conservation, ecosystem health, and local economic development.



- Smallholder operations include mixed land use, where agroforestry practices incorporate **Trang Pepper** and **Eco Harvest Honey**, aligning with both FSC and EUDR requirements.

2.4 Compliance and Monitoring

- **TRAZTRU System:** All forest management activities are monitored within TRAZTRU for real-time traceability, land-use tracking, and compliance with FSC and EUDR requirements.
- **APP-005 Inspections:** Plantation inspections are conducted using the updated APP-005 report, assessing biodiversity, soil and water conservation, community engagement, and economic resource use.
- **Internal Monitoring :** Ensure all the practice have been done according to plan and standard .

3. Management Objectives

3.1 Environmental Objectives

- **Sustainable Forest Stewardship:** Prioritize environmentally sustainable practices that maintain soil quality, preserve water resources, and support biodiversity within rubber plantations.
- **Biodiversity and Habitat Conservation:** Protect and enhance habitats for endangered species, implement ecosystem monitoring, and integrate dual-use zones, such as areas for *EcoHarvest Honey* production.
- **Soil and Water Conservation:** Conduct regular soil testing and implement site-specific fertilizer application to optimize soil health and reduce chemical runoff, in line with RAOT standards.
- **Minimizing Environmental Impact:** Reduce environmental impacts from plantation activities by following updated APP-005 monitoring for erosion control, invasive species, and chemical use.

3.2 Social Objectives

- **Community and Cultural Respect:** Foster positive relationships with local communities by respecting legal and customary rights, and recognizing culturally significant areas near plantations.
- **Local Economic Support:** Strengthen community engagement through economic initiatives, including *Trang Pepper* cultivation and *EcoHarvest Honey* production, offering additional income sources to smallholders.



- **Worker and Family Welfare:** Ensure worker safety, track accident history, and support the well-being of families residing on-site, aligned with responsible plantation management.
- **Skill Development and Knowledge Sharing:** Provide smallholders with training on sustainable agricultural practices, focusing on carbon credit initiatives, advanced harvesting techniques, and sustainable fertilizer use.

3.3 Economic Objectives

- **Income Diversification for Smallholders:** Introduce *Trang Pepper* and *EcoHarvest Honey* as alternative income streams during non-tapping months, maximizing the economic potential of plantation land.
- **Efficient Resource Management:** Improve productivity and cost efficiency by optimizing fertilizer usage based on productive area and pest control through APP-005 data collection.
- **Compliance and Market Access:** Maintain high standards in compliance with FSC and EUDR guidelines, ensuring legal access to European markets.
- **Long-Term Economic Sustainability:** Support economic sustainability through long-term harvest planning, accurate data management with TRAZTRU, and pursuing carbon credit opportunities for plantations.

Full detail

[:https://docs.google.com/spreadsheets/d/1i4BqiTXPa7ftrh4kShhnr5JzR1VToVRNYN17A7sbtME/edit?usp=share_link](https://docs.google.com/spreadsheets/d/1i4BqiTXPa7ftrh4kShhnr5JzR1VToVRNYN17A7sbtME/edit?usp=share_link)



3.4 Budget for objectives

	Year 2024	Actual 2024	Year 2025	Actual 2025 (Sep)
Environment	1,330,025	49%	2,421,601	48.83%
Social	139,500	5%	253,990	5.12%
Economic	1,254,537	46%	2,284,159	46.05%
Total Actual Expenses yearly	2,724,062		4,959,750	
+/- From Budget	-38.23%			
Exchange rate 34	\$80,119.47			

Full detail

https://docs.google.com/spreadsheets/d/1i4BqiTXPa7ftrh4kShhnr5JzR1VToVRNYN17A7sbtME/edit?usp=share_link

4. Risk Assessment*2025

Based on the thorough review of AGRIAC's Forest Management Plan, here's an enhanced risk assessment that aligns with the management objectives outlined

Key:

- **Likelihood (1-5):** 1 = Rare, 5 = Almost certain
- **Consequence (1-5):** 1 = Minor, 5 = Catastrophic
- **Risk Level:** Low (1-6), Moderate (7-14), High (15-25)

Objective	Potential Risk	Likelihood (1-5)	Consequence (1-5)	Risk Score (Likelihood x Consequence)	Risk Level	Mitigation Measures
1 Environmental Objectives						
Sustainable Forest Stewardship	Depletion of soil quality due to over-fertilization	2	5	10	Moderate	Conduct regular soil testing and use precision fertilizer application in line with RAOT standards.
Biodiversity and Habitat Conservation	Habitat disruption from plantation expansion	2	5	10	Moderate	Implement monitoring programs and create dual-use zones for biodiversity.
Soil and Water Conservation	Contamination from chemical runoff	2	5	10	Moderate	Optimize fertilizer use and integrate buffer zones near water bodies.



Minimizing Environmental Impact	Spread of invasive species	3	3	9	Moderate	Monitor and control invasive species through periodic APP-005 assessments.
2 Social Objectives						
Community and Cultural Respect	Disruption of culturally significant areas	2	4	8	Moderate	Engage with local communities to identify and protect cultural sites.
Local Economic Support	Limited community engagement due to operational focus	3	3	9	Moderate	Strengthen partnerships and conduct regular community meetings.
Worker and Family Welfare	Workplace accidents or unsafe conditions	2	5	10	Moderate	Maintain comprehensive safety protocols and track accident history.
Skill Development and Knowledge Sharing	Lack of training uptake by smallholders	3	3	9	Moderate	Offer tailored, accessible training programs and incentives for participation.
3 Economic Objectives						
Income Diversification for Smallholders	Dependence on a single product market	3	4	12	High	Diversify product offerings, such as EcoHarvest Honey and Trang Pepper.
Efficient Resource Management	Inefficiency in fertilizer use leading to increased costs	3	3	9	Moderate	Use APP-005 data to optimize resource allocation.
Compliance and Market Access	Non-compliance with FSC and EUDR standards	2	5	10	Moderate	Implement strict internal audits and use the TRAZTRU system for compliance tracking.
Long-Term Economic Sustainability	Market fluctuations affecting profitability	3	4	12	High	Pursue carbon credit opportunities and diversify income streams to buffer against market risks.
Key:						
Likelihood (1-5): 1 = Rare, 5 = Almost certain						
Consequence (1-5): 1 = Minor, 5 = Catastrophic						
Risk Level: Low (1-6), Moderate (7-14), High (15-25)						

5. Property Overview

The forest areas managed by Agriac are located across various regions in Southern Thailand, with the primary use being rubber production, often integrated with palm oil or other agricultural activities. Management is focused on small-scale operations, typically less than 20 hectares, and includes diverse land use such as productive rubber plantations, residential spaces, food cultivation areas, and communal leisure spaces.

Agriac's management areas feature a unique, community-driven structure. Even though individual land title deeds define borders, operationally, plots often blend into one another without distinct boundaries. Smallholders rely on mutual agreements and traditional practices to define operation areas, including shared paths for rubber tapping



and transportation. This interconnected setup embodies the strong cultural and communal ties within the smallholder community, where agricultural production and social cohesion are closely linked. The operational framework thus not only fosters economic activity but also upholds community values and cultural heritage, creating a holistic model of land use and sustainable development.

The operation area are as following *2025

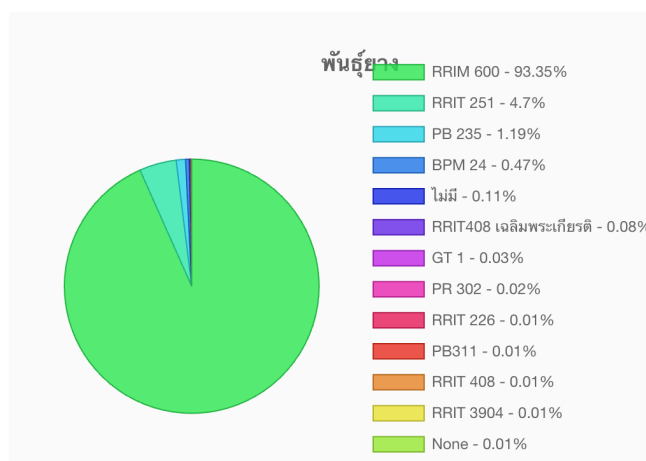
Number of FMU	total area (HA)	Total area (rai)	Operation Area (Rai)	Operation Area (HA)	Number of smallholders	No of MU
11,799	19,115.90	119,474.38	100,123.75	16,019.80	8,957	19

Gender Male : Female = 3,793 : 5,157 with 100 % are local

Average Age of smallholder : 51.81 Yr old

Average Age of Plantation : 19.40 yr

Clone distribution





Rubber

ตำบล (แปลงยาง)	2019	2020	2021	2022	2023	2024	2025	2026	2027
จำนวนไร่ (Rai)	8055	8055	8055	20509	20691	51,342	100,000	150,000	200,000
Production Capacity (Kg/Rai/Yr)	304	304	304	304	304	304	304	304	304
Forcast Capacity (Kg/Yr)	2,448,720	2,448,720	2,448,720	6,234,736	6,290,091	15,607,856	30,400,000	45,600,000	60,800,000
Actual capacity (Kg/Yr)	*ยังไม่เริ่มดำเนินการ	*ยังไม่เริ่มดำเนินการ	1,250,526.24	893,849.84	1,555,627	3,990,968	7,532,154		
% of capacity operation	NA	NA	51.07%	14.34%	24.73%	25.57%	24.78%		
							Sep 2025		

Wood

ตำบล (แปลงยาง)	2019	2020	2021	2022	2023	2024	2025	2026	2027
จำนวนไร่ (Rai)	8055	8055	8055	20509	20691	51,342	100,000	150,000	200,000
Production Capacity (T/Rai)	23	23	23	23	23	23	23	23	23
Forcast Capacity (T/Yr)	185,265	185,265	185,265	471,707	475,895	1,180,857	2,300,000	3,450,000	4,600,000
Actual capacity (Kg/Yr)	0	0	0	0	0	0	0		
Actual capacity (Kg/Yr)	*ยังไม่เริ่มดำเนินการ	*ยังไม่เริ่มดำเนินการ	0.00	0.00	0.00	0.00	0.00	10%	10%
							Sep 2025		

Source :

https://docs.google.com/spreadsheets/d/17PMm1MD23kCbljA5AehAz_OpyLDe13BXmilfXOMVVQA/edit?usp=sharing

Production capacity : <http://lib.doa.go.th/multim/B01579.pdf>



5.1 Explanation of Data

1. Geographical Scope:

- The operational area covers nineteen provinces
- These provinces represent the key geographic distribution of our FSC-certified smallholder operations.

2. Total Area and Units:

- The total managed area is **19,115.90 hectares**, equivalent to **119,474.38 rai**.
- Within this area, there are **11,799 FMUs**.

3. FMU Structure:

- Forest Management Units (FMUs) are organized to meet FSC compliance standards. Each FMU includes one or more plots, and management practices are tailored to the size and characteristics of the plots in each FMU.

4. Province-Specific Details:

- **Nakhon Si Thammarat:** Largest operation with **2,682 FMUs** covering **3,447.13 ha**.
- **Srisaket:** Large-scale operation with **2,049 FMUs** and **3,517.03 ha**.
- **Surat Thani:** Significant operation, managing **1,874 FMUs** across **4,064.14 ha**.
- **Trang:** Medium-scale operation with **1,126 FMUs** and **1,571.89 ha**.
- **Chumphon:** Moderate operation with **728 FMUs** and **1,414.81 ha**.
- **Patthalung:** Smaller operation, covering **721 FMUs** and **746.91 ha**.
- **Krabi:** Small-scale operation, with **528 FMUs** across **909.83 ha**.
- **Yala:** Small-scale operation, covering **491 FMUs** and **420.02 ha**.
- **Narathiwat:** Limited operation, managing **391 FMUs** with **244.24 ha**.



- **Nong Khai:** Limited operation with **377 FMUs** across **860.51 ha**.
- **Phangnga:** Small operation, managing **200 FMUs** over **425.14 ha**.
- **Loei:** Small operation, covering **172 FMUs** and **563.67 ha**.
- **Songkhla:** Micro-scale operation with **134 FMUs** and **140.38 ha**.
- **Pattani:** Micro-scale operation, managing **131 FMUs** and **119.74 ha**.
- **Rayong:** Small-scale operation with **117 FMUs** and **510.87 ha**.
- **Prachuap Khiri Khan:** Very small-scale operation, covering **35 FMUs** and **96.32 ha**.
- **Surin:** Small-scale operation, with **29 FMUs** and **44.46 ha**.
- **Phuket:** Very small-scale operation with **6 FMUs** and **5.60 ha**.
- **Ubon Ratchathani:** Minimal operation, covering **4 FMUs** and **13.21 ha**.

5. Purpose of Distribution:

- This distribution reflects our commitment to manage forest resources sustainably and efficiently while meeting FSC requirements for

No	Management Unit	Number of FMU	Total Area (Rai)	Total Area (HA)	Operation Area (Rai)	Operation Area (HA)
1	Nakorn Si Thammarat	2,682	21,544.56	3,447.13	19,262	3,081.86
2	Srisaket	2,049	21,981.44	3,517.03	16,955	2,712.83
3	Surat Thani	1,878	25,400.88	4,064.14	21,557	3,449.04
4	Trang	1,126	9,824.31	1,571.89	8,128	1,300.41
5	Chumpon	728	8,842.56	1,414.81	7,522	1,203.52
6	Patthalung	721	4,668.19	746.91	3,920	627.13



7	Krabi	528	5,686.44	909.83	4,098	655.75
8	Yala	491	2,625.13	420.02	2,624	419.89
9	Nara Thiwat	391	1,526.50	244.24	1,527	244.35
10	Nongkhai	377	5,378.19	860.51	3,913	626.08
11	Phangnga	200	2,657.13	425.14	2,196	351.36
12	Loei	172	3,522.94	563.67	3,434	549.51
13	Songkhla	134	877.38	140.38	877	140.36
14	Pattani	131	748.38	119.74	748	119.72
15	Rayong	117	3,192.94	510.87	2,481	396.98
16	Prajuab Kirikhan	35	602.00	96.32	518	82.88
17	Surin	29	277.88	44.46	274	43.89
18	Phuket	6	35.00	5.60	29	4.64
19	Ubon Ratchatani	4	82.56	13.21	60	9.60
	Total	11,799.00	119,474.38	19,115.90	100,123.75	16,019.80

5.2 Integration of Northeastern Thailand as a New Operational Area

Northeastern Thailand represents the most recent addition to our FSC-certified operations, marking a significant expansion of our sustainable forestry practices. This new regional inclusion aligns with our strategic goals to engage more smallholders and promote sustainability across the country. The operations are implemented through local cooperatives within the northeastern provinces.

Overview of Northeastern

- Total Area Managed: 4,998.88 hectares (or 31,243 rai)
- Number of Forest Management Units (FMUs): 2,631

Northeastern's inclusion adds diversity to our operations, with a focus on integrating smallholder plots into the FSC certification framework. The area contributes to our overall mission of enhancing sustainable forestry while providing economic and environmental benefits to local communities.

Key Objectives for Northeastern



1. **Baseline Assessment:**
 - Conduct environmental and social assessments to establish the current status of forestry practices in Northeastern.
 - Identify High Conservation Value (HCV) areas and develop management strategies accordingly.
2. **Onboarding and Training:**
 - Educate smallholders on FSC standards, focusing on compliance with legal, social, and environmental requirements.
 - Provide resources and training for sustainable forest management and monitoring.
3. **Infrastructure Development:**
 - Establish operational frameworks, including traceability systems, to integrate Phangnga's outputs into the overall supply chain.
 - Ensure logistical support for certification audits and compliance monitoring.
4. **Community Engagement:**
 - Build relationships with local stakeholders, including smallholder groups, communities, and government bodies.
 - Promote community participation in decision-making and sustainable forestry practices.
5. **Sustainability Goals:**
 - Enhance biodiversity conservation and reduce environmental impacts in line with FSC principles.
 - Foster economic resilience among smallholders through sustainable practices.

Significance of Northeastern

The addition of Northeastern reflects our commitment to expanding sustainable forestry practices while supporting smallholder livelihoods. The area presents an opportunity to demonstrate how new regions can successfully adopt FSC principles, serving as a model for future expansions.



6. Description of Forest Resources

6.1 Soil Resources

6.1.1 Existing Condition

The soils across our management areas are primarily lateritic, requiring careful management to prevent erosion, particularly in steeply sloped regions.

Province	Soil Type	Challenges	Source
Surat Thani	Predominantly lateritic soils with moderate fertility, suitable for rubber cultivation but prone to erosion, especially on slopes.	Moderate nutrient content requires additional potassium and nitrogen fertilization to maintain productivity.	Soil Resource Status Report, LDD (2023)
Trang	Mixed sandy loam and clay soils. Loamy areas provide good drainage; clay-heavy areas retain excess water, risking root rot.	Managing water retention is critical, with erosion risks on slopes; preventing soil degradation during rainy seasons is necessary.	Soil Resource Status Report, LDD (2023)
Nakhon Si Thammarat	Rich alluvial and loam soils near riverbanks; erosion-prone on hillsides. Fertility is high in alluvial zones, supporting rubber and intercrops.	Requires balanced fertilization for sustained productivity; erosion prevention measures are needed in hillside regions.	Soil Resource Status Report, LDD (2023)
Krabi	Lateritic and sandy soils with good drainage though nutrient-poor compared to loamy soils. Supports rubber and agroforestry but prone to leaching.	Nutrient leaching is common, especially in high-rainfall areas; Periodic soil amendment is essential.	Soil Resource Status Report, LDD (2023)
Phangnga	Sandy loam soils with good drainage though acidic. High erosion risk on slopes due to monsoonal rains.	Soil acidity may require lime application, and erosion control is necessary, particularly on steep slopes.	Soil Resource Status Report, LDD (2023)
Yala	Lateritic soils with moderate fertility; prone to nutrient leaching	Requires frequent organic matter replenishment	Soil Resource Status Report, LDD (2023)



	in high-rainfall areas.	and effective drainage control.	
Pattani	Clay-loam soils in lowland areas; good water retention but risk of compaction.	Drainage improvement and careful tillage needed to avoid waterlogging.	Soil Resource Status Report, LDD (2023)
Songkhla	Loamy and sandy soils, variable fertility depending on coastal vs. inland zones.	Risk of salinity near coastal areas; requires soil amendments and proper irrigation management.	Soil Resource Status Report, LDD (2023)
Srisaket	Sandy and loamy soils with low organic matter.	Low fertility limits crop yield; requires organic matter addition and periodic fertilizer application.	Soil Resource Status Report, LDD (2023)
Loei	Lateritic and shallow soils with rocky subsoil; limited moisture retention.	Erosion-prone slopes; requires soil cover crops and terracing for erosion control.	Soil Resource Status Report, LDD (2023)
Surin	Sandy soils with poor nutrient-holding capacity.	Regular fertilization and mulching needed to retain nutrients and moisture.	Soil Resource Status Report, LDD (2023)
Ubon Ratchathani	Sandy loam with low nutrient levels.	Drought risk and nutrient deficiency require irrigation and fertilizer management.	Soil Resource Status Report, LDD (2023)
Nong Khai	Loamy sand with moderate drainage; low in phosphorus.	Periodic fertilization and water retention improvement necessary.	Soil Resource Status Report, LDD (2023)
Rayong	Sandy soils with high drainage capacity but low fertility.	Nutrient leaching is a common issue; requires frequent fertilization.	Soil Resource Status Report, LDD (2023)
Prachuap Khiri Khan	Sandy loam and lateritic soils with moderate fertility.	Irrigation management needed to mitigate seasonal dryness.	Soil Resource Status Report, LDD (2023)
Phuket	Sandy soils with low fertility and high drainage.	Prone to drought stress; requires mulching and organic matter addition.	Soil Resource Status Report, LDD (2023)



6.1.2 Risk assessment and Mitigation on Soil Resources

Risk Factor	Likelihood	Consequence	Risk Score	Risk Level	Mitigation Actions	Provinces
Erosion on Sloped Areas	Possible (3)	Moderate (3)	6	Moderate	Continue contour planting, terracing, and vegetation cover. FSC monitoring practices help reduce erosion risk. Conduct regular assessments.	Surat Thani, Nakhon Si Thammarat, Phang Nga
Nutrient Depletion	Possible (3)	Moderate (3)	6	Moderate	Conduct soil testing as per FSC guidelines, adjust fertilizer applications according to RAOT and FSC standards, and apply organic amendments for soil health.	Trang, Krabi, Surat Thani
Soil Acidification in Low-pH Regions	Unlikely (2)	Moderate (3)	5	Moderate	Apply lime to balance pH levels, particularly in acidic areas. Regular pH monitoring as part of FSC certification reduces likelihood of soil acidification issues.	Phang Nga



Waterlogging in Heavy Clay Areas	Possible (3)	Moderate (3)	6	Moderate	Implement drainage channels and minimal tillage practices in clay-rich regions. FSC guidelines support sustainable soil structure management practices.	Trang
Soil Compaction	Unlikely (2)	Minor (2)	4	Low	Use minimal tillage and organic materials to prevent compaction. FSC practices help maintain soil porosity, reducing compaction risk.	Trang, Phang Nga
Nutrient Leaching in Sandy Soils	Possible (3)	Moderate (3)	6	Moderate	Apply compost and bio-fertilizers to improve soil structure and moisture retention. Regular monitoring per FSC standards reduces likelihood.	Krabi, Phang Nga, Surat Thani
Loss of Soil Organic Matter	Unlikely (2)	Minor (2)	4	Low	Continue applying compost and bio-fertilizers to enhance soil organic matter. FSC standards promote regular soil health assessments.	Krabi, Trang



6.1.3 Soil Conservation Practices

Given the overall outlook on soil and water conservation, specific erosion control measures have been implemented, such as terracing in high-risk areas and cover cropping. Regular soil health assessments will also be conducted as per APP-005 updates.

Conservation Practice	Description	Provinces
Erosion Control	Contour Planting and Terracing: Applied on sloped terrains to prevent soil erosion. Cover Crops: Planting cover crops to stabilize soil and reduce runoff.	Prevents soil erosion and maintains soil structure.
Soil Fertility Management	Nutrient Management: Conduct regular soil testing to determine specific nutrient needs. Precision Fertilization: Apply fertilizers based on guidelines and soil needs.	Prevents over-application and promotes soil health.
Organic Amendments	Compost and Bio-fertilizers: Enhance soil organic matter, moisture retention, and root health.	Improves moisture retention and reduces nutrient leaching.
Buffer Zones	Riparian Buffers: Vegetation zones near water bodies	Protects water quality and prevents sediment deposition.
Integrated Weed and Pest Management	Sustainable Pest Control: Minimizes pesticide use and supports natural pest control methods.	Maintains soil health and minimizes chemical impact.

6.2 Species Composition

- **Current Flora and Fauna:** The forested areas host a mix of rubber trees (*Hevea brasiliensis*), native hardwoods, and a variety of shrubs and ground cover plants. In addition, certain areas contain high-value conservation species, including endangered wildlife such as hornbills and macaques.
- **Biodiversity Enhancements:** Aligning with biodiversity objectives, Agriac promotes “Biodiversity Champion Farms” to encourage habitat conservation within plantations. Efforts to monitor and enhance biodiversity include defining a biodiversity score in collaboration with stakeholders and identifying ecosystem services that support local species.



6.2.1 Risk assessment for species composition

Risk Factor	Likelihood	Consequence	Risk Score	Risk Level	Mitigation Actions	Provinces Affected
Loss of Endangered Species Habitat	Unlikely (2)	Minor (2)	4	Low	Monitor biodiversity and maintain natural habitats to support local species, even though no endangered species have been identified in operation areas.	All Provinces
Biodiversity Decline Due to Monoculture	Unlikely (2)	Moderate (3)	5	Low	Continue promoting biodiversity within operations, including intercropping and the establishment of "Biodiversity Champion Farms" to encourage diverse habitat.	Surat Thani, Nakhon Si Thammarat, Krabi
Habitat Fragmentation	Possible (3)	Minor (2)	4	Low	Preserve buffer zones around high-conservation-value areas, and align plantation layouts to minimize habitat disruption.	Phang Nga, Trang, Krabi
Invasive Species Encroachment	Unlikely (2)	Minor (2)	4	Low	Monitor and control invasive species in collaboration with local conservation groups; establish early detection and rapid response measures for invasive species management.	Surat Thani
Reduction of Ecosystem Services	Unlikely (2)	Moderate (3)	5	Moderate	Define and monitor biodiversity scores with stakeholders; enhance ecosystem services such as pollination and pest control by supporting local flora and fauna diversity.	All Provinces
Risk of Over-Use of Agrochemicals	Possible (3)	Minor (2)	4	Low	Implement sustainable pest control practices, reduce chemical usage, and encourage natural pest predators within biodiversity champion farms.	Phang Nga, Trang, Krabi



6.3 Water Resources

- **Natural Water Features:** Rivers, streams, and ponds are interspersed throughout the plantation areas, necessitating protective riparian zones to maintain water quality and support aquatic life.
- **Water Resource Management:** Following guidance on sustainable water use, buffer zones have been established around water bodies to minimize erosion and runoff. Monitoring systems are in place to ensure compliance especially for pesticide usage near water sources.

6.3.1 Risk Assessment for Water Resources

Risk Factor	Likelihood	Consequence	Risk Score	Risk Level	Mitigation Actions	Provinces
Water Quality Degradation	Unlikely (2)	Moderate (3)	5	Low	Maintain buffer zones around water bodies to prevent natural sediment or organic runoff from entering water sources.	Surat Thani, Nakhon Si Thammarat, Krabi, Phang Nga
Erosion and Sedimentation in Water Bodies	Unlikely (2)	Moderate (3)	5	Low	Establish riparian buffers, especially on slopes; regularly monitor erosion-prone areas and stabilize with vegetation as needed.	Trang, Phang Nga
Overuse of Water Resources	Rare (1)	Moderate (3)	4	Low	Regularly monitor water levels to ensure natural water bodies remain unaffected by plantation activities.	Nakhon Si Thammarat, Krabi
Loss of Aquatic Biodiversity	Unlikely (2)	Minor (2)	4	Low	Protect aquatic habitats by maintaining buffer zones and controlling access to sensitive areas.	Nakhon Si Thammarat, Trang, Krabi, Phang Nga

6.4 Additional Aspects

1. Chemical Use and Waste Management

- To address the chemical use, include an overview of the fertilizer and pesticide application practices, including the shift to precision usage and RAOT-recommended practices. Describe waste management strategies,



such as designated disposal sites and hazardous material handling protocols, as outlined in [APP-005 report](#)

2. High Conservation Value (HCV) Areas

- Identify areas designated as HCVs, particularly any habitats for rare, threatened, or endangered species. Describe conservation measures in these areas, such as restricting access and enforcing no-logging policies, in line with the updated FSC standards for Thailand.

3. Non-Timber Forest Products (NTFP)

- Mention the inclusion of NTFPs such Latex, Rubber sheet and Cuplump and also 2025 additional product such as *EcoHarvest Honey* and *Trang Pepper* as part of the plantation's resources, which contribute to economic diversification and biodiversity. Outline the approach to managing NTFP resources sustainably, ensuring minimal impact on rubber tree productivity and ecosystem health.

4. Climate Resilience and Carbon Sequestration Potential

- Given the potential for carbon credit initiatives, outline the plantation's role in carbon sequestration. Describe ongoing efforts to measure and enhance carbon storage capacity through sustainable forestry practices, in line with carbon credit feasibility studies planned for this period.

7. Forest Health and Pest Management

7.1 Forest health overview

Surat Thani

Surat Thani's rubber plantations are situated in areas with relatively stable climatic conditions, promoting consistent yields. The forests maintain a diverse range of native flora and fauna that enhance ecological balance. However, prolonged wet conditions can cause root rot and pest outbreaks. Forest health management focuses on maintaining soil structure, improving drainage, and adopting integrated pest management (IPM) through natural predators and organic soil enhancement.

Trang

Trang's plantations experience a tropical monsoon climate, with heavy rainfall and prolonged humidity leading to fungal and insect infestations. The region's biodiversity supports ecological resilience, but waterlogging can affect tree vitality. Pest



management emphasizes biological control, soil aeration, and regular pruning to prevent fungal spread.

Nakhon Si Thammarat

This province has fertile alluvial soils but faces risks of erosion and pest concentration in lowland areas. Rubber monoculture can reduce biodiversity, increasing pest vulnerability. Forest health programs here integrate cover crops, soil nutrient balancing, and pest monitoring to sustain productivity.

Krabi

Krabi's forests are located in high-rainfall zones with sandy, nutrient-poor soils, making them prone to nutrient leaching and root diseases. High moisture favors fungal pathogens. Management practices include organic composting, mulching, and use of natural pest repellents to maintain healthy rubber stands.

Phangnga

Phangnga's plantations on steep, sandy loam slopes face challenges from soil erosion and humidity-related diseases. High rainfall increases fungal and insect pest pressure. Forest health strategies focus on slope stabilization using vegetative barriers, and pest control through biological methods and improved canopy management.

Songkhla, Yala, Pattani

Southern border provinces share similar climatic characteristics with high rainfall and humidity. Common pests include fungal leaf diseases and bark borers. Integrated pest management programs promote natural pest control agents, soil pH improvement, and training for smallholders on disease prevention.

Srisaket

The province's dry sandy soils and prolonged dry seasons increase pest stress on rubber trees. Termites and defoliators are common during droughts. Management includes soil enrichment with organic compost, mulching, and pest traps.

Loei

Located in hilly terrain with shallow lateritic soils, Loei experiences moderate pest risks but faces drought stress. Forest health efforts prioritize drought-resistant clones, mulching, and slope stabilization to reduce pest invasion.



Surin

Surin's sandy soils lead to limited nutrient availability, reducing plant vigor and increasing susceptibility to leaf-eating insects. Regular organic fertilization, intercropping, and biological pest control are key strategies.

Ubon Ratchathani

This area faces periodic droughts that weaken rubber trees and attract sucking pests. Pest management emphasizes maintaining soil moisture through mulching and use of microbial biofertilizers.

Nong Khai

Both provinces have moderate rainfall and sandy loam soils. Termites and leaf miners are prevalent pests. Integrated forest health strategies include organic pest barriers and mixed-cropping systems to enhance biodiversity.

Rayong

Rayong's sandy soils and humid coastal conditions support rubber growth but encourage fungal diseases such as leaf spot and root rot. Pest management focuses on improving soil organic content and applying biological control measures.

Prachuap Khiri Khan

The area's coastal climate and lateritic soils result in moderate pest pressure, primarily from aphids and leaf spot fungi. Preventive measures include soil pH correction, balanced fertilization, and biological pest control.

Phuket

Phuket's small plantations face drought and soil salinity in certain zones, which weaken trees and attract secondary pests. Forest health improvement focuses on mulching, compost enrichment, and periodic pest inspection.



7.2 Way forward with Forest Health and Pest Management

- **Integrated Pest Management (IPM):** Promote the use of biological controls, natural predators, and resistant tree varieties to manage pests.
- **FSC-Compliant Pesticide Use:** Limit chemical pesticide use to cases where it is absolutely necessary and in compliance with FSC guidelines. We prioritize non-chemical methods whenever possible.
- **Invasive Species Control:** Regularly monitor and remove invasive plant and animal species that threaten local biodiversity.

The organization has developed and implemented mitigation measures to work towards zero accidents, as outlined in the "**Occupational Health and Safety Policy**" and the **member handbook (Section 6.4)**. These measures include regular risk assessments, safety training programs, and provision of personal protective equipment (PPE). Accident data from 2024, recorded during APP-005 site inspections, provides critical insights into areas for improvement.

Based on the 2025 Accident Data:

- **Common Types of Accidents:**
 - **Cuts from tools (e.g., rubber-tapping knives):** Several incidents involved injuries from sharp tools, highlighting the need for enhanced tool safety training.
 - **Falls:** Accidents involving falls on uneven or slippery terrain were also reported.
- **Repetitive Incidents:**

Patterns of similar accidents suggest recurring risks in the work environment, particularly tool handling and terrain-related hazards.
- **Nature of Work:**

The accidents reflect the inherent risks of rubber plantation activities, such as tapping trees with sharp tools and working on challenging terrain.

Mitigation Measures:

1. **Tool Safety Training:**

Enhanced training programs focusing on the safe use of rubber-tapping knives and other tools.



2. **Terrain Management:**

Addressing hazards like slippery or uneven ground, particularly during rainy conditions, through better worksite management.

3. **Communication and Monitoring:**

These measures are communicated internally via meetings, training sessions, and accessible platforms such as Facebook and Line@. Accident data is reviewed regularly to identify trends and inform proactive interventions.

8. **Harvesting and Yield Management**

8.1 **Wood and Timber**

8.1.1 **Annual Allowable Cut (AAC)**

The AAC is calculated based on growth rates, ensuring that the forest's productive capacity is maintained. We adhere to a harvesting cycle that allows for regeneration and prevents overharvesting.

8.1.2 **Key Inputs for AAC Calculation**

1. **Total Forest Area (TFA):** The total productive forest area available for harvesting.
 - Measured in hectares (ha).
2. **Growth Rate or Mean Annual Increment (MAI):** The average volume of wood produced annually by the forest.
 - Measured in cubic meters per hectare per year (m³/ha/year).
3. **Rotation Age:** The number of years required for the forest to mature for harvesting.
 - This depends on species and site conditions.
4. **Stocking Density:** The volume of wood per hectare currently available (often assessed through an inventory).
 - Measured in cubic meters per hectare (m³/ha).
5. **Harvesting Cycle:** The planned cycle for reharvesting a specific area.
 - Usually specified in years.
6. **Sustainability Adjustment Factor (SAF):** A factor to account for natural losses, conservation areas, and other considerations, ensuring sustainable practices.



8.1.3 Formula for AAC Calculation

$$AAC = TFA \times MAI \times SAF$$

Where:

- **TFA:** Total Forest Area available for harvesting.
- **MAI:** Mean Annual Increment.
- **SAF:** Sustainability Adjustment Factor, typically less than 1 (e.g., 0.85 for 15% conservation adjustment).

The **Mean Annual Increment (MAI)** for rubber plantations typically varies depending on the following factors:

1. **Age of the Plantation:**
 - Younger plantations (below 10 years): Low MAI due to the focus on vegetative growth.
 - Mature plantations (10–30 years): Higher MAI as they reach optimal productivity.
 - Over-aged plantations (above 30 years): Declining MAI due to reduced growth rates.
2. **Site Quality:**
 - High-quality sites (good soil fertility, adequate water, and proper management): MAI can range from **5–15 m³/ha/year**.
 - Average-quality sites: MAI is around **3–7 m³/ha/year**.
 - Poor-quality sites: MAI is typically less than **3 m³/ha/year**.
3. **Management Practices:**
 - Well-managed plantations with thinning, fertilization, and pest control tend to have higher MAI.
 - Mixed-use systems (rubber and timber) may yield additional biomass.
4. **Clonal Variations:**
 - Improved rubber clones can contribute to higher MAI (e.g., certain clones developed for both latex and timber production).

8.1.3 Typical Range of MAI for Rubber Plantations:

- **Timber-Focused Rubber Plantations:** 8–12 m³/ha/year.
- **Latex and Timber Mixed Production:** 4–8 m³/ha/year.



For calculation purposes, our plantation is well-managed and aimed at latex production, an estimated MAI of **6 m³/ha/year** is reasonable.

2024 Calculation :

Total Forest Area (TFA): 8,214.66 hectares

Mean Annual Increment (MAI): 6 m³/ha/year

Sustainability Adjustment Factor (SAF): 0.1

The **Annual Allowable Cut (AAC)** is calculated as follows:

$$AAC = TFA \times MAI \times SAF$$

Substituting the given values:

$$AAC = 8,214.66 \text{ ha} \times (6 \text{ m}^3/\text{ha} \cdot \text{year}) \times 0.1 = 4,928.796 \text{ m}^3/\text{year}$$

Therefore, the **Annual Allowable Cut** is approximately **4,928.80 m³/year**. However in 2024 there is **NO** harvesting of the timber .

Low-Impact Logging: Heavy machinery is limited to designated access routes, and we use techniques that reduce soil compaction and disturbance to surrounding habitats.

However in 2024 there is **NO** harvesting of the timber .

8.2 Rubber Latex (NTFP)

8.2.1 Plantation Area and Production Capacity:

ตำบล (แปลงยาง)	2019	2020	2021	2022	2023	2024	2025	2026	2027
จำนวนไร่ (Rai)	8055	8055	8055	20509	20691	51,342	100,000	150,000	200,000
Production Capacity (Kg/Rai/Yr)	304	304	304	304	304	304	304	304	304
Forcast Capacity (Kg/Yr)	2,448,720	2,448,720	2,448,720	6,234,736	6,290,091	15,607,856	30,400,000	45,600,000	60,800,000
Actual capacity (Kg/Yr)	*ยังไม่เริ่มดำเนินการ	*ยังไม่เริ่มดำเนินการ	1,250,526.24	893,849.84	1,555,627	3,990,968	7,532,154		
% of capacity operation	NA	NA	51.07%	14.34%	24.73%	25.57%	24.78%		



Expansion of Plantation Area: The rubber plantation area is projected to increase significantly, from 8,055 rai in 2019 to 200,000 rai by 2027.

Production Capacity: The production capacity estimation per rai expect remains constant at 304 Kg/Rai/Year throughout the period,

8.2.2 Observations cost ,revenue ,profitability and yield

1. Cost Trends

- **2020–2025:** Total costs fluctuated slightly, with a noticeable decrease in **2025**.
 - Labor costs remained relatively stable but declined in percentage contribution due to reduced external labor dependency.
 - Material costs (fertilizers and pesticides) varied, reflecting market price adjustments, especially for chemical fertilizers.
 - Transportation and fuel costs remained a significant portion of operational expenses, but efficiency improved over time.

2. Revenue Trends

- **Revenue increased significantly from 2020 to 2025**, primarily driven by:
 - **Increased latex prices:** Prices grew from 37 THB/kg in 2020 to 61 THB/kg in 2025.
 - **Slight decline in yield (2023–2025):** Yields dropped from 237 kg/rai in earlier years to 240 kg/rai, likely due to changes in plantation practices or aging trees.

3. Profitability

- **Gross profit margins steadily improved** from 48.32% in 2020 to 75.02% in 2025.
 - The sharp increase in 2024 was due to reduced costs and the highest price per kilogram during the period.

4. Yield and Input Dependency

- **Yield per rai stabilized** at around 240–304 kg/year, showing consistent production practices.



- **Material usage efficiency improved:** Transition to more organic fertilizers and reduced pesticide usage supported sustainability goals.

Ref <https://docs.google.com/spreadsheets/d/1Mp7L2397kJcZiq5Bi3zf2jrQhMKPaUleJhOy89QROQs/edit?usp=sharing>

8.2.3 Forecast vs. Actual Production:

- Operations commenced in 2021 with an actual production of 1,250,526.24 Kg, achieving 51.07% of the forecasted capacity.
- In 2022, actual production was 893,849.84 Kg, which is 14.34% of the forecasted capacity.
- In 2023, actual production increased to 1,555,627 Kg, reaching 24.73% of the forecasted capacity.
- For 2024, actual production rose to 8,857,412 Kg, achieving 56.75% of the forecasted capacity.
- By 2025, actual production rose to 7,532,154 Kg, achieving 24.78% (September) of the forecasted capacity.

9. Conservation Area Management and Intact Forest Landscapes (IFL)

Conservation areas are critical to maintaining environmental integrity. The following areas have been identified and managed accordingly:

9.1 Riparian Zones

Buffer zones of natural vegetation are maintained around all rivers, streams, and ponds to prevent soil erosion and water contamination. These areas also provide habitats for aquatic and terrestrial species.



Surat Thani:



Major Waterways: The Tapi River, Thailand's longest southern river, flows through Surat Thani, creating extensive riparian zones.

Riparian Characteristics: These zones are characterized by dense vegetation, including mangroves and freshwater swamp forests, which are vital for flood mitigation and habitat provision.



Trang:

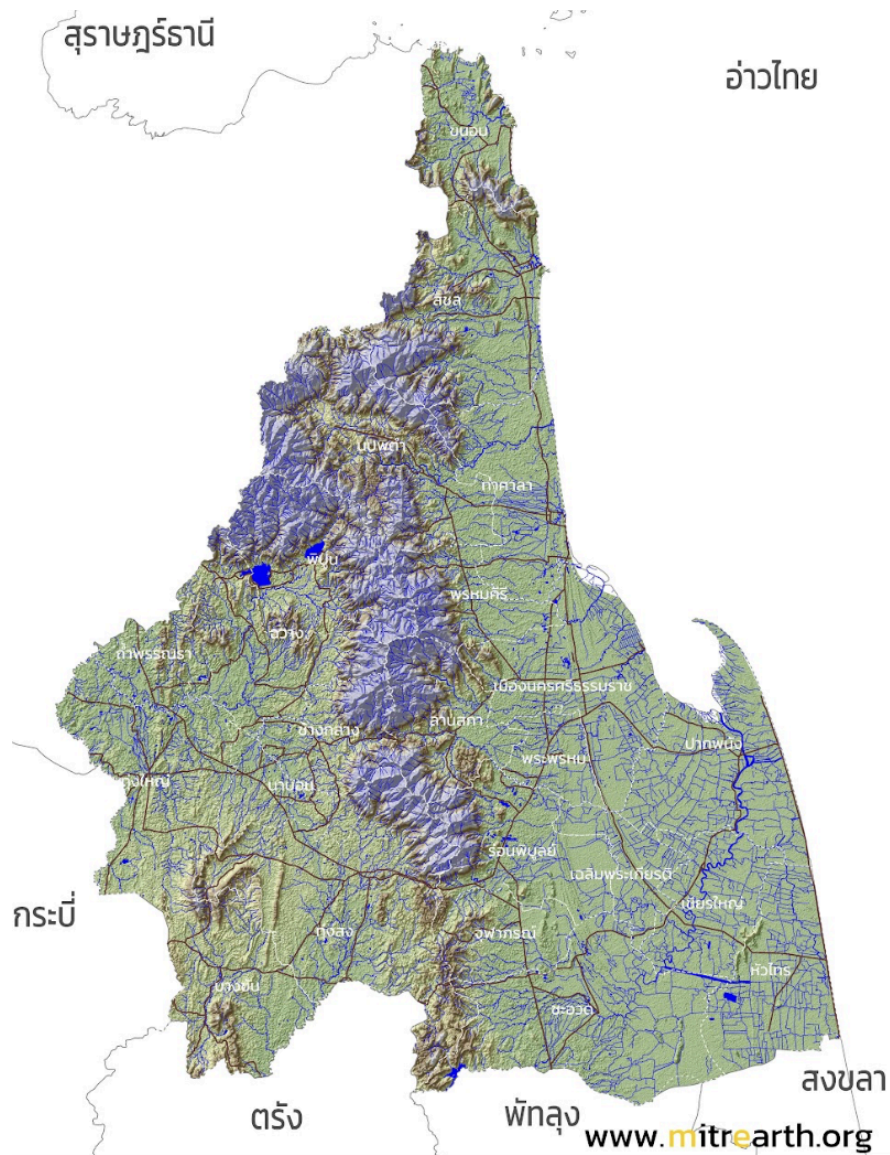


Major Waterways: The Trang River and its tributaries traverse the province, forming significant riparian areas.

Riparian Characteristics: The zones support diverse ecosystems, including peat swamp forests and freshwater marshes, essential for maintaining regional biodiversity.



Nakhon Si Thammarat:



Major Waterways: The Tapi River's tributaries and the Pak Phanang River system contribute to the province's riparian zones.

Riparian Characteristics: These areas are rich in mangrove forests and nipa palm stands, crucial for coastal protection and supporting fisheries.



Krabi:



Major Waterways: The Krabi River and its network of streams create extensive riparian zones.

Riparian Characteristics: The zones are dominated by mangrove forests, which play a key role in shoreline stabilization and provide nurseries for marine life.



Phang Nga:

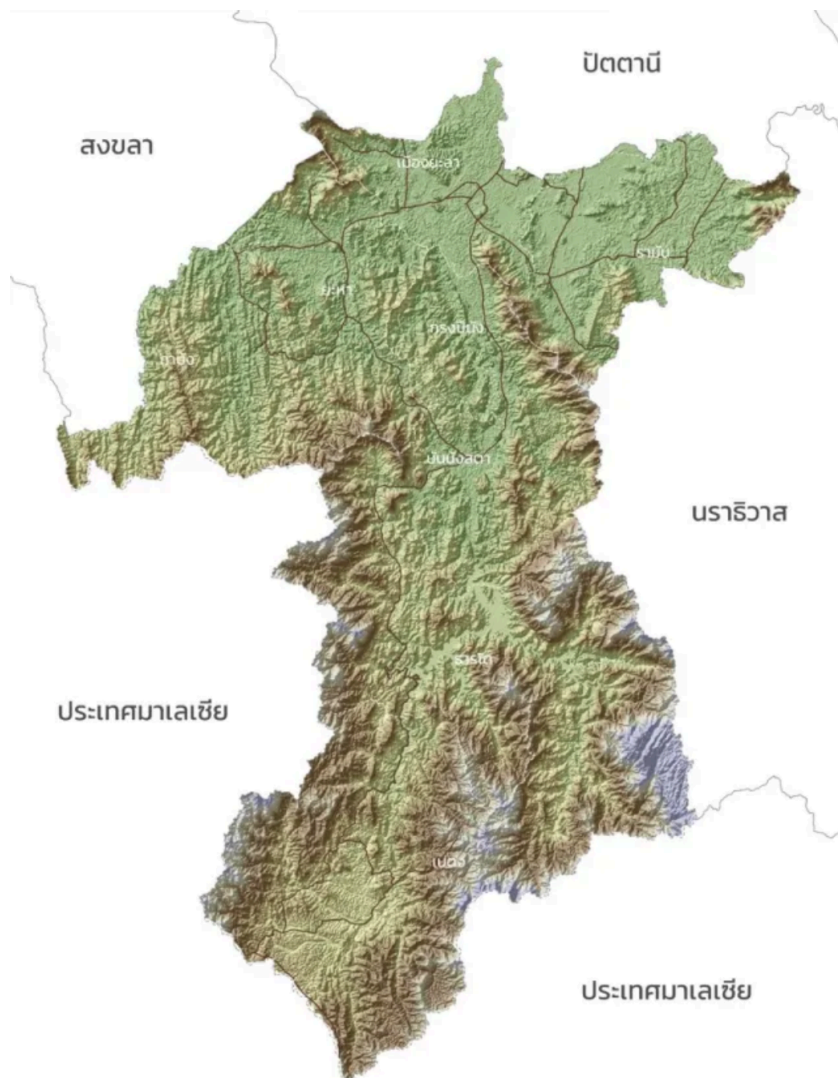


Major Waterways: The Phang Nga River and its tributaries form the province's riparian zones.

Riparian Characteristics: These areas are characterized by dense mangrove forests and limestone karst formations, supporting unique ecosystems and protecting against coastal erosion.



Yala:



Major Waterways:

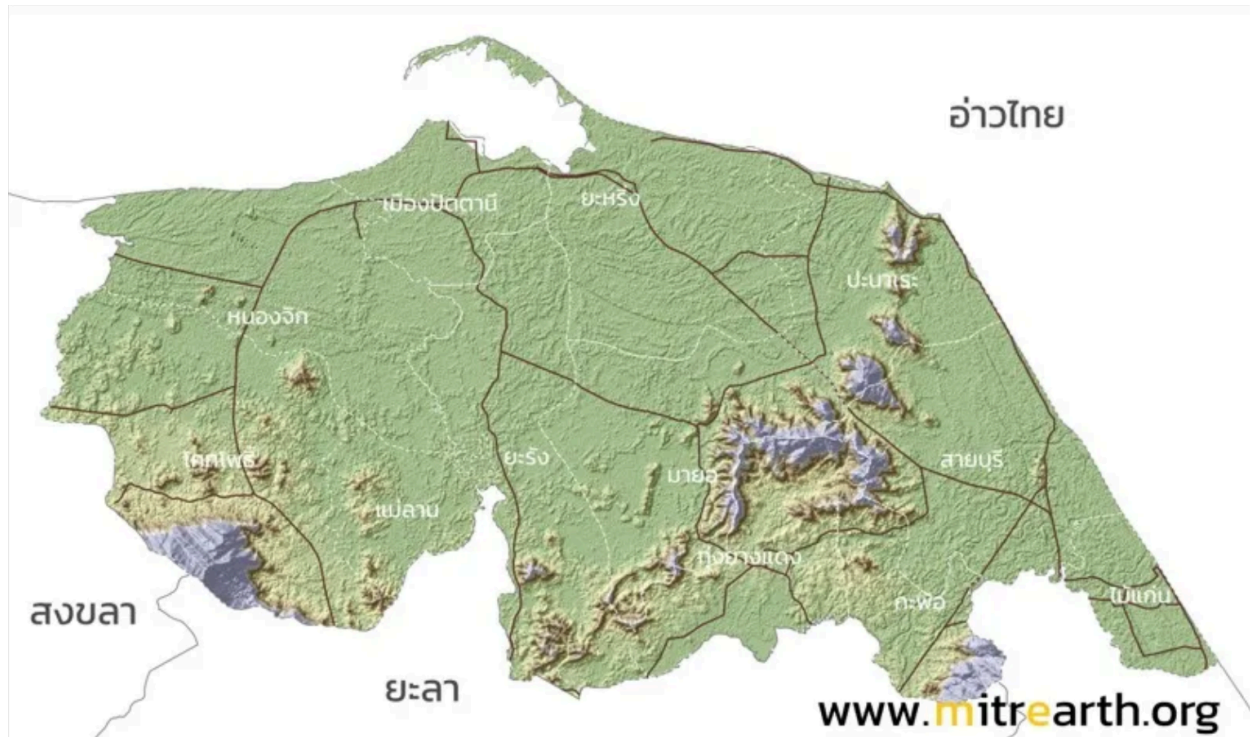
The Pattani River and its tributaries flow through the province, supporting agriculture and community water use.

Riparian Characteristics:

Riparian zones host tropical forests and peat swamps that sustain biodiversity. Rubber plantations along riverbanks integrate with agroforestry systems, helping prevent erosion and maintain soil moisture.



Pattani:



Major Waterways:

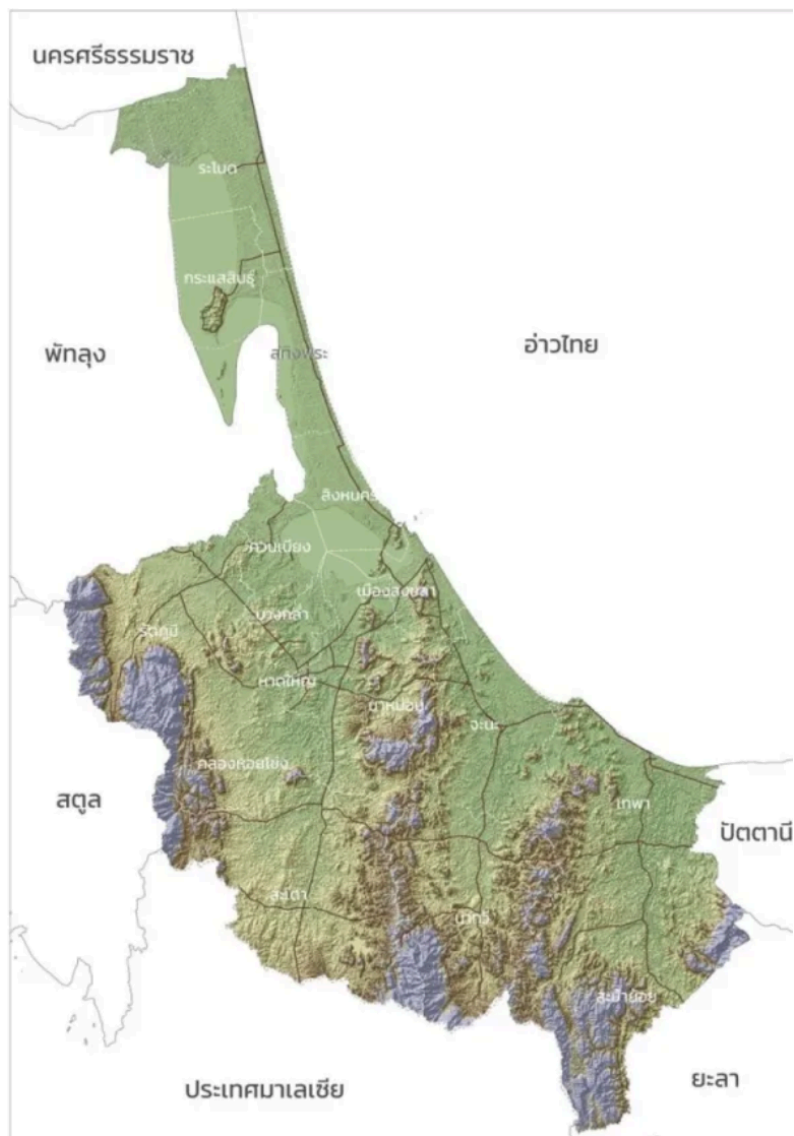
The Pattani River is the main watercourse, flowing through central districts before reaching the Gulf of Thailand.

Riparian Characteristics:

Riparian zones include lowland forests and agricultural areas that support rubber and rice cultivation. These ecosystems play a key role in water retention, soil protection, and maintaining local biodiversity.



Songkhla:



Major Waterways:

Songkhla Lake Basin and the U-Taphao River are key waterways that connect inland agricultural zones to the Gulf of Thailand.

Riparian Characteristics:

Riparian zones include wetlands and lowland forests that support rice and rubber cultivation. These ecosystems play a critical role in flood control, soil fertility, and biodiversity conservation.



Srisaket:



Major Waterways:

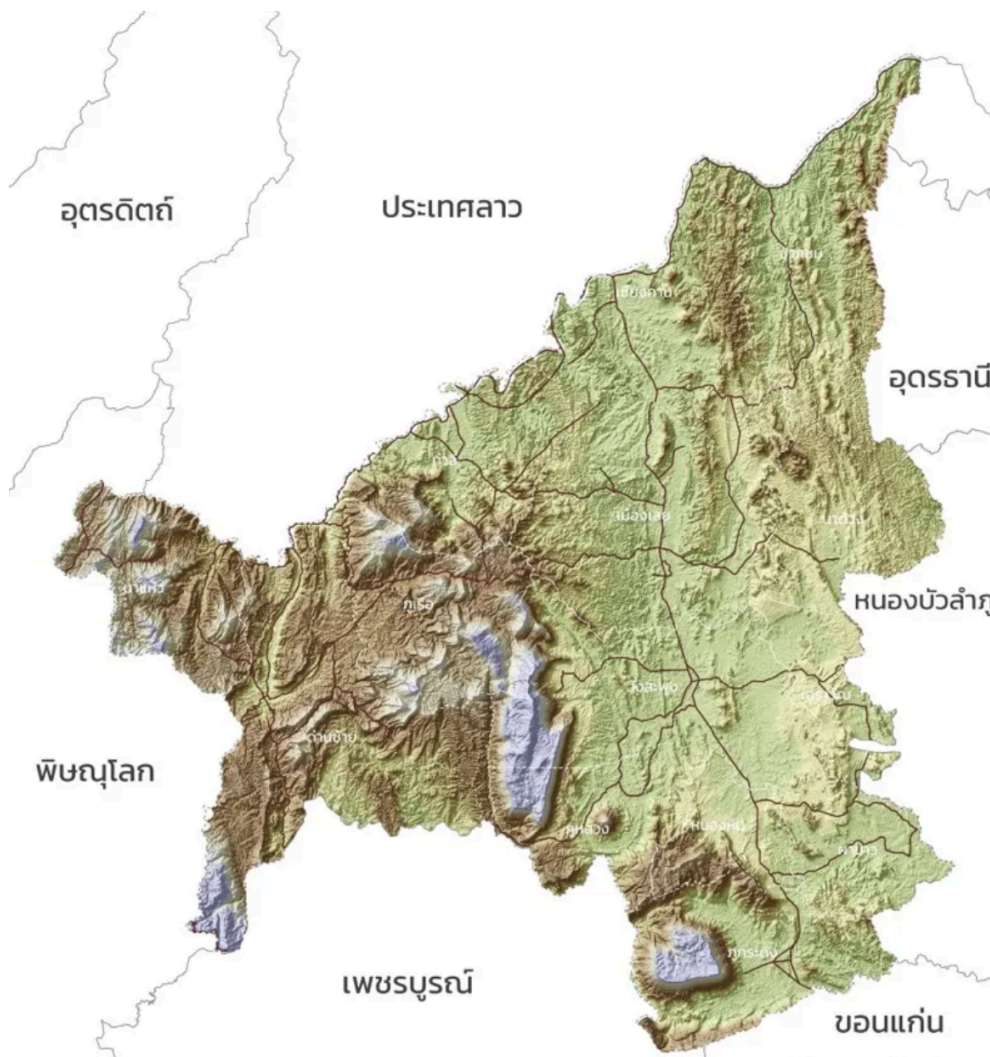
The Mun River and its tributaries flow across the province, providing essential water sources for agriculture and local communities.

Riparian Characteristics:

Riparian zones consist of floodplains and paddy fields that support rubber and rice cultivation. These areas help maintain soil fertility, control erosion, and sustain aquatic biodiversity.



Loei:



Major Waterways:

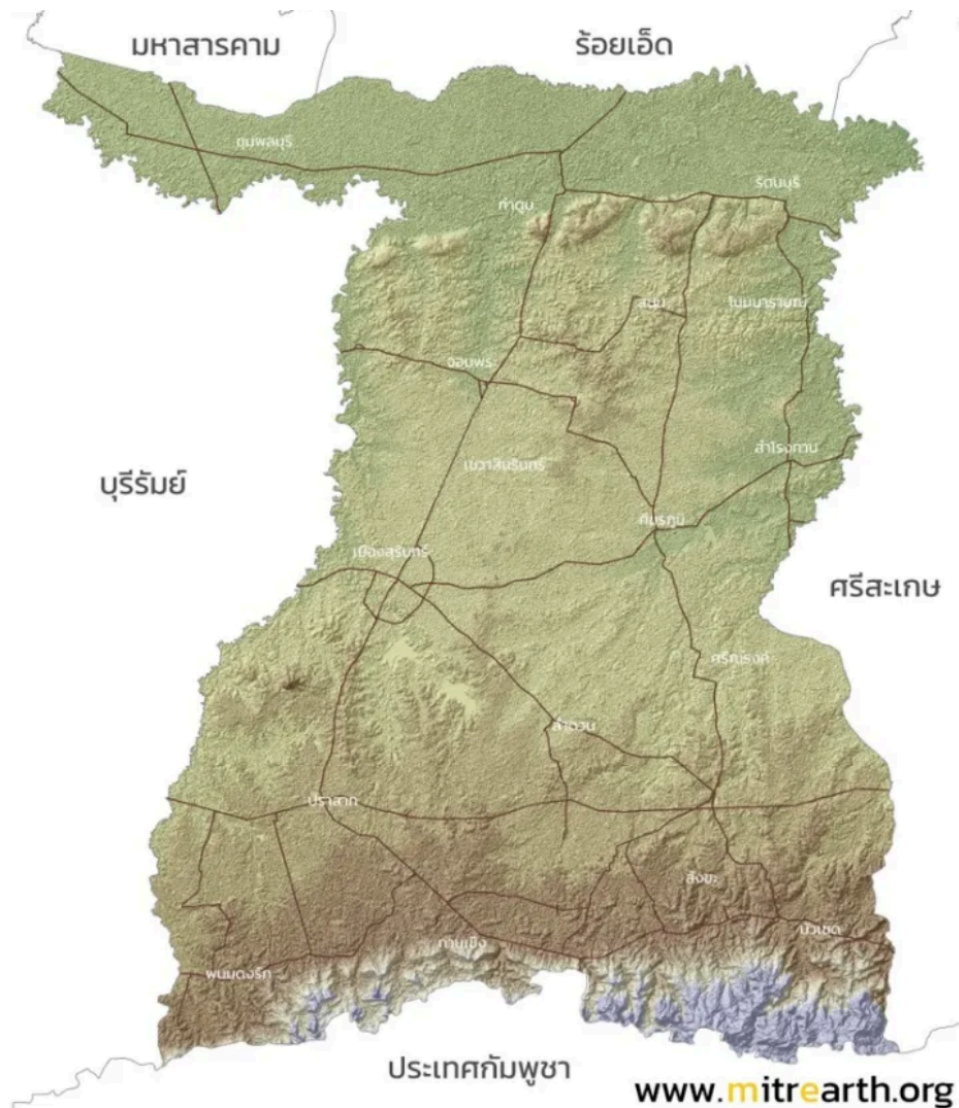
The Loei River and its tributaries flow through mountainous terrain before joining the Mekong River, forming key watershed areas.

Riparian Characteristics:

Riparian zones include upland forests and agricultural valleys that support rubber and crop cultivation. These areas are vital for erosion control, soil conservation, and maintaining local biodiversity.



Surin:



Major Waterways:

The Mun River and its tributaries are the main waterways, providing essential water sources for agriculture and local settlements.

Riparian Characteristics:

Riparian zones feature paddy fields and mixed agricultural landscapes that support rubber and rice cultivation. These areas help enhance soil fertility, prevent erosion, and maintain ecological balance.



Ubon Ratchathani:



Major Waterways:

The Mun and Chi Rivers are the main waterways, converging in Ubon Ratchathani before joining the Mekong River.

Riparian Characteristics:

Riparian zones consist of fertile floodplains supporting rice and rubber cultivation. These ecosystems are vital for water regulation, nutrient cycling, and maintaining biodiversity along the Mekong basin.



Nong Khai:



Major Waterways:

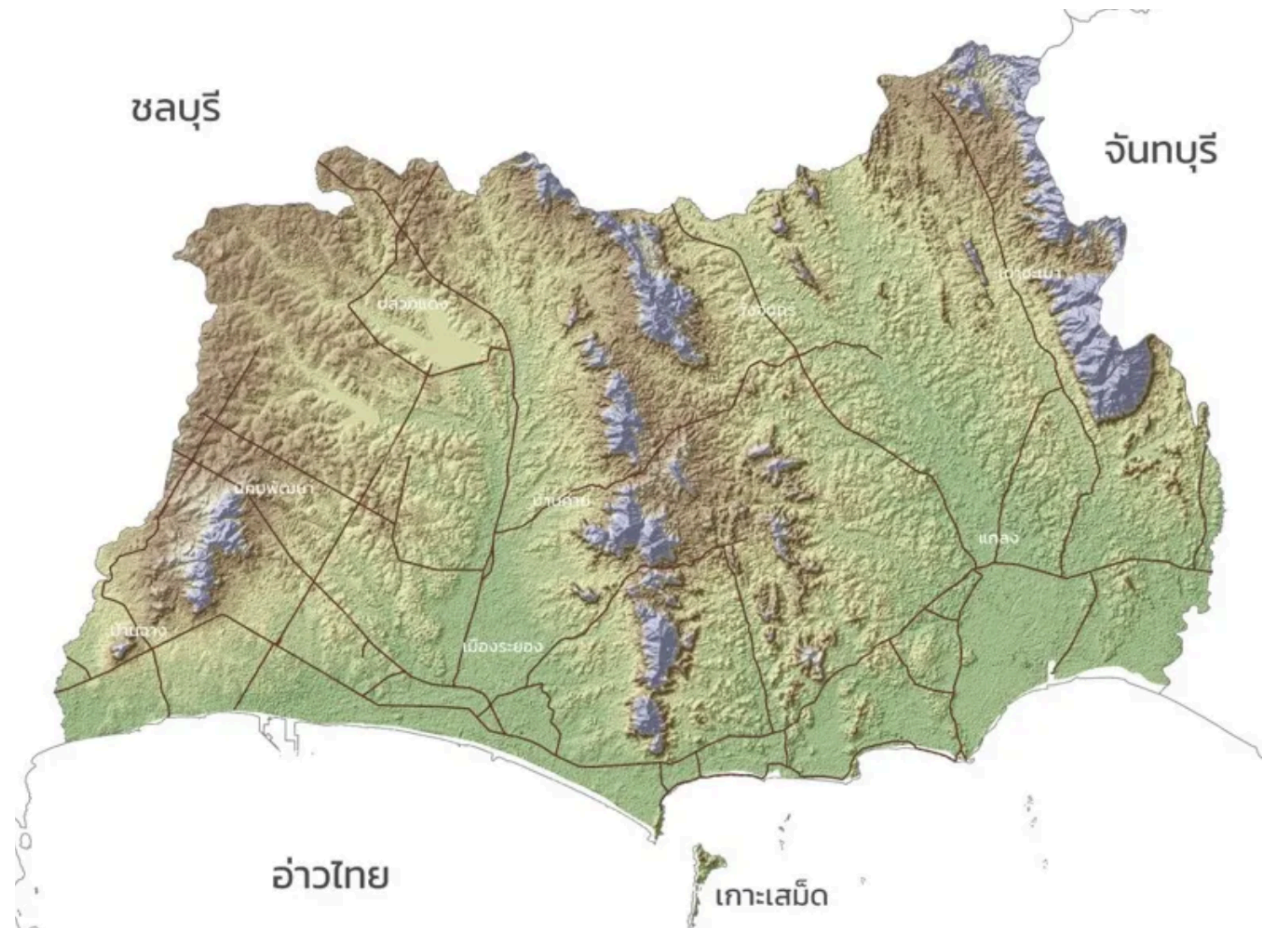
The Mekong River forms the northern boundary of the province, serving as a major waterway for agriculture and fisheries.

Riparian Characteristics:

Riparian zones consist of floodplains and river terraces supporting rice and rubber cultivation. These areas help regulate flooding, enhance soil fertility, and sustain aquatic biodiversity along the Mekong corridor.



Rayong:



Major Waterways:

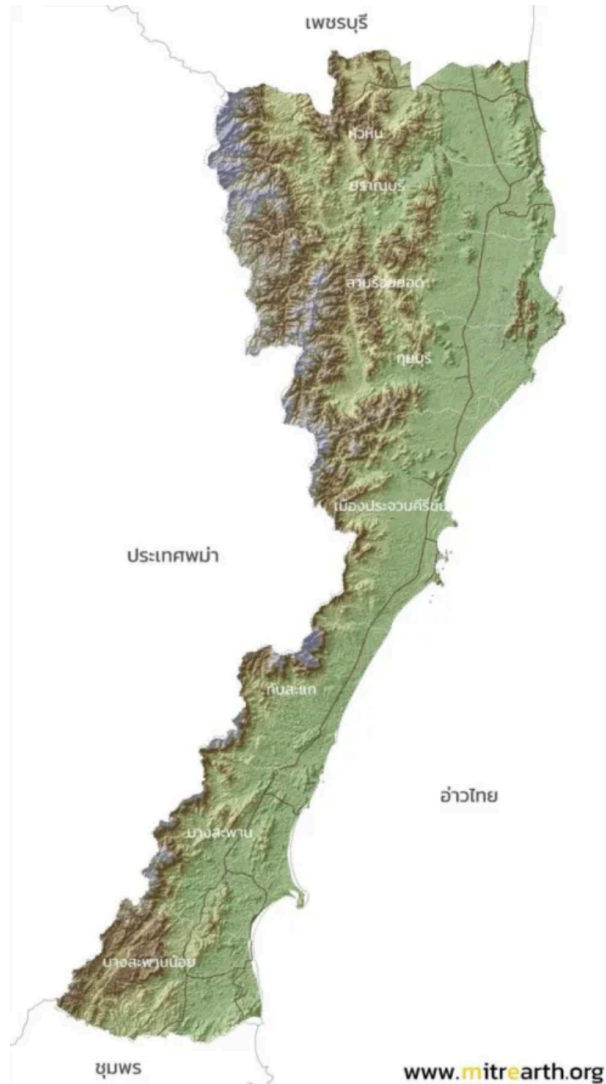
The Rayong River and its tributaries flow through coastal plains and discharge into the Gulf of Thailand.

Riparian Characteristics:

Riparian zones include mangrove forests and lowland agricultural areas that support rubber and fruit cultivation. These ecosystems aid in soil stabilization, flood prevention, and coastal biodiversity conservation.



Prachuap Keerikhan:



Major Waterways:

The Pranburi and Kui Buri Rivers flow through the province, supplying freshwater for agriculture and local communities.

Riparian Characteristics:

Riparian areas include lowland forests, mangroves, and agricultural zones that support mixed farming. These ecosystems help reduce erosion, maintain soil fertility, and protect coastal biodiversity.



Phuket:



Major Waterways:

Phuket has small coastal streams and estuaries that drain into the Andaman Sea, supporting local agriculture and communities.

Riparian Characteristics:

Riparian zones include mangrove forests and lowland wetlands that protect coastlines from erosion. These areas are vital for maintaining water quality, biodiversity, and coastal resilience.



9.2 High Conservation Value Forests (HCVFs)

AGRIAC recognizes the presence and importance of **High Conservation Values (HCVs)** within and surrounding its certified smallholder areas. The organization's commitment to protecting these values ensures compliance with **FSC Principle 9** and supports biodiversity, ecosystem services, and cultural heritage.

HCV Identification and Evaluation

During 2025, AGRIAC conducted a comprehensive HCV assessment across all Management Units (MUs) using a **three-step verification process**:

1. **Pre-screening questionnaires** were distributed to all farmers to identify proximity to water bodies, conservation areas, wildlife habitats, or culturally important sites.
2. **Satellite and GIS layer intersection**—including National Parks, Reserved Forests, Wildlife Sanctuaries, Protected Areas, and EU Deforestation Layer—was analyzed through TRAZTRU GIS to detect possible overlaps.
3. **On-site verification (APP-005 inspections)** confirmed conditions in the field with geo-tagged photos and checklists.

Findings (2025)

- **No HCV 1–6 areas were found within plantation boundaries.**
- **HCV-1 (Biodiversity):** 18 plantations are adjacent to national parks or wildlife corridors. All are outside protected boundaries and are managed under *no-spray* and *no-clearing* rules.
- **HCV-4 (Ecosystem Services):** 10 plantations are near watercourses or riparian zones. Each site maintains a **minimum 20-meter buffer** with signage and photo records verified through internal audits.
- **HCV-5 & HCV-6 (Community & Cultural Values):** No cultural or religious sites were found within or adjacent to operational areas; 100 % of cultural mapping has been completed.

Monitoring and Management

- **Quarterly internal audits** verify HCV buffer maintenance and photographic documentation.
- **Champion Farm Program (EN02)** promotes biodiversity enhancement and native species planting near HCV-adjacent plots.



- **Water quality testing (EN03/3–4)** is conducted quarterly in HCV-4 areas.
- All monitoring data and GPS coordinates are stored in **TRAZTRU**, providing transparent, real-time reporting to cooperative managers and auditors.

Protection Measures

- Commercial activities—including tapping, clearing, and chemical use—are **prohibited within HCV buffers**.
- **Approved ESRA controls** for Glyphosate, Glufosinate, and Hexaconazole strictly limit application in proximity to HCVs.
- Farmers receive **annual refresher training** on HCV awareness, buffer marking, and biodiversity protection.
- Any new land addition to the group must undergo an HCV screening before acceptance into the certification scope.

Summary of HCV Status (2025)

HCV Type	Description	No. of Plots / Sites	Management Action	Verification Tool
HCV-1	Adjacent to protected areas or wildlife habitat	18	Maintain >20 m no-spray buffer; record photos & GPS	APP-005 / TRAZTRU
HCV-4	Riparian zones & watershed protection	10	Quarterly water-quality tests; vegetation cover maintained	EN03 / Internal Audit
HCV-5 –6	Community or cultural significance	0 (found)	Continuous community screening & mapping	SC01 Program

Conclusion

As of 2025, **no High Conservation Value Forests exist within AGRIAC’s certified plantation boundaries**, and all adjacent sensitive areas are adequately protected. The integrated monitoring through TRAZTRU, field inspections, and annual internal audits ensures **zero encroachment, zero chemical drift, and ongoing biodiversity conservation**.

AGRIAC’s HCVF management demonstrates a proactive and transparent approach to environmental stewardship, fully consistent with **FSC Principle 9** and national conservation objectives.



9.3 Erosion-Prone Areas

AGRIAC has identified the management of **erosion-prone and degraded lands** as a key environmental priority under **FSC Principle 6 (Environmental Values and Impacts)**. The organization employs preventive and restorative measures to maintain soil stability, protect water resources, and promote long-term productivity of smallholder plantations.

Identification and Mapping

- Potential erosion zones are detected through a combination of **TRAZTRU GIS slope analysis, satellite imagery, and APP-005 field inspections**.
- During 2025 inspections, approximately **6 % of visited plots** showed moderate slope or surface-runoff risk.
- All at-risk sites have been mapped and are tracked under the **EN03 Soil and Water Conservation Program**.

Management and Restoration Measures

1. **Vegetative Cover:** Native and deep-rooted species (e.g., *Hopea*, *Dipterocarpus*, bamboo, vetiver grass) are planted along contour lines to stabilize soil.
2. **No-Clearing Policy:** Steep or degraded slopes are excluded from tapping and reclassified as **conservation or restoration zones**.
3. **Mulching and Ground-Cover Maintenance:** Retaining leaf litter and applying organic mulch reduce soil exposure and increase moisture retention.
4. **Drainage Control:** Simple check-dams and contour ditches reduce runoff velocity and prevent sediment loss.
5. **Soil Testing and Site-Specific Fertilization:** Conducted through **EN03/1** and **EN03/2** to maintain soil structure and minimize nutrient leaching.
6. **Community Training:** Farmers receive annual instruction on erosion prevention and soil-friendly cultivation practices through cooperative workshops.

Monitoring and Verification

- **Field inspections (APP-005)** record slope conditions, ground cover, and evidence of runoff.
- **GIS and remote-sensing data** are reviewed semi-annually to detect land-cover change.



- **Quarterly internal audits** verify that conservation zones remain intact and that corrective planting has been implemented.
- All monitoring results are stored in **TRAZTRU** and summarized in the *FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)* for annual evaluation.

Results (2025)

- 100 % of moderate-risk plots now maintain permanent vegetative buffers.
- No severe erosion or sedimentation incidents were recorded.
- Soil-fertility indicators improved through organic-matter retention and reduced chemical input (average fertilizer use – 4.7 %, meeting the EN03 target of – 5 %).

Conclusion

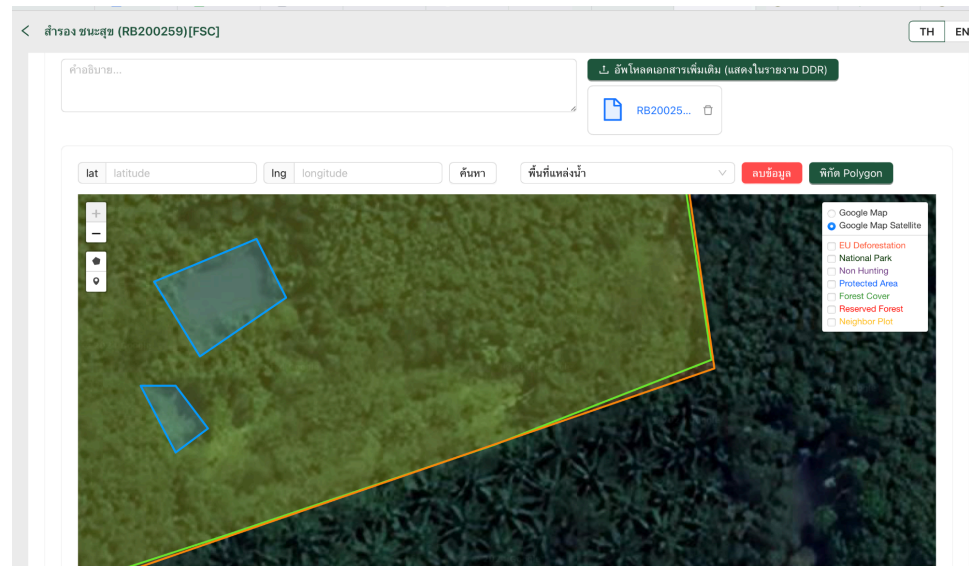
All erosion-prone areas within AGRIAC's management scope are effectively controlled and continuously restored using **native vegetation, contour stabilization, and soil-conservation practices**. These measures protect water quality, sustain long-term productivity, and uphold AGRIAC's commitment to **regenerative and FSC-compliant land management**.

9.4 Wildlife Corridors

Strips of natural forest are preserved to allow the movement of wildlife between habitats, ensuring species migration and genetic diversity.

The possibility of HCVPs now updated in the TRAZTRU system in 7 layers upon the recruiting and approval of the plantation.

1. EU deforestation Layer
2. National Park
3. Non hunting area
4. Protected area
5. Forest cover
6. Reserved forest
7. Neighbor plot overlap



AGRIAC recognizes that maintaining ecological connectivity is essential to sustaining biodiversity across the managed landscape.

Although certified smallholder plots are largely composed of agricultural mosaics, many adjoin forest edges, secondary growth, or riparian zones that function as **wildlife corridors** supporting local fauna movement and ecosystem integrity.

Identification and Landscape Context

- **GIS Analysis:** TRAZTRU maps overlay plantation boundaries with **Reserved Forest, Wildlife Sanctuary, and National Park layers** to identify potential ecological linkages.
- **APP-005 Field Inspections (2025):** Recorded evidence of wildlife presence—such as bird nesting sites, small mammals, reptiles, and pollinators—in approximately **7 % of inspected plots**, primarily in Trang, Phangnga, and Krabi.
- **Community Observations:** Farmers report frequent sightings of non-threatened species including *civets*, *monitor lizards*, *squirrels*, *hornbills*, and *bees*, indicating a functioning ecosystem matrix between plantation and adjacent forest.

Conservation and Management Measures

1. **Riparian and Buffer Zones:** Minimum **20 m no-spray buffers** along streams serve as linear corridors for wildlife movement and nesting.



2. **Native Vegetation Strips:** Farmers are encouraged to retain or plant native shade and fruit-bearing trees (*Ficus*, *Mangifera*, *Hopea*, *bamboo*) to provide food and habitat.
3. **Connectivity Planning:** Adjacent smallholders coordinate through cooperatives to maintain **linked vegetation belts** across plot boundaries.
4. **Chemical Use Restrictions:** All pesticide applications follow the 2023 ESRA mitigation plan (Glyphosate, Glufosinate, Hexaconazole) prohibiting use within wildlife or HCV buffers.
5. **Champion Farm Program (EN02):** Select farms near forest margins act as demonstration sites for biodiversity enhancement and pollinator-friendly management.
6. **Community Awareness:** Annual meetings include wildlife-protection training, reporting procedures for injured or rare species, and coordination with local RAOT and National Park officials.

Monitoring and Evaluation

- **Quarterly Internal Audits** verify the condition of vegetated buffers and record any observed wildlife activity.
- **TRAZTRU GIS Monitoring** overlays vegetation indices (NDVI) to detect deforestation or buffer loss.
- **Biodiversity Surveys** conducted under EN02 capture photo evidence and species sightings at Champion Farms and riparian zones.
- **Stakeholder Engagement:** Collaboration with nearby communities to reduce hunting, trapping, or disturbance in known corridor areas.

Results (2025)

- No signs of habitat clearing or barrier construction within certified plots.
- Vegetation cover maintained or increased in all identified corridor zones.
- Pollinator presence (bees, butterflies) confirmed in ≥ 60 % of inspected plots.
- Wildlife-related conflicts or incidents: **none recorded**.

Conclusion

AGRIAC's management approach actively protects and enhances wildlife corridors by preserving vegetated buffers, coordinating smallholders for habitat connectivity, and applying strict chemical and land-use controls.

These combined actions contribute to regional biodiversity conservation, reinforce the



integrity of adjacent protected areas, and exemplify compliance with **FSC Principle 9** on the maintenance of High Conservation Values and ecological networks.

10. Indigenous Cultural Landscapes

AGRIAC recognizes and respects the rights, culture, and traditional knowledge of Indigenous Peoples, in accordance with **FSC Principle 3** and national Thai law. Although no Indigenous Peoples reside within AGRIAC's certified smallholder plantations, the organization maintains proactive engagement and monitoring to ensure that Indigenous territories, values, and cultural landscapes are not affected by FSC operations.

10.1 Identification and Context

- **Geographical Screening:** All certified areas were reviewed through TRAZTRU GIS overlays and administrative records to identify Indigenous settlements or ancestral territories.
- **Findings:** No Indigenous Peoples or traditional land claims exist within the boundaries of certified plantations.
 - The **Maniq community**, recognized as one of Thailand's Indigenous forest groups, is located near **Trang Province**, approximately 10–15 km from the nearest Management Unit.
 - No overlap or direct resource dependency between Maniq lands and AGRIAC's operations was identified.
- **Cultural Mapping:** Completed in 2025 across 21 MUs, confirming that no sacred, ceremonial, or historically significant Indigenous sites are present within operational areas.

10.2 Stakeholder Engagement

AGRIAC applies a **precautionary and participatory approach** in areas adjacent to Indigenous communities:

1. **Dialogue and Collaboration:** Continuous contact is maintained with the
 - **Sirindhorn Anthropology Centre (SAC),**
 - **Faculty of Sociology and Anthropology, Thammasat University,** and



- **Indigenous Peoples' Education and Environment Foundation (ม.ก.ส)**, to ensure awareness of Indigenous rights, cultural sensitivity, and shared learning opportunities.
- 2. **District Chiefs and Local Authorities** act as liaison points for any consultation requirements regarding land or community interactions.
- 3. **Free, Prior, and Informed Consent (FPIC)**: If new operations or expansion areas are proposed near Indigenous settlements, AGRIAC will conduct a formal FPIC process in cooperation with relevant stakeholders.

10.3 Protection Measures

- **No Conversion or Encroachment**: Indigenous or community lands are excluded from the certification boundary and clearly demarcated in GIS.
- **Cultural Respect Training**: Cooperative officers and field auditors receive annual orientation on cultural heritage and Indigenous engagement procedures.
- **Grievance Mechanism**: The established complaint channels (LINE Official, website, cooperative offices) are accessible to all stakeholders, including Indigenous representatives, should any concern arise.
- **Cultural Sensitivity**: Any discovery of artifacts, traditional shelters, or sacred sites triggers an immediate suspension of activity and notification to local authorities and cultural experts.

10.4 Monitoring and Verification

- Indigenous landscape data are reviewed annually through the **Monitoring and Evaluation System** (see Section 12).
- The **FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)** confirms that no Indigenous territories or rights were affected by plantation operations.
- Continuous communication with the **Maniq community network** is maintained to track any boundary or land-use changes that could influence future risk assessments.

10.5 Conclusion

As of 2025, AGRIAC's certified operations are confirmed to have **no overlap with Indigenous lands or cultural landscapes**.

However, the organization upholds a **commitment to respect, monitor, and protect Indigenous values** through transparent engagement, participatory dialogue, and precautionary planning.



This ongoing vigilance ensures that Indigenous rights and cultural heritage remain fully safeguarded, reflecting AGRIAC's compliance with **FSC Principle 3** and its dedication to ethical, inclusive forest stewardship.

Maniq Overview

Indigenous Cultural Landscapes: Engagement with local indigenous communities will be strengthened to recognize and incorporate traditional knowledge and cultural sites. This includes consulting with community leaders and rights holders to map and protect areas of cultural significance."

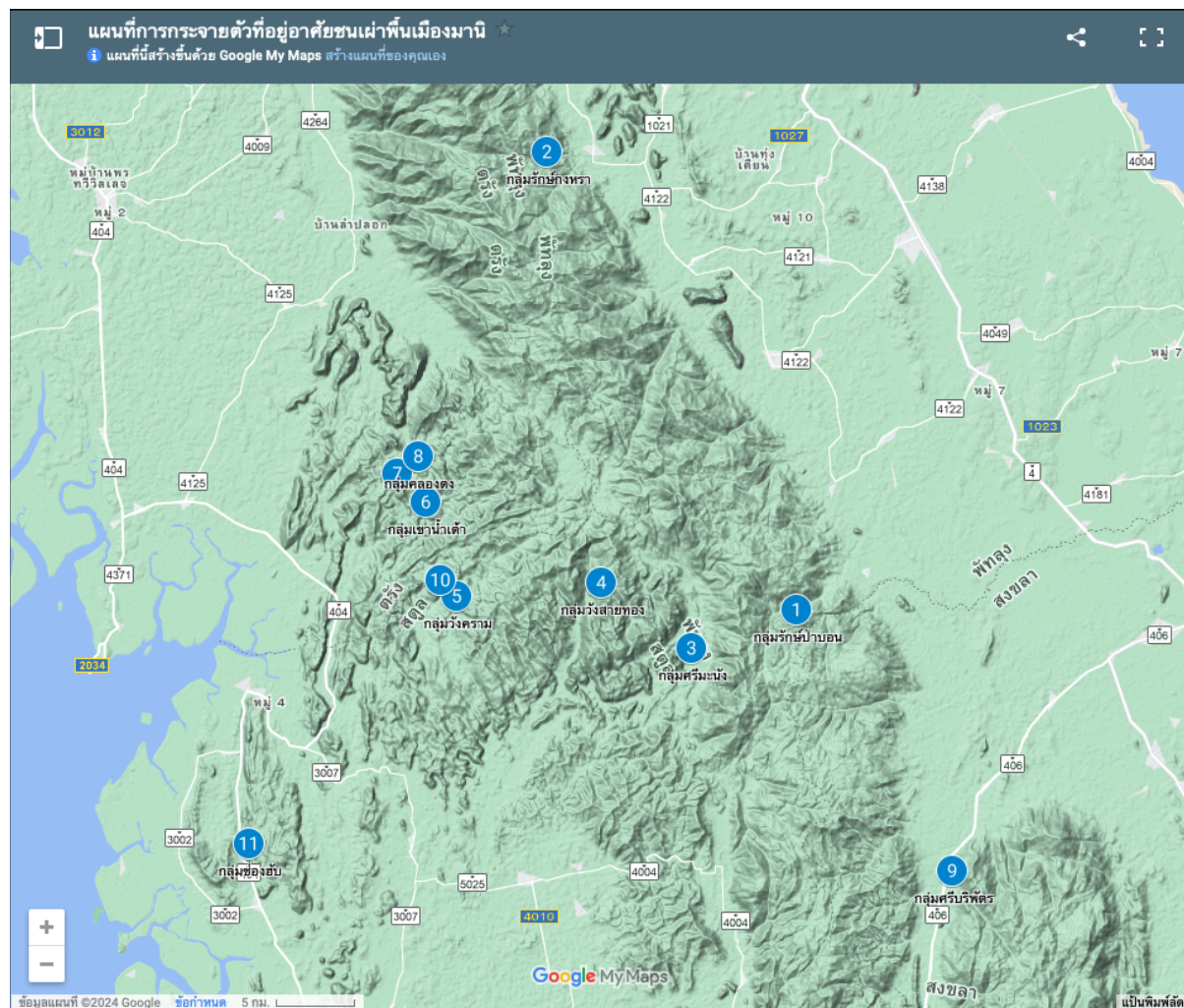
The **Maniq people**, also known as the **Sakai** or **Negrito**, are an indigenous group traditionally living in the forested regions of southern Thailand. The Maniq are part of the **Semang** group, which is one of the oldest surviving groups of hunter-gatherers in Southeast Asia. They have historically lived in small, nomadic groups, depending heavily on the forest for food, shelter, and spiritual practices.

The primary areas where the **Maniq** people are found are located in the southern provinces of **Trang, Phang Nga, Yala, Narathiwat**, and parts of **Satun**, particularly within the **Titiwangsa Mountain Range** and the **Banthat Mountain Range**. These forested areas are critical to their way of life, as they sustain their traditional hunting, gathering, and spiritual practices. The Maniq people have a deep cultural and historical connection to these forest landscapes, which are considered vital for their survival and cultural identity.

10.1 Presence of Maniq People in AGRIAC's Operational Area

While **AGRIAC's operational areas** span across provinces such as **Surat Thani, Trang, Nakhon Si Thammarat, Krabi** and **Phang Nga** our current field reports and operations have not identified the presence of **Maniq communities** within the immediate operational zones. The **Trang** province, located near our operational areas, is known to have historical and occasional sightings of the **Maniq**, especially in the more remote, forested regions, but these areas are not directly impacted by our activities.

The **Maniq people** are primarily found in the more forested and isolated regions of southern Thailand, such as parts of **Trang, Phang Nga**, and **Satun**, which are outside of the areas currently under AGRIAC's management.



10.2 Recognition of the Importance of the Maniq People

Although we do not currently have any **Maniq communities** within our operational areas, AGRIAC fully recognizes and respects the cultural, environmental, and social importance of the **Maniq people**. Their deep connection to the forest ecosystem, their traditional knowledge of sustainable resource management, and their cultural heritage are invaluable, not only to their community but to the broader environmental conservation efforts in Thailand.

AGRIAC is committed to ensuring that any potential future interactions or encroachments on traditional **Maniq lands** are handled with care, cultural sensitivity, and in consultation with indigenous groups. Our operations, which prioritize environmental stewardship, align with the broader goals of conserving Thailand's



forests, and we are always open to engaging with the **Maniq people** or other indigenous communities should the need arise.

10.3 Distribution of the Maniq Indigenous Communities in Trang Province

In **Trang Province**, the **Maniq indigenous people** (also known as **Sakai**) are spread across the forested areas of the **Banthat Mountain Range**, particularly in the headwaters of **Klong Palian** and **Klong Lipang** in **Palian District**. There are **three groups** of Maniq communities, as follows:

1. **Group located around the Klong Tong village forest area:**
 - **Details:** This group is settled near the headwaters of **Klong Tong**, or what is commonly referred to as **Klong Badlut**, which is an important water source in the area.
2. **Group located around the Chao Pa village forest area:**
 - **Details:** This group is settled near the headwaters known as **Tha Khao** or **Khao Hua Sum**, which are significant water sources commonly referred to by local villagers.
3. **Group located around the Khao Na Tao village forest area:**
 - **Details:** This group is settled near the headwaters of **Klong Lipang**, an area known for its watercourses and waterfalls that flow through the forest landscape

10.4 Importance of the Area

These regions are home to the **Maniq indigenous people**, who live within these natural forest ecosystems and rely heavily on the surrounding resources for their subsistence, including water sources and forest products. The areas surrounding the headwaters of these rivers are crucial for the livelihoods and cultural practices of the **Maniq people**, including their traditional hunting, gathering, and sustainable land-use practices.

The distribution of these communities in the headwater areas is important to consider when managing natural resources and ensuring the preservation of their way of life. For any operations, such as those conducted by **AGRIAC**, it is essential to avoid disruptions to the land and water sources that are integral to the **Maniq people's** survival and cultural heritage. Effective management practices should take into account the need to protect these indigenous landscapes and the communities that depend on them



10.5 Risk of operation disturbant

Based on the two identified groups of the Maniq people — those who have established permanent settlements and those who move according to food sources — we can assess why the Maniq are considered a low risk and not present in AGRIAC's operational areas:

1. Maniq Groups with Permanent Settlements

- **Characteristics:** The Maniq people who have established permanent settlements reside in Trang (3 groups), Satun (1 group), and Songkhla (2 groups). These groups have built stable homes with hardwood structures, and most members have acquired national ID cards.
- **Reason for Low Risk:**
 - These communities are now settled in specific, permanent locations and are no longer nomadic. As a result, they are not likely to migrate into or out of the AGRIAC operational zones.
 - AGRIAC's operations in Surat Thani, Krabi and Phang Nga do not overlap with these permanent settlement areas, which are mainly concentrated in Trang and Satun.
 - The low mobility of these groups means there is little chance of conflict or disruption from the operational activities of AGRIAC in these areas.

2. Maniq Groups that Move According to Food Sources

- **Characteristics:** This group of Maniq people has not established permanent settlements. Instead, they move periodically, typically 3-4 times per year, following areas with abundant food sources. They live in temporary shelters made from leaves and other natural materials and have a very mobile lifestyle. These groups are often in flux, with some even splitting off into smaller sub-groups.
- **Current Distribution:** There are 5 such groups currently in Phatthalung (2 groups) and Satun (3 groups), and they are known to migrate between Trang, Satun, and Phatthalung, specifically in areas around the Banthat Mountain Range and the Bansat Mountain Range.
- **Reason for Low Risk:**
 - **Mobile Lifestyle:** Since these groups are not settled in one location, there is little chance of direct interaction with AGRIAC's operations, which are concentrated in more stable, defined areas that are not located along their migration routes.



- **Geographic Distance:** AGRIAC's operations, mainly in Surat Thani, Krabi, Phang Nga do not coincide with the primary migration zones of these mobile groups, which are focused in areas between Trang, Satun, and Phatthalung, especially near the Bansat mountain range and other remote forested regions.
- **Temporary Settlements:** Their temporary shelters in forested areas are not permanent and do not overlap with the areas of permanent settlements or critical agricultural zones.

3. Absence of Maniq People in AGRIAC's Operation Areas

- **Lack of Interaction:** Given the geographic separation between the operational areas of AGRIAC and the areas where the Maniq people, especially the mobile groups, reside, there is no evidence of any direct presence or interaction with AGRIAC's operational zones.
- **Low Risk:** Both groups of Maniq people — those in permanent settlements and those who remain mobile — are not situated within AGRIAC's primary areas of activity. The operational zones, which span provinces like Surat Thani, Krabi, Phang Nga are geographically distant from the known settlements and migration corridors of the Maniq.
- **Cultural and Environmental Considerations:** AGRIAC respects the cultural significance of these indigenous groups and ensures that no activities would disrupt their traditional lands, particularly in regions where Maniq people are known to have historical or spiritual connections to the land.

10.6 Conclusion

The **Maniq people** are considered **low risk** for AGRIAC's operations due to the **geographical separation** between their settlements and migration routes and AGRIAC's operational areas. The **permanent settlements** of the Maniq are located in areas that do not overlap with AGRIAC's forests, and the **mobile groups** are primarily migrating between different provinces, away from our operational zones. This ensures that AGRIAC's activities will not interfere with the **Maniq people** or their traditional lands. Furthermore, AGRIAC remains committed to respecting indigenous rights and ensuring minimal impact on indigenous landscapes, even in areas where the risk of direct interaction is low.



Given the **low risk** of direct interaction with the Maniq, no immediate action is necessary. However, Agriac will continue to monitor the surrounding regions for any signs of cultural significance or presence of indigenous groups. Any changes in the landscape or land use will be carefully assessed to avoid any disruption to the cultural integrity of these areas

Should the Maniq or other indigenous groups be identified in the future, Agriac will engage in dialogue to ensure respectful collaboration and to address any concerns regarding forest management practices

In areas where indigenous communities have a presence or historical connection, Agriac will implement best practices for preserving traditional knowledge and livelihoods. This may include respecting traditional land-use practices such as agroforestry, sustainable harvesting, and maintaining landscape features that are important for the community's identity and well-being

11. Stakeholder Engagement

As a project manager reviewing the stakeholder engagement records, the following summary highlights key interactions and partnerships AGRIAC has maintained throughout the year to foster collaboration, compliance, and sustainable practices:

1. Cooperative Engagements (Co-Ops)



- **Multiple Training Sessions:** AGRIAC organized training workshops with various cooperatives to ensure their members understand the importance of sustainable rubber plantation management. Notable sessions included training at Ban Ta Khun on forest sustainability and engagement with Klong Pang Co-Op for FSC management.
- **Whole Foods Visit:** A significant visit to a cooperative was documented in September, where Whole Foods representatives were engaged to strengthen relationships and promote best practices in sustainable farming.

2. Government Sector Consultations



- **EUDR Compliance Workshops:** AGRIAC engaged with government entities to discuss the European Union Deforestation Regulation (EUDR) and how the company plans to meet its stringent requirements, ensuring sustainable practices and traceability.
 - **Collaborations on Carbon Credits:** Dialogues were initiated with the Rubber Authority of Thailand and other regional government bodies to explore carbon credit opportunities, showcasing AGRIAC's commitment to reducing carbon footprints.
 - Partnered with **Rubber Authority of Thailand (RAOT)** under the Agriac initiative. Included certification outcomes and professional standards training in monitoring frameworks.
 -
3. **Local Experts and FSC Workshops**
- **FSC Standards Calibration:** Several workshops were conducted with local experts and representatives from FSC Thailand to align operations with new FSC standards, ensuring compliance and promoting ecosystem services.
 - **Feedback and Recommendations:** Engagements with local experts allowed AGRIAC to gather feedback and refine its management plan to better align with FSC and international sustainability criteria.
4. **Customer and Industry Stakeholders**



- **EUDR Awareness:** Meetings with key customers such as Top Glove and other significant rubber industry players focused on aligning supply chains with EUDR requirements and discussing potential risks and mitigation strategies.
- **Product and Market Consultations:** Regular touchpoints with customers emphasized product specifications, market trends, and sustainable sourcing, ensuring transparency and maintaining trust in AGRIAC's supply chain.

5. Educational Institutions and NGOs

- **Workshops and Knowledge Sharing:** AGRIAC collaborated with institutions like Prince of Songkla University to deliver workshops aimed at improving the qualifications of rubber farmers and promoting alternative income sources like Trang Pepper cultivation.
- **NGO Partnerships:** Collaborations with organizations such as GIZ provided insights into using geographic information system (GIS) tools for better environmental monitoring.

6. International and Certification Auditors

- **Engagement with FSC Asia-Pacific:** Visits and workshops facilitated discussions on new standards and audits, ensuring that AGRIAC's practices align with global sustainability benchmarks.
- **Soil Association Certification:** Consultations with international auditors reinforced AGRIAC's dedication to maintaining high standards of forest management and sustainable development.

Key Insights:

- **Strong Focus on Compliance:** AGRIAC's engagement with FSC, EUDR, and other regulatory bodies highlights its proactive approach to maintaining compliance.
- **Comprehensive Community Involvement:** Regular training and feedback sessions with local cooperatives and stakeholders demonstrate AGRIAC's commitment to involving community members in sustainable practices.
- **Strategic Partnerships:** Collaborations with NGOs, experts, and international bodies ensure that AGRIAC is at the forefront of sustainable forestry management and market requirements.

This stakeholder engagement demonstrates AGRIAC's strategic commitment to sustainability, compliance, and community engagement, forming a strong foundation for its ongoing operations and management plan for 2025.



Stakeholder	time
ผู้เชี่ยวชาญ / Local expert	8
โรงงานยางพารา/ NR Factory	6
ลูกค้า/customer	27
สถานศึกษา / Education sector	2
สหกรณ์ / Co-Op	10
หน่วยงานตรวจรับรอง / Auditor	6
หน่วยงานราชการ/Government sector	6
หน่วยงานอื่นๆ/Other	5
Grand Total	70

Full report : <https://www.jotform.com/tables/201961156202446>

12. Monitoring and Evaluation

Ensure comprehensive monitoring to assess the impacts of forest management activities on environmental, social, and economic parameters. This monitoring will help maintain compliance with FSC standards and support continuous improvement in forest stewardship.

Monitoring Tools and Methods:

- TRAZTRU Applications:**
 - APP-001 / APP-002:** Utilized to identify farmers, plantations, and detailed plantation characteristics.
 - APP-005:** Applied for plantation inspections to verify compliance with FSC standards and document observations.
- Farmer and Cooperative Meetings:**
 - Regularly scheduled meetings to collect qualitative data, address challenges, and share feedback from farmers and cooperative members.
 - Meetings serve as a platform to communicate expectations and assess ground-level impacts.
- LINE@ Official Platform (Ongoing Development):**
 - A digital tool for real-time communication with stakeholders, ensuring rapid updates, efficient dissemination of information, and feedback collection.
- Stakeholder Engagement Activities:**



- Includes direct collaboration with farmers, local communities, and relevant authorities.
- Focus on aligning practices with FSC standards and improving the socio-economic benefits for stakeholders.

Data snap shot : [Refer FSC internal Audit & Risk Assessment Report – AGRIAC \(2025\)](#)

Metric	Result	Note
Total members	8,957	21 MUs across 11 provinces
Total certified area	16,019.82 ha (100,123.875 rai)	per Management Plan 2024–2025
Inspections (APP-005)	3,952 plots	44.1% coverage
PPE compliance	100% verified	no missing PPE recorded
Accident rate	0.8% minor	no lost-time incidents
Chemical use verified	Glyphosate, Glufosinate, Hexaconazole only	All approved & ESRA assessed
HCV-1 adjacency	18 plots	Biodiversity monitoring ongoing
HCV-4 (water sources)	10 plots	Buffered ≥20 m
Soil tests completed	*Pending to 2026	Target: 50% in 2026
Fertilizer reduction	4.7%	Target –5% in 2025
Cultural mapping	100% mapped	No overlap with farm boundaries

AGRIAC maintains a comprehensive Monitoring and Evaluation (M&E) system to track environmental, social, and economic performance in alignment with FSC-STD-RAP-THA-01-2024 and FSC-STD-THA-01-2024.

All M&E activities are anchored in the results of the *FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)* (issued 20 October 2025).

12.1 Monitoring Framework



Tool / Activity	Function	Frequency
TRAZTRU Applications (APP-001 – APP-005)	Digital identification of farmers and plantations; inspection data entry and compliance verification.	Continuous
Farmer & Cooperative Meetings	Qualitative data collection, feedback, and participatory evaluation of field practices.	Quarterly
LINE Official Platform	Rapid two-way communication and alert system for field updates and stakeholder feedback.	Continuous
Stakeholder Engagement Activities	Cooperation with local authorities, NGOs, and communities on environmental and social initiatives.	Ongoing
Quarterly Internal Audits	Verification of compliance, corrective actions, and CAP closure.	4 times per year
Annual Integrated Audit	Consolidated assessment before FSC external surveillance.	Annually

All data collected through these mechanisms feed into TRAZTRU dashboards, which generate analytical summaries for management decisions.

12.2 Environmental Monitoring

Objective:

To assess the effectiveness of environmental management measures, ensure responsible chemical use, maintain biodiversity, and monitor soil and water health.

Reference:

Environmental performance metrics and residual-risk ratings are drawn from the *FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)* (pp. 2–7).

Key Indicators and Results (2025):

Metric	Result	Interpretation
Total members	8 ,957 (21 MUs / 11 provinces)	Baseline population
Total certified area	16 ,019.82 ha (100 ,123.875 rai)	Certified production zone
Inspection coverage	3 ,952 plots (44.1 %)	Representative sampling



PPE compliance	100 %	Meets FSC P2 requirements
Accident rate	0.8 % minor (no lost time)	Effective H&S control
Chemical use	Glyphosate, Glufosinate, Hexaconazole only	All ESRA-assessed and approved
HCV-1 adjacency	18 plots	Biodiversity monitoring active
HCV-4 (water sources)	10 plots (buffer ≥ 20 m)	Effective ecosystem protection
Fertilizer reduction	4.7 % (-5 % target 2025)	On track via EN03 programs
Soil tests	32 % completed (target 50 % in 2026)	Phased implementation
Cultural mapping	100 % sites mapped	No overlap with operations

Land-Use and Vegetation Observations:

- **Structures present:** 11.96 % of inspected plots (houses 65 %, animal pens 18 %, sheds 6 %).
- **Other crops:** 20.78 % intercropped (palm, fruit, bamboo, etc.) supporting ecosystem balance.
- **Joint planting:** 18.54 % of plots with mixed species (teak, coconut, durian, bamboo, etc.) enhancing biodiversity.
- **Rubber tree condition:** Average rating 4 / 5 (43 % plots); only 4.8 % below acceptable standard—follow-up scheduled.

HCV Verification:

All plantations underwent the 3-step HCV evaluation (pre-screening → satellite analysis → onsite APP-005 checklist).

No HCV 1–6 overlaps were detected; 10 plots classified as HCV-4 are buffered and monitored quarterly.

ESRA Integration:

Three active agrochemicals — Glyphosate, Glufosinate, and Hexaconazole — were evaluated under AGRIAC’s 2023 ESRA framework.

Mitigation measures (PPE use, 20 m buffers, drift control, no application in rain, triple rinse) are verified in the 2025 internal audit and rated *Low risk*.

12.3 Social Monitoring



Objective:

To evaluate worker welfare, community engagement, and protection of cultural values.

Aspect	Indicator	2025 Result	Source
Employment of local labor	“จ้างคนทำสวนยางหรือไม่” responses	> 70 % plots hire local labor	APP-005
Accident records	Accident field entries	0.8 % minor only – no severe cases	APP-005
Community meetings	Annual records per coop	≥ 1 meeting per MU + feedback minutes	Internal audit
Cultural site proximity	HCV 6 screening	None identified within or adjacent areas	HCV report
Grievance mechanism	LINE & website logs	Active – average response < 7 days	SC01/3 Budget

Conclusion:

No plantations lie near religious or cultural heritage zones.

Stakeholder engagement and cooperative meetings continue to ensure social license and community inclusion.

12.4 Economic Monitoring

To evaluate the economic performance and financial sustainability of FSC-certified smallholder operations, ensuring that market participation under FSC certification delivers measurable income improvement and stability to members.

Reference:

Verified data from the *FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)* and cooperative purchasing records (Jan–Sep 2025).

2025 Rubber Procurement Performance (by Month)

Month (2025)	Gross Weight (kg)	Net Weight (kg)	Rubber Value (THB)	Expense (THB)
Jan	2,746,790.00	1,282,761.68	85,047,595.17	83,893,963.20
Feb	1,808,225.00	940,362.87	63,511,345.80	63,070,055.67



Mar	1,663,903.00	1,053,281.66	71,641,686.21	71,376,696.98
Apr	886,133.00	612,175.28	38,075,317.83	37,917,041.26
May	2,443,773.00	1,451,852.99	84,573,704.51	84,146,585.05
Jun	640,757.00	392,377.24	21,301,742.19	20,990,373.00
Jul	1,493,085.00	955,716.52	50,857,359.95	50,523,140.35
Aug	1,170,526.00	721,390.25	39,137,631.66	38,653,927.30
Sep	330,820.00	122,235.96	7,427,071.91	6,952,503.50
Total (Jan–Sep 2025)	13,184,012.00	7,532,154.45	461,573,455.23	457,524,286.31

Note: Data sourced from cooperative procurement records audited by AGRIAC Compliance Unit, Oct 2025.

Average Selling Price Comparison (2025)

Source	Average Price (THB/kg)	Difference (THB)	% Above Market
AGRIAC (FSC Supply Chain)	61.28	+7.13	+13.17 %
General Market Average	54.15	—	—

The audit confirms that AGRIAC's certified members received, on average, a **13.17% higher price per kilogram** than the national market rate in 2025.

This premium reflects the value of FSC certification, traceability assurance under TRAZTRU, and transparent cooperative pricing practices.

Economic Performance Analysis

- **Total net rubber purchased (Jan–Sep 2025): 7,532,154 kg**
- **Total gross value: THB 461.57 million**
- **Total expense: THB 457.52 million**



- **Operational margin:** $\approx 0.9\%$ after deductions (logistics, processing, and audit costs).
- **Average member benefit:** +13.17% income premium compared with the national market.
- **Supporting programs:** Secondary income through EcoHarvest Honey and Trang Pepper initiatives (SC02), advancing community economic resilience.
- **Traceability & compliance:** 100% of rubber traded through TRAZTRU, ensuring full conformity with FSC and **EUDR** standards (EC03).

Conclusion

The 2025 economic monitoring confirms the strong financial performance of AGRIAC's FSC-certified network:

- Certified members consistently achieve higher-than-market prices.
- Cooperative purchasing remains transparent and efficient.
- Group certification directly enhances **economic sustainability**, **fair income distribution**, and **long-term market access** under FSC Principles 5 and 10.

12.5 Monitoring Tools and Methodologies

Tool	Application
GIS & Remote Sensing	Detects land-use change and verifies HCV integrity.
Field Assessments	APP-005 onsite checks with geo-tagged photos.
Biodiversity Surveys	Conducted through Champion Farms and HCV plots (EN02).
Community Surveys	Annual feedback on economic and social impacts.

12.6 Reporting and Continuous Improvement

- **Documentation:** TRAZTRU dashboards compile real-time environmental and social data.
- **Annual Review:** The findings from the *FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)* serve as the official annual review of M&E performance.
- **Stakeholder Collaboration:** Results shared with cooperatives, local governments, and RAOT for joint planning of 2026 improvements.
- **Key Next Steps (2026):** Expand soil testing to $\geq 50\%$ plots, fully digitize HCV reporting in TRAZTRU, and launch Champion Farm Biodiversity Dashboard.



12.7 Summary of Linkage

Monitoring Element	Verified by	Reference
Environmental values, soil & water conservation	Internal audit 2025 (EN03, EN04 projects)	FSC Internal Audit & Risk Assessment Report – AGRIAC (2025)
HCV protection & biodiversity	Champion Farm records and HCV maps	Same report + EN02 budget
Worker safety & PPE	Audit checklists and training logs	Internal audit 2025 P2 section
Social and economic impacts	Co-op records and community surveys	Internal audit 2025 SC01–SC03
ESRA implementation (Glyphosate, Glufosinate, Hexaconazole)	Field verification of controls	Internal audit 2025 ESRA summary

13. Maps and GIS Tools by TRAZTRU

All management areas are mapped using GIS technology. These maps detail:

- Property boundaries
- Topography
- Forest cover and land use
- Conservation zones, riparian buffers, and HCVFs
- Wildlife corridors

These maps are updated annually based on satellite imagery and field data to ensure accuracy.

Integrated Development

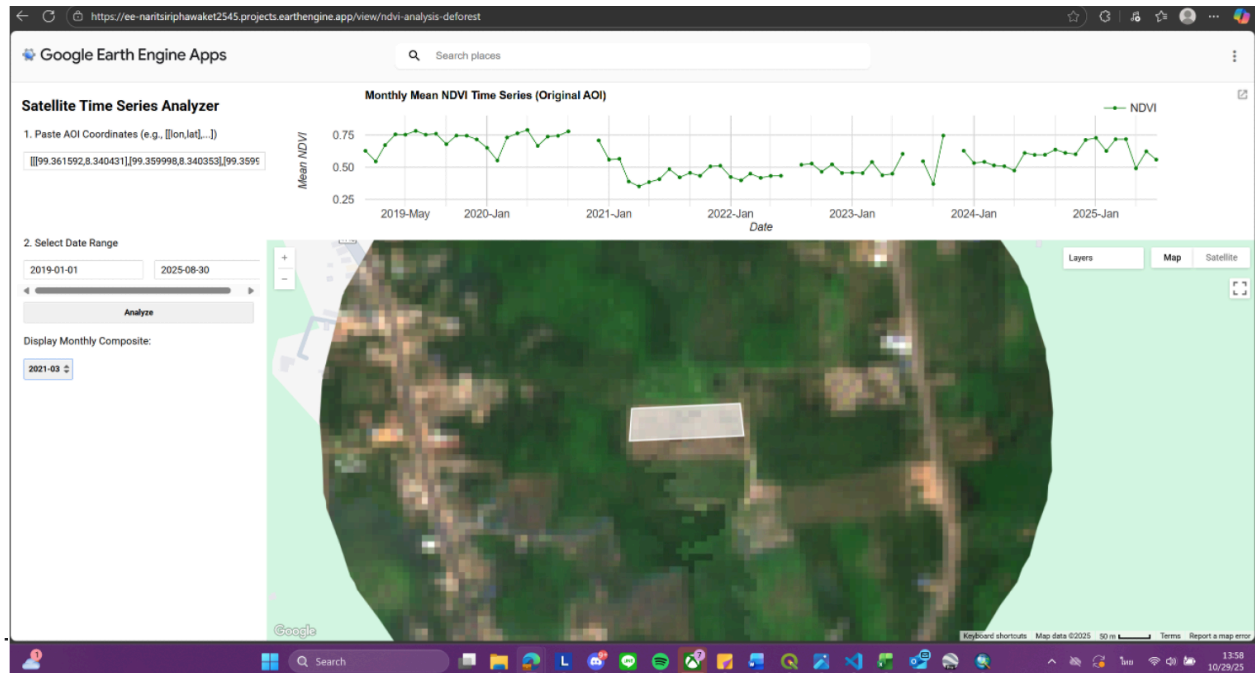
Update on the Development of the Truztru System

1. Open Plot Verification System.

The system now integrates Sentinel-2 satellite imagery to verify whether the identified plots are truly open areas and to determine when clearing activities occurred.



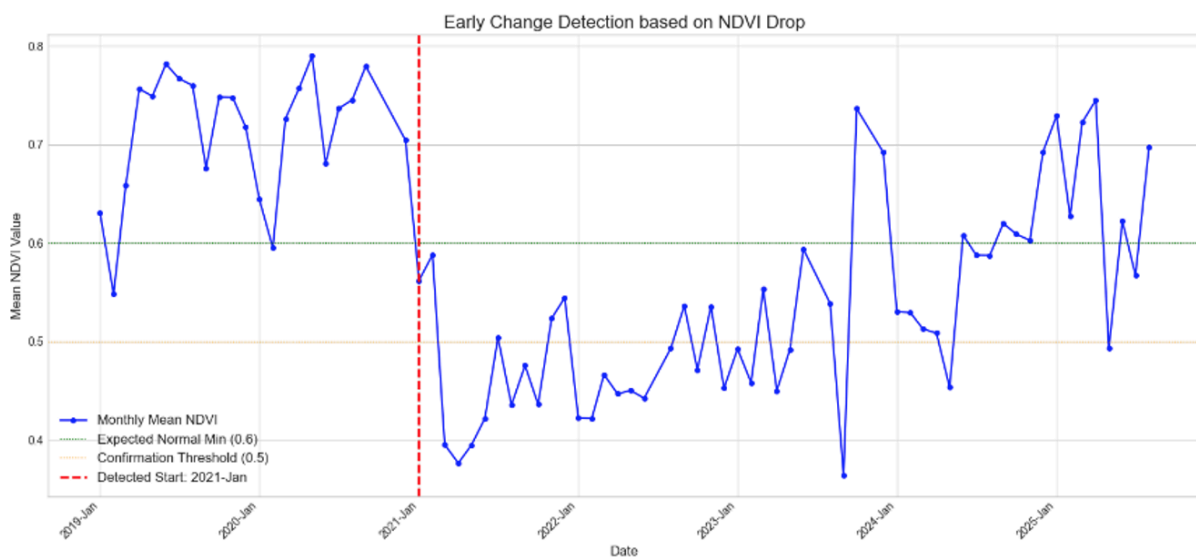
This feature utilizes NDVI (Normalized Difference Vegetation Index) analysis to assess vegetation changes, allowing for more accurate monitoring and verification within the system.



(GEE).

Users can verify open plots by simply entering polygon coordinates and selecting the date range they wish to check. The system will then automatically generate NDVI graphs and display corresponding satellite imagery, allowing users to visually inspect vegetation conditions and confirm whether a plot is cleared.

Currently, the team is working on enhancing the system to become more automated, after which it will be integrated into the main Truztru platform for broader use.





2. Reducing Manual Form Entry through GIS-Based Verification

ข้อมูลแปลงที่ดิน

ที่ตั้งสวนยาง

ลักษณะพื้นที่

ข้อมูลยาง

ลักษณะพื้นที่

☒ ราบ

☐ ลุ่ม

☐ ลาดเอียงเกิน 35 องศา

สวนยางติดพื้นที่

☐ แม่น้ำ/คลอง/ลำธาร

☐ ป่าสงวน/ป่าอนุรักษ์

☐ พื้นที่ห้ามล่าสัตว์

สวนยางติดสถานที่

☐ โรงเรียน

☐ โรงพยาบาล

☐ วัด

พื้นที่มี

☒ ไม่มี

☐ มี

มีชนเผ่าอยู่ในพื้นที่หรือไม่

☒ ไม่มี

☐ มี

ชนิดสัตว์ที่อยู่อาศัย

☒ ไม่มี

☐ มี

รายละเอียดการใช้ข้อมูลดาวเทียมในการตรวจสอบลักษณะพื้นที่

ข้อมูลแปลงที่ดิน

ที่ตั้งสวนยาง

ลักษณะพื้นที่

ข้อมูลยาง

ลักษณะพื้นที่

☒ ราบ

☐ ลุ่ม

☐ ลาดเอียงเกิน 35 องศา

สวนยางติดพื้นที่

☐ แม่น้ำ/คลอง/ลำธาร

☐ ป่าสงวน/ป่าอนุรักษ์

☐ พื้นที่ห้ามล่าสัตว์

สวนยางติดสถานที่

☐ โรงเรียน

☐ โรงพยาบาล

☐ วัด

พื้นที่มี

☒ ไม่มี

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มีชนเผ่าอยู่ในพื้นที่หรือไม่

☒ ไม่มี

☐ มี

ชนิดสัตว์ที่อยู่อาศัย

☒ ไม่มี

☐ มี

โดยเนื้อหาจะแบ่งออกเป็น 3 พากในกระบวนการทำแบ่งเป็น

พาก A จะเป็นการใช้ข้อมูลดาวเทียมในการตรวจสอบความชันของพื้นที่ว่าเป็นที่ราบหรือพื้นที่มีการเอียง

พาก B จะเป็นการตรวจสอบการมีแม่น้ำ และการตกอยู่ในพื้นที่ป่าสงวน ป่าอนุรักษ์ หรือพื้นที่ห้ามล่าสัตว์

พาก C จะเป็นการตรวจสอบประเภทของป่าไม้ วัด โรงเรียน โรงพยาบาลหรือพื้นที่ที่เกี่ยวข้องกับศาสนาอยู่ในระบอบข้างหรือไม่

Part D เป็นการตรวจสอบชนเผ่าในบริเวณรอบๆ พื้นที่

At present, the farm plot registration form requires users to fill in a large number of data fields. To simplify the process and reduce the workload for farmers, the system aims to minimize manual form-filling and streamline data collection.

This improvement leverages various geospatial data sources, such as water resource maps, building and infrastructure data, and elevation models, to automatically verify and populate form fields.

By doing so, the system helps reduce redundant steps, save time in farmer data collection, and improve the overall efficiency and accuracy of the registration process.

A report has been prepared to describe the processes and methodologies used for the verification system.

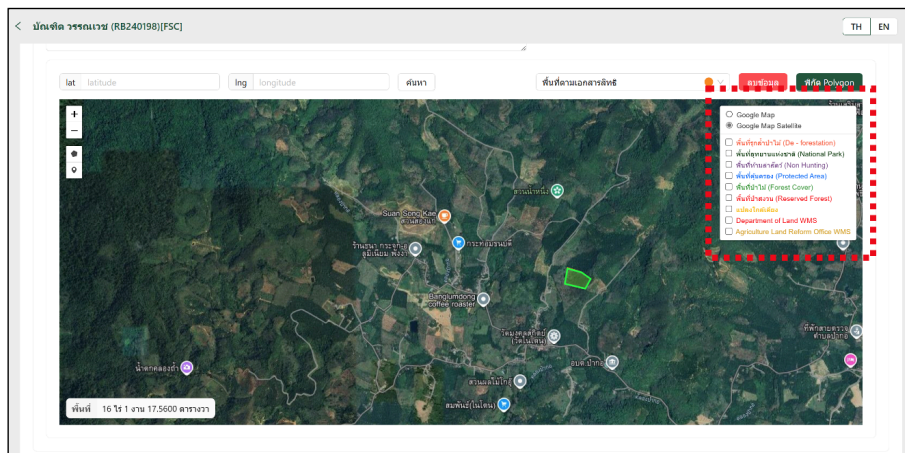
However, it is still in the development stage and requires further thorough testing and validation before being released and fully integrated into the Truztru system.

<https://drive.google.com/file/d/1w1-68zhMRSBMMdvalr8lCPWjuy8AGkAY/view?usp=sharing>



Note: This document is still under development and is not the final version for official use.

3. Layer Improvement



As part of the future development plan, the system will undergo **layer improvements** (highlighted in red in the figure above). Each GIS layer will be reviewed, verified, and updated to ensure accuracy and relevance.

For the **Reserved Forest layer**, enhancements will include an update that allows users to identify **which areas have been officially revoked under the Forest Reserve Act**, making it easier to reference and attach the corresponding legal documents during verification.

14. Benefit from the forest

Focusing on how Agriac, as a responsible forest management entity, upholds the guidelines for sustainable management of multiple products and services. The overarching aim is to ensure long-term economic viability while maximizing social and environmental benefits from the management unit. This document outlines the alignment of Agriac's activities with the FSC standard and provides an overview of current practices, compliance measures, and opportunities for continual improvement.

14.1 Identification and Production of Diversified Benefits and Products

Product list



Update	Status	Product Type	Trade Name	Species	Primary Activity	Secondary Activity	Main Output Category
28 Oct 2021	Non-Active	W1 Rough wood W1.1 Roundwood (logs)		Hevea brasiliensis	Logging		FSC 100%
29 Oct 2021	Non-Active	W1 Rough wood W1.3 Twigs		Hevea brasiliensis	Logging		FSC 100%
30 Oct 2021	Active	N7 Natural gums, oils and derivatives N7.1 Rubber/ Latex N7.1.1 Natural rubber	Latex	Hevea brasiliensis	gathering of non-wood products		FSC 100%
31 Oct 2021	Active	N7 Natural gums, oils and derivatives N7.1 Rubber/ Latex N7.1.1 Natural rubber	Cup lump	Hevea brasiliensis	gathering of non-wood products		FSC 100%
1 Nov 2021	Active	N7 Natural gums, oils and derivatives N7.1 Rubber/ Latex N7.1.1 Natural rubber	Unsmoked sheet	Hevea brasiliensis	gathering of non-wood products		FSC 100%
1 Sep 2024	Non-Active	N9 Food N9.8 Honey	EcoHarvest Honey		gathering of non-wood products	gathering of non-wood products	FSC 100%
1 Sep 2024	Non-Active	N9 Food	Trang Pepper	Piper nigrum Linn , Piperaceae	gathering of non-wood products	gathering of non-wood products	FSC 100%

Agriac identifies and produces diversified products and services to strengthen the local economy in alignment with the FSC standard. The management unit's ecosystem services, including clean water provision, soil conservation, biodiversity maintenance, and climate regulation, are acknowledged and maintained.

- **14.1.1 Compliance with Ecosystem Services Procedure:**

- Agriac ensures that ecosystem services, such as water conservation and biodiversity enhancement, are integral to its management activities. Although the FSC forest management standard does not mandate ecosystem services, if promotional claims are made, Agriac will follow the FSC-PRO-30-006 V1-0 Ecosystem Services Procedure and FSC-GUI-30-006 V1-0 to demonstrate impacts and enable market access.
- **Current Measures:** Monitoring water bodies, maintaining riparian buffers, and promoting biodiversity by integrating non-timber forest products (e.g., EcoHarvest Honey) within the management unit.



14.2 Sustainable Harvesting of Forest Products

Agriac adheres to sustainable harvesting practices to ensure environmental balance and compliance with the management plan

- **14.2.1 & 5.2.2 Harvest Level Determination:**
 - A sustainable harvest rate has been defined in the management plan to prevent over-extraction and allow for forest regeneration. This rate is based on ecological assessments, growth data, and rotation cycles.
- **14.2.3 Record Maintenance:**
 - Detailed records of harvested timber and non-timber forest products are maintained by Agriac or its designated representative to ensure transparency and tracking of resources.

14.3 Positive and Negative Externalities in Operations

While Criterion 5.3 does not include specific indicators for smallholders, Agriac considers the potential positive and negative impacts of its operations on local communities and ecosystems:

- **Current Practices:**
 - Monitoring environmental impacts such as soil erosion and water quality.
 - Promoting practices that encourage community engagement and contribute to the local economy, such as supporting smallholder participation in agroforestry programs.

14.4 Use of Local Processing and Services

Agriac utilizes local resources and services where feasible, reinforcing community support and economic development:

- **Practical Application:**
 - Contracting local processing facilities and labor for rubber processing and related activities.
 - Collaborating with local cooperatives and small businesses for value-added services to increase local economic resilience.



14.5 Long-Term Economic Viability

While specific indicators for long-term economic viability are not mandated for smallholders, Agriac demonstrates its commitment through strategic planning and investment:

- **Commitment to Viability:**
 - Ongoing investments in training smallholders on sustainable practices, leveraging TRAZTRU for data management, and exploring carbon credit opportunities.
 - Developing partnerships to enhance market access and ensure compliance with FSC and EUDR guidelines, thus safeguarding future income sources.

14.6 Summary and Future Recommendations:

Agriac's management plan aligns with Principle 5 by integrating sustainable practices, supporting local economic growth, and maintaining ecosystem benefits. Continued efforts include:

- Strengthening monitoring of harvest rates and ecosystem impacts.
- Expanding training for smallholders on sustainable resource use.
- Enhancing stakeholder collaboration to optimize economic, social, and environmental returns.

Conclusion: Through diligent management, adherence to FSC standards, and proactive community involvement, Agriac ensures that its operations provide long-term economic, social, and environmental benefits. This commitment reinforces Agriac's role as a sustainable forest steward, contributing positively to the local economy and the broader environmental landscape.

15. Conclusion

The year **2025** marks a significant advancement in AGRIAC's journey toward sustainable forest and smallholder management under **FSC-STD-RAP-THA-01-2024** and **FSC-STD-THA-01-2024**. Through the integration of improved monitoring tools, expanded operational areas, and enhanced data management systems, AGRIAC has strengthened its compliance and measurable impact across environmental, social, and economic dimensions.



Key Achievements:

- **Operational Scale:** AGRIAC now manages **11,799 FMUs** across **19 provinces**, encompassing a certified operation area of **16,019.82 hectares** (100,123.875 rai) and **8,957 smallholders**, representing one of Thailand's largest FSC smallholder networks.
- **Economic Performance:** Certified smallholders achieved an **average selling price of 61.28 THB/kg**, outperforming the national market average of **54.15 THB/kg** — a **13.17% price premium**, translating into improved livelihood and market stability. Total rubber procurement (Jan–Sep 2025) reached **7.53 million kg net weight**, generating a gross value of **THB 461.57 million** with strong financial transparency and traceability.
- **Environmental Stewardship:** Monitoring results confirm **100% PPE compliance**, a **0.8% minor accident rate**, and **verified chemical use** limited to **Glyphosate, Glufosinate, and Hexaconazole**, all assessed under the **2023 ESRA framework**. No HCV 1–6 overlaps were detected, with **18 plots adjacent to HCV-1 areas** and **10 plots buffered near water sources (HCV-4)**, ensuring ecological protection and biodiversity integrity.
- **Social and Community Integration:** Over **70%** of plantation plots employ **local labor**, while cultural mapping coverage has reached **100%**, confirming that no operations overlap with cultural or spiritual sites. Continuous stakeholder meetings and cooperative engagements reinforce social inclusion and responsible management.
- **Technology Integration:** The **TRAZTRU system** now provides real-time traceability from farm to export, integrating **GIS, Sentinel-2 satellite imagery, and NDVI analysis** for deforestation verification. Enhanced data layers (National Parks, Protected Areas, EU Deforestation Layer, Reserved Forests) ensure proactive land-use compliance and risk prevention.

Environmental and HCV Commitment:

AGRIAC continues to strengthen its conservation role by monitoring **biodiversity plots**, promoting **Champion Farms**, and maintaining **≥20-meter buffers** around key water bodies. Through partnerships with RAOT, local communities, and universities, continuous training on **soil health, sustainable fertilizer management, and invasive species control** has been embedded into cooperative operations.

Economic and Social Resilience:

The introduction of **EcoHarvest Honey** and **Trang Pepper** enhances income diversification and ecosystem balance during non-tapping seasons. Local value



retention and transparent cooperative management models ensure that economic growth remains inclusive, equitable, and consistent with **FSC Principles 5 and 10**.

Monitoring and Continuous Improvement:

All findings from the **FSC Internal Audit & Risk Assessment Report (2025)** form the basis of AGRIAC's performance review. Continuous improvement actions include:

- Expanding soil testing to **≥50%** of all plots by 2026.
- Digitizing biodiversity and HCV reports directly within **TRAZTRU**.
- Launching the **Champion Farm Biodiversity Dashboard** for transparent impact tracking.
- Extending monitoring in newly integrated **Northeastern MUs** to enhance regional representation.

Conclusion Statement:

AGRIAC's 2025 operations demonstrate that **sustainable forest management can harmonize profitability, biodiversity, and community well-being**. The measurable improvements in traceability, market value, and risk reduction affirm AGRIAC's position as a leading example of FSC-compliant smallholder development in Thailand.

The organization remains committed to continuous improvement through evidence-based monitoring, adaptive management, and stakeholder collaboration — ensuring that every hectare under AGRIAC's care contributes to a **resilient, transparent, and deforestation-free future**.