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Co-funded by the European Union

Assessment of Thailand's Existing Standards and Tools for EUDR Compliance

Executive Summary of EUDR Study: Provision of Sectoral Expertise and Analysis Related to the EU Deforestation Regulation (EUDR) in Thailand

Executive Summary

Introduction,

The European Union Deforestation Regulation (EUDR) the EU aims to minimize its contribution to deforestation and forest degradation worldwide thereby contributing to mitigate climate change, reduce greenhouse gas emissions and biodiversity loss. Entered into force in 2023, the regulation mandates that key commodities such as natural rubber, palm oil, and wood must be deforestation-free, legally produced, and traceable to their source. This regulation has significant implications for Thailand, a major producer and exporter of these commodities, affecting economic growth and rural livelihoods. Preparing for EUDR application presents challenges, especially for small holder farmers and SMEs lacking robust traceability systems and legal documentation. While only operators and traders as defined by the EUDR have due diligence obligations under the EUDR, it is in the interest of Thai supplychain actors to provide relevant information to their business partners to maintain their access to and competitiveness for the EU market.

Implemented by

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Objective and Scope of the Study

This study examines the alignment of current traceability systems and sustainability standards used by supply chain actors in Thailand with the main EUDR requirements, focusing on the natural rubber, palm oil and timber sector. It evaluates available tools and information for due diligence processes, including traceability tools, legal verification systems, certification schemes, and monitoring and risk assessment tools. Focusing on three EUDR requirements, namely,

- deforestation-free production,
- legal production, and
- due diligence statement, incl. geolocation data.

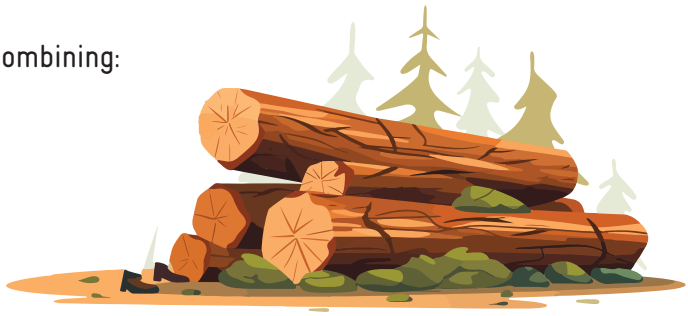
The study also explores the role of satellite monitoring, land classification systems, and certification standards in verifying deforestation-free sourcing areas. It also non-exhaustively examines the relevant legislation and the capacity of existing traceability systems to provide relevant information in the EUDR context.

Based on its findings, the study highlights challenges faced by smallholders and SMEs especially. The study identifies strengths, challenges, and potential pathways for further enhancing traceability and deforestation-free supply chains for Thai supply chain actors in the EUDR context, aiming to increase supply chain transparency, legal compliance, and sustainability to benefit from competitiveness in international markets.

Conceptual Framework

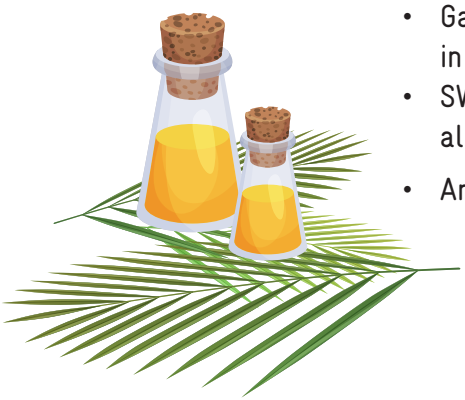
The study employed a qualitative multi-method approach combining:

- Literature review
- Stakeholder interviews
- Sector-specific workshops
- Case studies



A qualitative, multi-method approach captures both technical and institutional dimensions of EUDR alignment. The study incorporates stakeholder perspectives from various levels of the supply chain, including:

- Government bodies,
- Private sector actors,
- Certification organizations,
- Smallholder farmers, and cooperatives,
- NGOs, and academic institutions.



The study used

- Gap analysis to assess standards, traceability tools, and regulatory frameworks relevant in Thailand against EUDR requirements
- SWOT analysis evaluated the readiness of Thailand's tools and institutions for EUDR alignment.
- Analysed traceability systems categorized into
  - government-mandated,
  - voluntary corporate,
  - certification-based, and
  - open-source tools.
- Examined how Thai policy instruments and institutional responsibilities can be aligned to support EUDR application.

EUDR Overview:

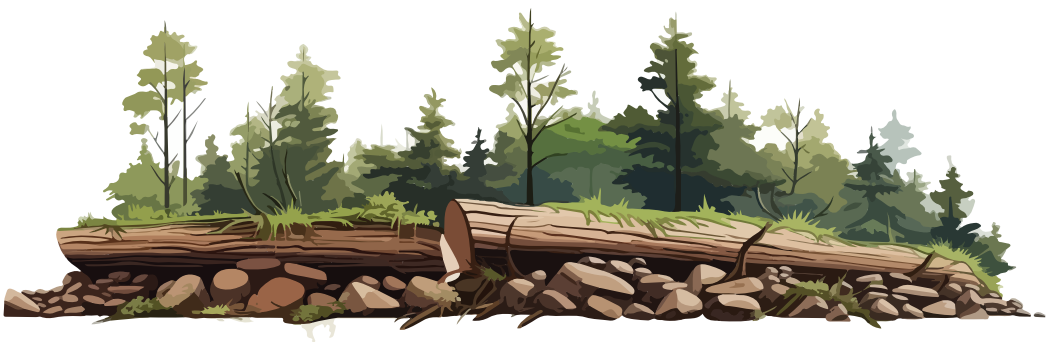
The EUDR mandates that seven commodities, including livestock, cocoa, coffee, palm oil, rubber, soy, and timber, can only be placed on the EU market if they meet three conditions:

- Be deforestation-free,
- Be legally produced in the country of origin, and
- Be covered by a due diligence statement.

Operators and traders are required to fulfill a three-step due diligence process:
The EUDR encourages companies to support suppliers, particularly smallholders, through investments and capacity building as part of their risk mitigation measures. This includes providing necessary information for due diligence purposes to maintain or enhance their access to the EU market.

Overview of Sectors and Existing Standards and Tools Used in Thailand:

Thailand has banned commercial logging in natural forests since 1989, but concerns remain regarding expansion into reserved forests. Key government agencies, such as the Royal Forest Department (RFD) and the Rubber Authority of Thailand (RAOT), use satellite imagery to monitor forest cover, but these systems are not yet fully aligned with EUDR traceability requirements. The study distinguishes different types of traceability systems: Government-led systems, such as the RAOT GIS system for the rubber sector or the Royal Forest Department Timber Licensing System, private IT Solutions, such as RubberWay, TRAZTRU, Koltiva, and Agridence's Harmuni, certification schemes such as FSC, PEFC, and RSPO as well as open-source solutions and collaborative approaches.



Assessment of Laws Relevant to All Sectors (Wood, Rubber, and Palm Oil):

While focusing on aspects of traceability and deforestation-free production, the study also provides a non-exhaustive overview on relevant national legislation in Thailand in the EUDR context as a basis for further analysis of traceability tools, also providing an overview in how far information on legal production in the Thai context and relevant under the EUDR is already being covered or integrated within the different types of traceability systems currently used by Thai supply chain actors.

Key findings from the analysis on the relevant legislative framework:

- Despite well-established laws in the Forestry and Land (use) tenure sectors, enforcement of existing national legislative frameworks varies across sectors, affecting implementation in areas such as formal land tenure. Key laws analyzed include the Forest Act, National Reserved Forest Act, Land Code, Land Reform for Agriculture Act, Community Forest Act, and National Land Policy Committee Act. These laws collectively define land use legality but supply chain actors face challenges in verifying compliance in practice, especially for smallholders operating without formal documentation.
- With regards to Thailand's environmental legislative framework, including the Environmental Quality Act, National Park Act, Wildlife Conservation Act, and Hazardous Substances Act, enforcement is limited in rural areas, and overlapping land claims complicate compliance with national legislation. Integration of environmental data into traceability systems is weak, reducing transparency along the supply chain.
- Thailand's labor (protection) laws align with international standards, ensuring minimum wages, safety conditions,and protection against forced labor. Enforcement is weak among smallholders, where informal hiring is common. Fragmented documentation across disconnected systems creates challenges in verifying compliance in the EUDR context.

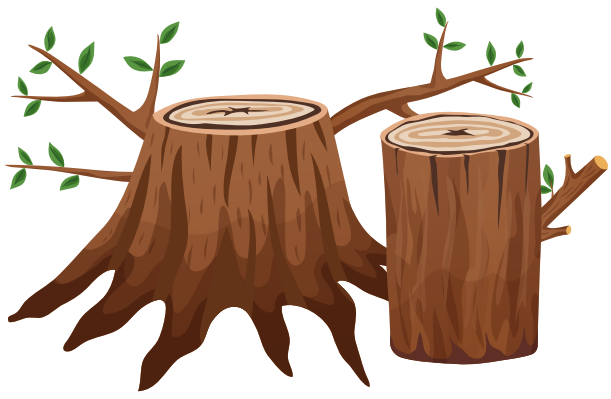
Key findings from the gap analysis on traceability standards and tools:

- The traceability landscape in Thai supply chains is currently fragmented, with varying functionality and adoption levels of existing traceability systems across sectors. Collaborative initiatives, such as Thailand's Smart Agriculture Programs and Multi-Stakeholder Working Groups, aim to harmonize traceability systems with EUDR requirements and promote sustainable practices.
- Traceability systems, certification schemes, and institutional mechanisms used in Thai supply chains partially already support EUDR compliance.
- **Private IT Solutions and Corporate Business systems:** Agribusinesses in Thailand have adopted several private-sector digital traceability platforms in response to the need for transparent and sustainable sourcing. Key systems include RubberWay, TRAZTRU, Koltiva, and Agridence, each offering tools for digital traceability and risk monitoring. Additionally, large agribusinesses use proprietary systems such as SAP, Farmforce, and SriTrang Friend to enhance transparency and accountability in their supply chains. Despite their technological sophistication, private traceability platforms in Thailand face limitations in supporting full EUDR compliance. Issues like lack of third-party verification, non-standardized formats, and insufficient data privacy measures collectively undermine the reliability and inclusiveness of these systems.
- **Certification Schemes:** FSC, PEFC, and RSPO support traceability and legality verification but face challenges such as high costs, limited smallholder inclusion, and lack of real-time geospatial integration.

- Open-source tools such as Google Earth, Qfield, Ground, and INA Trace provide publicly accessible satellite imagery and basic mapping functionalities. These platforms are used by various stakeholders, including smallholders, auditors, NGOs, and exporters, for initial assessments of land cover, plantation boundaries, and visible changes in land use. In Thailand, Google Earth complements official land mapping efforts where government or proprietary GIS systems are unavailable or difficult to access. Further open-source tools are currently not widely used by Thai supply chain actors.
- **Collaborative Approaches:** Thailand's Smart Agriculture initiatives aim to digitize agricultural production and enhance traceability. However, implementation is fragmented, and legal enforcement mandates are lacking. Data protection protocols need improvement to ensure compliance with PDPA and GDPR.

General Challenges for Implementation:

- Supply chain actors in Thailand face several challenges in preparing for the European Union Deforestation Regulation (EUDR) application. Despite progress in traceability and sustainability verification, there are missing components that hinder full support for EU operators' due diligence obligations. These challenges are categorized into technical, financial, regulatory, stakeholder engagement, and market infrastructure.
- **Technical Challenges:** Traceability systems in Thailand suffer from poor interoperability, with government platforms operating separately from private tools. They lack standardized data exchange protocols and integration with satellite-based deforestation monitoring. Smallholders face technological access issues, including the absence of smartphones, GPS tools, and internet connectivity, along with low digital literacy. Data protection practices are underdeveloped, raising concerns about consent, data ownership, and secure storage
- **Financial Challenges:** Financial constraints significantly impact smallholders and SMEs, with high costs associated with certification schemes and digital compliance tools. Limited public funding for digital traceability infrastructure slows down national implementation efforts. The absence of financial incentives leaves smallholders with little motivation to upgrade their production systems.
- **Regulatory and Legal Challenges:** Thailand's fragmented regulatory environment creates inconsistencies in compliance monitoring. Many smallholders lack formal land titles, complicating verification of legal land use. Labor law enforcement is weak in informal operations, and national traceability databases are not interoperable with private certification systems.
- **Stakeholder Engagement Challenges:** Direct engagement with smallholders and local processors is limited, and many are unaware of the EUDR. Coordination between public and private stakeholders is also limited, resulting in fragmented data and inefficiencies in verification. Informal trade networks lack oversight, making it difficult to verify the legal origin of commodities.
- **Infrastructure and Market Access Challenges:** Thai supply chain actors are facing structural challenges in aligning commodity production with international frameworks. There is limited access to global best practices and knowledge-sharing platforms. Producers and exporters risk exclusion from EU markets if they are not included into traceability solutions. Thailand is currently also still lacking a clear national export strategy for EUDR-compliant supply chains.



Key findings from the SWOT Analysis:

Strengths:

- **Established Systems:** Thailand has robust government-led platforms like the RAOT GIS system for geolocation mapping and rubber farm registration, providing a foundation for traceability. Certification schemes such as FSC, PEFC, and RSPO offer partial alignment with EUDR requirements by incorporating geolocation and legal verification processes.
- **Private Sector Innovation:** Platforms like TRAZTRU, Rubberway, and Koltiva offer digital traceability tools that include deforestation monitoring and smallholder data collection. Large agribusinesses have developed proprietary systems for internal traceability and risk analysis, which can be scaled or integrated.
- **Regulatory Framework:** Thailand has well-established laws related to land use, environmental protection, and trade documentation, providing a legal backbone for compliance verification.
- **Sustainability Frameworks:** Internationally recognized certification schemes and digital traceability initiatives support EUDR-aligned deforestation-free sourcing, enhancing due diligence verification across various supply chains.
- **Multi-Stakeholder Engagement:** Participation in certification working groups, policy forums, and traceability standardization committees has improved coordination among government agencies, private sector actors, and civil society.
- **Emerging Technologies:** Piloting blockchain-based traceability systems and satellite-integrated deforestation monitoring tools promise enhanced transparency and real-time compliance verification.

Weaknesses

- **Fragmentation:** Existing systems operate in silos with different data formats and standards, preventing seamless data exchange and increasing complexity in compliance verification.
- **Smallholder Digital Exclusion:** Many smallholders rely on paper-based records and lack access to GIS tools, resulting in incomplete traceability coverage.
- **Limited Certification Coverage:** High costs and documentation barriers restrict smallholder participation in certification schemes, leaving many outside the traceability systems.
- **Interoperability Issues:** Lack of integration between government and private-sector systems leads to duplication of efforts and increased compliance costs.

Opportunities

- **Digital Transformation Programs:** Initiatives under Thailand's Smart Agriculture strategy can provide training, tools, and financial incentives to smallholders, improving their digital participation and reducing traceability gaps.
- **Advancement of Digital Traceability Systems:** Expanding GeoJSON-compatible tools and promoting open-source geolocation technologies can enhance transparency and compliance verification. Investments in blockchain and AI-driven monitoring systems can improve data integrity and real-time tracking.
- **Harmonization with EUDR:** Aligning national sustainability systems with EUDR requirements can streamline compliance verification. Establishing a unified national sustainability standard can reduce inconsistencies across supply chains.
- **Regional Collaboration:** Engaging in knowledge exchange with neighboring countries and strengthening ASEAN-wide interoperability efforts can facilitate cross-border trade compliance with EUDR requirements.

Threats

- **Market Access Risks:** Non-compliance with EUDR regulations could result in loss of EU buyers, and reputational risks for Thai exporters. Competitor countries with stronger compliance frameworks may gain a market advantage.

- **High Compliance Costs:** Certification, traceability software, and legal documentation requirements impose significant financial burdens on smallholders and SMEs, risking their exclusion from sustainable supply chains.
- **Data Privacy Concerns:** Compliance with Thai PDPA and EU GDPR necessitates secure handling of supply chain data. Lack of a standardized, secure national data-sharing platform increases the potential for unauthorized access and regulatory non-compliance.
- **Regulatory Uncertainty:** Delays in nominating a national focal point for EUDR coordination and lack of verified traceability data may lead EU buyers to view Thai commodities as high-risk by default.

Recommendations for Further EUDR Alignment and Implementation: Government agencies

- Government actors should enhance monitoring capabilities by expanding the use of satellite-based remote sensing and geospatial data analytics.
- Harmonizing nationally used sustainability standards with EUDR criteria is essential.
- Upgrading traceability systems to align with EUDR criteria requires issuing technical and legal guidance on data interoperability.

Private Sector:

- Private actors should upgrade their traceability systems to support GeoJSON-compatible geolocation data and incorporate automated deforestation monitoring tools.
- Collaboration with government-led systems and certification schemes is needed.
- Capacity building and training programs for procurement officers and compliance teams are essential.

Smallholders & SMEs:

- Participation in financial and technical support programs is essential for smallholders and SMEs.
- Land tenure verification and registration programs should be prioritized.
- Improving digital literacy and IT capacities will help smallholders strengthen their position in the value chain.

Cross-Border Interoperability:

- Enhancing regional data-sharing mechanisms and collaboration on trade is crucial. Developing a region-wide traceability framework within ASEAN would offer a unified approach to data exchange.
- Bilateral agreements with EU member state regulatory bodies should be pursued to facilitate alignment and minimize potential trade disruptions.

Conclusion:

In summary, while Thailand has established a foundational legal and institutional framework to support EUDR compliance, significant challenges remain in implementation, smallholder inclusion, and data integration. Enhanced collaboration, digital traceability, and legal harmonization are essential for improving compliance and protecting access to EU markets. Thai supply chain actors have made meaningful progress toward EUDR alignment, but some challenges remain. A coordinated, multi-stakeholder approach is essential to ensure Thailand remains a viable supplier of deforestation-free commodities to the EU market. Priority actions include establishing a national interoperable traceability system, integrating real-time geospatial monitoring tools, and implementing structured data privacy frameworks. By investing in these mechanisms, Thailand can transform regulatory challenges into competitive advantages in global commodity markets.

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EUDR Engagement project Engagement with Indonesia, Malaysia, Laos, Thailand and Vietnam to raise awareness on and to promote better understanding of the EU approach to reducing EU-driven deforestation and forest degradation

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