

# INTERNATIONAL TROPICAL TIMBER COUNCIL

COMMITTEE ON ECONOMICS, STATISTICS AND MARKETS

**COMMITTEE ON FOREST INDUSTRY** 

Distr. GENERAL

CEM-CFI(LIX)/3 1 September 2025

Original: ENGLISH

FIFTY-NINTH SESSION 27-31 October 2025 Panama City, Panama

## REPORT OF COMPLETED PROJECTS

This document highlights the work carried out under project PD 913/20 Rev.4 (M) of the Committee on Economics, Statistics and Markets and PD 926/22 Rev.1 (I), PD 928/22 Rev.1 (I) and PP-A/60-369 of the Committee on Forest Industry.

# **Committee on Economics, Statistics and Markets**

1. PD 913/20 Rev.4 (M) Strengthening Forest Monitoring and Extending the Coverage of the Traceability System in Panama

**Budget and Sources of Funding:** 

Total Budget: US\$ 1,477,948
Government of Japan: US\$ 730,088
Government of Panama: US\$ 747,860

Executing Agency: Ministerio de Ambiente (MiAmbiente)

Approved: March 2022

Financed: December 2021

Starting Date: November 2022

Duration: Planned: 30 months

Actual: 33 months

On November 22, 2022, the Ministry of the Environment (MiAMBIENTE) of Panama started the implementation the Project "Strengthening Panama's Forest Control and Expanding the Traceability System", financed by the International Tropical Timber Organization (ITTO), led by the Forestry Directorate of MiAMBIENTE, with the management of the administration of funds by Fundación PA.NA.M.A. This project represents the second phase of implementation of a traceability system in the country, whose development objective is to consolidate at the national level a forest management model capable of stopping forest degradation due to illegal logging and trade.

The first phase of the traceability system was executed in the areas of Eastern Panama and Darién province. Given the limited coverage, it was deemed necessary to expand the system to the rest of the country's provinces and provide capacity building to field personnel as well as strengthen the implementation of the current system. The project had a team of specialists and consultants for the development of each output in the execution of the work plan. This team has carried out different tours nationwide to implement the traceability system throughout the country with ITTO being involved in three Project / Technical Steering Committee meetings and field visits on the ground during the implementation period of the project.

This project had an initial duration of 30 months, ending in March 2025. However, a three-month extension was requested at no additional cost to complete the remaining activities. During this approved extension period, the remaining activities were completed, carrying out numerous actions aimed at strengthening forest management in the country, within the framework of the various project outputs.

During this period, activities related to the various products of this project were carried out. These included training on the Forest Traceability and Control System (FTCS) for MiAMBIENTE technicians and various actors in the forest production chain throughout the country, two events called forest business roundtables, and theoretical and practical training workshops for social communicators on the importance of forest management and traceability. These activities are also part of the Network for Legal Timber and Responsible Trade.

This report presents a summary of the activities which were carried out until the end of the project. The activities include the organization, management, and coordination of the project's technical team to achieve progress and the corresponding results of the project's outputs. In addition, the report summarizes the efforts made in training, communication, and monitoring of the initiative proposed. The summary also reflects the commitment of MiAMBIENTE's Forestry Directorate and the team of consultants to strengthening forest control and compliance with the project's components.

The project main outputs are the following: Output 1: Strengthen Legal Timber Network to promote knowledge about sustainable forest management and responsible timber trade. Output 2; Design, validation, and adoption of a new simplified management plan system for small forest areas, including protocols for evaluating all types of harvesting permits; Output 3; A robust Forest Traceability and Control System with national coverage and including all links in the timber production and marketing chain.

It is to be noted that output 2: "Training program on the new simplified management plan system for small forest areas" was not implemented. The reasons for not implementing this output are due to new national laws that debars any entity of the state or government to implement such simplified plans in community forests owned by the indigenous people. The full explanation is contained in the Executing Agency (EA) report. It is also worth noting that EA did submit to ITTO for consideration of new activities in place of activities initially proposed for execution under output 2 which further expanded the scope of some activities in the remaining outputs as presented below summarizing the results of the projects at completion on June 30, 2025.

# Summary of progress made in achieving the objectives set out in this project

Activity 1.1.1. Strengthening the Legal Timber Network for its operationalization The Forestry Directorate's website was developed and launched, integrated into the MiAMBIENTE institutional website. This platform hosts relevant information on the forestry sector, such as laws, regulations, and procedures, in addition to promoting the Legal Timber Network and tools such as ForestPlace, where companies can showcase their products and services. The initiative has contributed to improving transparency, stakeholder integration, and the dissemination of responsible timber trade.

Activity 1.1.2. Development of at least two Forest Business Roundtables in Panama. Two forest business roundtables discussions were held, one in September 2024 and the other in March 2025. The first one brought together multiple actors from the value chain, consolidating initial agreements and commercial relationships. The second round was based on market research and facilitated more than 100 meetings between suppliers and buyers, a detailed analysis of wood supply and demand, and strategic recommendations for the development of the Panamanian forestry market. Both activities strengthened links between the public, private, and community sectors.

Activity 1.2.1. Design and implementation of a communication campaign. During the second half of the project, a communication campaign was implemented to raise awareness about forest management and traceability through digital media. Spokespersons appeared on television and radio where educational videos were shared on social media, and platforms such as YouTube Ads and Meta Ads were used to achieve wide coverage. The campaign reached more than 387,000 impressions and 237,000 views on YouTube, while Meta achieved more than one million impressions and 235 clicks, effectively positioning the message of forest sustainability.

Activity 1.2.2. Development of training aimed at training 50 communicators. Theoretical training and a field trip were organized for communicators from various media outlets. The first part addressed the sustainable forest management cycle in forests and plantations, while the second allowed participants to observe firsthand the community forestry process in the community of Tortuga, Emberá Wounaan Comarca. These activities strengthened the capacity of communicators to convey key messages on sustainable forest management and traceability.

# Activity 3.1.1. Evaluation and introduction of improvements to the Forest Traceability and Control System (FTCS).

Improvements were made to the system, including strengthening connectivity and technological equipment. Fifteen tablets and 28 printers were distributed, and 13 satellite antennas were installed, facilitating the FTCS's operations in the field and its expansion to new regions. These actions made it possible to increase control, reduce paper use, and improve verification and inspection times.

13 satellite antennas were installed, facilitating the FTCS's operations in the field and its expansion to new regions. These actions made it possible to increase control, reduce paper use, and improve verification and inspection times.

## Activity 3.1.2. Assessment of equipment needs for operational regions.

A technical needs assessment was carried out and equipment was delivered to the Ministry of Environment agencies nationwide. The provision of tablets, printers, and connectivity improved institutional capacities for forest control and traceability in the field.

**Activity 3.1.3. Strengthening of a national network of control posts.** At least 10 control posts were strengthened through the provision of technological equipment and connectivity. This action has been key to the operability of the system and the monitoring of the legality of forest product transport.

Activity 3.2.1. Development and implementation of the FTCS's training program. Multiple workshops were developed for MiAMBIENTE technicians and users of the production chain. These workshops were held in Veraguas, Coclé, Herrera, Los Santos, Colón, Panama East, Darién, and Panama West, strengthening skills in the use of the FTCS, forest registration, and restoration monitoring. More than 300 people participated, consolidating a technical network trained throughout the country.

Activity 3.2.2. Workshops of training for technicians of MiAMBIENTE. Practical workshops were held, providing technical guidance, access to digital platforms, and field support. These training sessions made it possible to standardize criteria, resolve technical and operational questions, and facilitate the implementation of the FTCS and the Restoration Monitoring System.

# Activity 3.3.1. Development and implementation of the tracking and monitoring program.

Progress was made in restructuring and improving the program by integrating a forest information subsystem into FTCS and the Legal Timber Network. The adoption of Forest Stewardship Council (FSC) standards for management plans in indigenous communities was promoted, and the Forest Registry was strengthened as a requirement for legality and order in the sector. In addition, technical staff were trained in the Restoration Monitoring System.

### Activity 3.3.2. Development of pilot projects to validate the tracking and monitoring program.

Pilot projects were developed in the provinces of Chiriquí, Bocas del Toro, Colón, Azuero, Central Provinces, and the Metropolitan Region. These pilot projects included the implementation of the FTCS for commercial forest plantations and managed regeneration, in compliance with Resolution DM-0118-2025, as well as strengthening the forest registry as a prior control instrument.

**Activity 3.3.3. Formal adoption of the monitoring and follow-up program.** The program was formally adopted through its operational validation in key regions and the generation of regulatory inputs. This process has laid the foundations for the technical, administrative, and legal follow-up of management plans to be fully integrated into MiAMBIENTE's institutional work.

## Activity 3.3.4. Training workshops for technicians in MiAMBIENTE's operational regions.

As part of the process of adopting and rolling out the monitoring program, training workshops were provided to regional and local technicians, covering topics such as forest registration, use of the FTCS, the Restoration Monitoring System, and FSC certification. These actions made it possible to standardize procedures, enhance technical capacities, and facilitate the decentralized implementation of the program.

# Elements that guarantee the sustainability of achievements of the project:

The sustainability of the results achieved during the project has been considered a cross-cutting theme in all the actions implemented. The main factors that will enable the achievements to be sustained beyond the period of direct intervention are highlighted below:

- 1. Institutional strengthening and formal adoption of tools.
  - The integration of the Legal Timber Network into the MiAMBIENTE institutional website, as well as the launch of the Forestry Directorate's web portal, guarantee continuity in the dissemination of information, promotion of legal trade, and transparency in the sector.
- 2. Transfer of technical skills.
  - More than 300 people were trained, including MiAMBIENTE technicians, community actors, and system users. This network of trained professionals ensures STCF's operational capacity, restoration monitoring, and verification of legal compliance without relying exclusively on external assistance.
  - The Forestry Directorate absorbed 100% of the project's technical staff, ensuring the retention of knowledge and the continuity of technical actions.
- 3. Private and community sector participation
  - The incorporation of companies into the Legal Timber Network in 2025 and the active participation
    of trade associations such as ANARAP in the FCTS improvement processes are evidence of the
    private sector's commitment to traceability and legal trade. This involvement ensures greater
    legitimacy and operational viability of the system, especially in the face of international
    requirements such as the European Union's Deforestation Regulation (EUDR).
  - Forest business roundtable table discussions have strengthened links between the public, private, and community sectors, establishing sustainable commercial relationships that can be maintained and replicated without depending on project funding.
- 4. Investment in infrastructure and equipment
  - More than 40 agencies and 10 checkpoints were equipped with technology (tablets, printers, satellite antennas), which improves institutional operational capacity and reduces dependence on paper.
  - Improved connectivity in remote areas and the use of digital systems facilitate supervision and control, ensuring more efficient operations and lower operating costs in the future.
- 5. Availability of reusable communication resources
  - The communication campaign generated high-quality audiovisual materials, available on institutional platforms and social networks, which can continue to be used in awareness-raising, training, and environmental education processes without the need for additional investment.

The Executing Agency has submitted to the Secretariat the project completion report and technical reports which are available on request (Spanish only). The final financial audit of the project has also been completed. The Committee may wish to declare the project duly complete.

## **Committee on Forest Industry**

1. PD 926/22 Rev.1 (I) Promotion of Sustainable Domestic Consumption of Wood Products in Thailand

**Budget and Sources of Funding:** 

Total Budget: US\$ 345,000 Government of Japan: US\$ 320,000 Kasetsart University contribution: US\$ 25,000

Executing Agency: Kasetsart University (KU) in collaboration with the Royal Forest

Department (RFD)

Approved: September 2022

Financed: October 2022

Starting Date: February 2023

Duration: Planned: 24 months

Actual: 25 months

The project arose from a concept note submitted under the call for proposals mandated by Decision 4(LVI). Following its development into a full project proposal and approval in September 2022, the Japan Forestry Agency pledged funding to this project. The project agreement was signed in December 2022 and the project has been operational since 1 February 2023.

The development objective of the project aims at enhancing sustainable domestic wood consumption in Thailand. The specific objective is to promote sustainable domestic consumption of wood and wood products in Thailand through policy improvement on wood certification, stakeholder capacity building, and timber supply chains in pilot provinces. At the completion of the project, it is expected that the National Forestry Policy Committee/FRD will approve the policy/ies for promoting domestic uses of wood and wood products. Wood industries and tree growers (large and smallholders) collaboration will be strengthened to fill domestic market demands for sustainable legalized wood products and their supply and value chains. The project Outputs are: 1) Improved policies for promoting domestic uses of wood and wood products; and 2) Stakeholder capacity built to produce innovative wood and wood products needed by domestic markets. All project's activities were successfully implemented. The specific objective has been achieved through smooth implementation of eight activities of the two outputs.

## Output 1

The activities of the Output 1 include: 1) Strengthen the national council/association and Forest Plantation Network and individuals for the promotion of sustainable wood use; 2) Information and analysis on annual domestic wood production, the location of (legal) supply sources, value chains and demands & trends; 3) Legalize and endorse domestic logs and sawn wood from planted forests on private own land or permitted public lands and their factories and mills through national & international certification; and 4) Experiences/lessons on smallholder plantations in selected countries investigated and introduced.

#### Output 2

The activities of the Output 2 include: 1) Advanced skills to design and develop wood products to meet domestic market demands; 2) Upgraded capacity and understanding to comply with legality requirements, forest law enforcement and certification; 3) Awareness of urban consumers on the role of wood used for SFM and domestic wood consumption via workshops and exhibitions; and 4) Strengthened partnerships and

communication between wood producers and wood consumers at all levels (household to international business).

# **Activities and Key Achievements of The Project**

Outputs	Activities	Key Achievements		
Output 1: Improved policies for promoting domestic uses of wood and wood products	1.1 Strengthen the national council/association and Forest Plantation Network and individuals for the promotion of sustainable wood use	<ul> <li>The project Inception Meeting (23 Feb. 23) shared Japan's Kizukai wood-use campaign.</li> <li>NHA consultation meeting (24 Apr. 23): the meeting conducted to integrate a government organization into the promotion of domestic wood use in the housing sector, serving as a case lesson drawn from Japan;</li> </ul>		
		promoting domestic wood use on teak plantation investments, with publications on sustainable teak.;		
		<ul> <li>Training workshop for smallholders in Nan Province 32 participants, silviculture, legality, sustainable practices.</li> </ul>		
		Consultation workshop in Trang Province (28 Jun. 23): stakeholder discussions on rubber wood supply chain challenges.		
		Field visits to Inter Furniture Ltd. and Plan Toys Ltd. focusing on the rubberwood value chain, export challenges, and eco-friendly toy production.		
	1.2 Information and analysis on annual domestic wood production, supply sources, value chains and demands & trends	Teak, edited by Dr. P.K. Thulasidas and Dr. Tetra Yanuariadi, two written reprints are		
	1.3 Legalize and endorse domestic logs and sawn wood from planted forests	The 1 <sup>st</sup> Domestic Wood Products and Supply Chain Stakeholders Consultation Meeting was convened on July 24 to facilitate dialogue and collaboration among key actors across the		

Outputs	Activities	Key Achievements		
		regulations on harvesting, transport, and processing.  • After the two-time consultation meetings, variety certification systems for domestic timber legality were strengthened according to enhance verification and compliance mechanisms.		
	1.4 Experiences/lessons on smallholder plantations in selected countries	ll construction sustainability economy) l		
Output 2: Stakeholder capacity built to produce innovative wood and wood products needed by domestic markets	2.1 Advanced skills to design and develop wood products			
	2.2 Upgraded capacity and understanding to comply with legality requirements, forest law enforcement and certification	Legal compliance training for producers & manufacturers.		
	2.3 Awareness of urban consumers on role of wood in SFM and domestic wood consumption	4,000 professionals, resulting in the		
	2.4 Strengthened partnerships and communication between wood producers and consumers	Field visit to networking the wood working		

The project actively engaged diverse stakeholders, from government agencies, private sector to local communities and smallholders, in shaping the future of sustainable wood consumption in Thailand. The signing of a multi-stakeholder MoU with 20 organizations exemplified this inclusivity and commitment. Training workshops, stakeholder consultations, and field demonstrations provided smallholders with technical skills in silviculture, legality, and certification, while also introducing innovative practices such as intercropping teak with pumpkins. These activities not only improved farmer knowledge and productivity but also created diversified livelihood opportunities, enhancing community empowerment and resilience.

The project, to some extend contributed to Thailand's national target of achieving 40% forest cover, with 15% allocated to commercial forestry. By promoting sustainable plantation management, responsible harvesting practices, and efficient timber utilization, it reduced environmental impacts while enhancing resource efficiency. The introduction of strengthened certification systems and improved legality verification further reinforced traceability, accountability, and compliance with international forestry standards. These measures fostered sustainable forest management, advanced biodiversity conservation, and reinforced long-term environmental stewardship.

The Executing Agency has submitted to the Secretariat the project completion report and technical reports which are available on request (English only). The final financial audit of the project has also been completed. The Committee may wish to declare the project duly complete.

2. PD 928/22 Rev.1 (I) Development of Sustainable Domestic Market for Wood Products (Indonesia)

**Budget and Sources of Funding:** 

Total Budget: US\$ 285,691
Government of Japan: US\$ 261,811
Government of Indonesia contribution: US\$ 23,880

Executing Agency: Directorate General of Sustainable Forest Management

Ministry of Environment and Forestry, Republic of Indonesia

Approved: September 2022

Financed: October 2022

Starting Date: July 2023

Duration: Planned: 18 months

Actual: 19 months

The project arose from a concept note submitted under the call for proposals mandated by Decision 4(LVI). Following its development into a full project proposal and approval in September 2022, the Japan Forestry Agency pledged funding to this project. The project agreement was signed in December 2022 and the project has been operational since July 2023.

The project aims to increase contribution of the national forest industry to national economic development. Its specific objective is to promote a strong and resilient domestic consumption of wood products, to be achieved through delivery of two outputs, namely: i) increased capacity of domestic market to satisfy consumers' need for wood product, and ii) enhanced institutional arrangement for steadily rising domestic consumption of wood products. The specific objective has been achieved through smooth implementation of nine activities of the two outputs. The nine activities were implemented by conducting studies, creating innovation through product competition, implementing public education, as well as developing policy recommendations by organizing focus group discussions and workshops.

#### Output 1

Increased capacity of the domestic market to satisfy consumers' need for wood products is supported by implementing studies regarding the study on consumption of wood products, study on salient features of substitute products, and study on the development of an enriched assortment of wood products sold in the domestic market, development of a mid-term national strategy to strengthen domestic market for wood

products, and conducting public education on the advantages of using wood products for the enhanced domestic market of wood products in the project locus area covering West Java, Central Java, East Java, and additional locus Banten Province.

# Output 2

To enhance institutional arrangements for steadily rising domestic consumption of wood products, the project has supported the Establishment of a National Council for Promotion of Sustainable and Resilient Domestic Market for Wood Products, the development of policy interventions on the use of wood materials in the construction sector, and development of policy incentives for investment in collective facilities for wood processing. The project also provided the facilitation for sharing information and experience of development of the domestic market for wood products.

# Planned and realized outputs and related activities

Objective/Outputs/ Activities	Planned	Realization	Status /Remarks				
Development Objective	Development Objective						
Specific Objective							
Output 1 Increased capacity of the domestic market to satisfy consumers' need for wood product							
Activity 1.1 To conduct a preliminary study on the consumption of wood products	One package of the study on the consumption of wood products in three locus is available	<ul> <li>One package of the study on the consumption of wood products in 3 locus with 1 additional locus available</li> <li>Six FGDs were held to disseminate the study results (in conjunction with Activity 1.2, 1.3, and 1.5)</li> </ul>	Completed				
Activity 1.2 To examine salient features of substitute products	One package of the study on the salient features of substitute products in three locus is available	<ul> <li>One package of the study on the salient features of substitute products is available</li> <li>Six FGDs were held to disseminate the study results (in conjunction with Activity 1.1, 1.3, and 1.5)</li> </ul>	Completed				
Activity 1.3 To enrich the assortment of wood products sold in the domestic market	<ul> <li>Five new fortified wood products are introduced in the domestic market</li> <li>Four exhibitions of the new fortified wood products are conducted</li> </ul>	<ul> <li>More than 20 fortified wood products are introduced in the domestic market</li> <li>Five exhibitions of the new fortified wood products are conducted (in conjunction with Activity 1.1, 1.3, 1.5, and 1.4)</li> </ul>	Completed				

Activity 1.4 To develop a mid-term national strategy for the domestic market for wood products	A mid-term national strategy for the domestic market for wood products has been developed	<ul> <li>Mid-term national strategy for the domestic market for wood products is developed</li> <li>Six FGDs to develop and disseminate the national strategy for the domestic market for wood products are conducted (in conjunction with Activity 1.1 and 1.2)</li> </ul>	Completed
Activity 1.5 To educate consumers on the advantages of using wood products	Four public education events to disseminate the advantages of using wood products are conducted	Five public education events to disseminate the advantages of using wood products are conducted (in conjunction with Activity 1.1, 1.2, 1.3, 1.5, and 1.4)	Completed
Output 2: Enhanced ins wood products	stitutional arrangem	ents for steadily rising domestic o	onsumption of
Activity 2.1 To establish a national council for the promotion of a sustainable and resilient domestic market for wood products	The initial national council to support the promotion of a sustainable and resilient domestic market for wood products was formed	The initial national council in the form of a communication stakeholders forum to support the promotion of a sustainable and resilient domestic market for wood products was established	Completed
Activity 2.2 To introduce policy interventions on the use of wooden materials in the construction sector	Draft policy intervention on wood uses ready for national review	wood use was reviewed at the	Completed
Activity 2.3 To promote policy incentives for investment in collective facilities for wood processing	Draft policy incentives for wood processing ready for MoEF to endorse	incentives for wood processing	Completed
Activity 2.4 To share information and experience in the development of domestic consumption of wood products with the assistance of ITTO	The information and experience in the development of domestic consumption of wood products are disseminated	1	Completed

Strengthening the domestic markets in Indonesia for wood products helps business actors grow, create jobs, and generate national income. This is very important in the face of the slowing global economy. The activities conducted in ITTO PD 928/22 Rev.1 (I) are designed to revitalize and fortify the domestic production and consumption of wood products in Indonesia. The importance of developing the domestic market for wood products could also be measured through various initiatives, by the study

that results in policy recommendations, public education, exhibition, and design competition. It is also effectively achieved by strong commitment and support from relevant stakeholders who share similar interests and a mutual vision and mission in developing the domestic market for wood products.

The Executing Agency has submitted to the Secretariat the project completion report and technical reports which are available on request (English only). The final financial audit of the project has also been completed. The Committee may wish to declare the project duly complete.

3. PP-A/60-369 Strengthening Surveillance and Monitoring to Tackle the Surge in Forest

Loss and Land Degradation, Induced by Intensifying Conflict in Thailand's

**Border Areas** 

**Budget and Sources of Funding:** 

Total Budget: US\$ 278,078.48
Government of Japan: US\$ 278,078.48
Government of Thailand contribution: US\$ In-kind

Executing Agency: Kasetsart University

Approved: January 2024

Financed: March 2024

Starting Date: June 2024

Duration: Planned: 12 months

Actual: 9 months

In compliance with the new financing architecture (approved by the 56th ITTC under Decision 4(LVI), a donor expressed interest in funding a concept note, which was subsequently developed into a proposal by the Executing Agency in collaboration with the ITTO Secretariat and donor. The project agreement between ITTO and Kasetsart University, Thailand was signed on 8 June 2024 and the project has been operational since June 2024.

The specific objective of the project is to tackle continuing deforestation and forest degradation while sustaining livelihoods in the disturbed Thailand-Myanmar border areas. Two outputs are proposed including 1) robust forest monitoring system installation to assist local authorities and communities in monitoring forest loss and degradation through the application of using satellite and drone data, and 2) fulfilled requisite capacity enhancement of local authorities, community groups and youth in community forest protection and sustainable livelihood development. The specific objective has been achieved through smooth implementation of seven activities of the two outputs.

The total project outlay was USD 278,078.48 for previously planned activities for the 12 months period (June 2024 to May 2025). However, the project period was shortened from 12 months to 9 months (July 2024 to March 2025) to align with Japan's fiscal year. Many of the project activities were rescheduled accordingly. The implementation of the project towards achieving outputs complied with the verifiable indicators specified in the Logical Framework Matrix of the project document. The project's achievements of each activity are summarized as follows:

#### Output 1

Robust forest monitoring system installation to assist local authorities and communities in monitoring forest loss and degradation through the application of using satellite and drone data.

## Activity 1.1 Prepare hard copy and digital copy of land use/forest cover maps in 1990 to present.

Satellite images covering the entire Mae Hong Son province and a 20 km buffer area along the Thailand-Myanmar border for 1990 and 2023 were successfully acquired. Gathered existing land use data for the year 2020 from Land Development Department and forest and non-forest map for 2023 from the RFD to use as basemaps for interpretation. A field verification survey classified and allocated 301 checkpoint locations across Mae Hong Son province, proportionally based on land use types. The results showed that in both 1990 and 2023, most of the area was covered by forest areas. Evergreen forest accounted for 15% of the total area, while deciduous forest contributed 8% of the total area. Together, these two forest types comprised approximately 97% and 94% of the total land use in 1990 and 2023, respectively.

# Activity 1.2 Prepare the vulnerable deforestation areas map using GIS analysis and monitor the risk areas using drone technology.

Based on the land use maps derived from the activity 1.1, land use changes between 1990 and 2023 were determined. The results indicated that about 390 km2 of forest areas were converted to other uses, mainly to barren land/range land, followed by settlement and paddy cultivation. It should be noted that paddy and cash crops increased over 2% annually, while barren land/range increased almost 2% annually. In addition, the area of natural water (streams and rivers) slightly decreased due to different dates of satellite images. If the land use change trends continue, it is predicted that by 2056, the area of forest cover change will be approximately 92%.

# Activity 1.3 Develop and install SMART PATROL technologies for citizen science and community reporting illegal activities (logging, poaching and encroachment) in 5 target community forests.

The ITTO Forest Loss Monitoring project studied and analyzed SMART PATROL data related to the agency's core missions, then prepared, collected, and analyzed data for community-based data collection design and work development indicators. A new SMART PATROL data collection template was developed to suit specific needs and connect to mobile devices (via App or Play Stores) to help local authorities, communities and youth to report forest loss and degradation.

# Activity 1.4 Install cameras and NCAPs technologies for real-time monitoring and reporting illegal activities (logging, poaching and encroachment) in and around the 5 target community forests.

The use of camera trap technology, so called NCAP, in Thailand was reviewed and provide the device to support and connect with the SMART PATROL SYSTEM. Worked with forest rangers, Thai army and head of target community forests to identify suitable sites (3 sites per each target area) to install NCAP cameras. Set up the NCAP cameras to connect the mobile phones of selected stakeholders to alert illegal activities and its routine maintenance and operation. Conducted NCAPs Training and workshop for forest Rangers, community groups and youth in and around the 5 target community forests. Connected data NCAP cameras and sharing data with SMART Mobile, reporting on SMART Connect and SMART PATROL program.

# Activity 2.1 Conduct training activities and workshops on forest and land monitoring, and user-friendly digital forest monitoring platform that integrates cutting-edge technologies to stakeholders (e.g., local authorities, community groups and youth).

The training activities were on the following subjects: 1) NCAPs, 2) SMART PATROL, and 3) Drone. A total of 37 participants attended, including 22 village leaders and residents from 4 villages and 12 RFD officials from the Forest Protection Units and the Forest Community

# Activity 2.2 Conduct training on sustainable livelihood development activities and income generation to local people and Myanmar refugees.

The training activities were on the following subjects: 1) cultivation, harvesting, processing and commercialization of bamboo and NTFPs, 2) improvement handicraft products, and 3) study visit to Pha Taem National Park on domesticated wild orchid in the buffer zone to reduce illegal collection in the park. A total of 37 participants attended, including 22 village leaders and residents from 4 villages and 12 RFD officials from the Forest Protection Units and the Forest Community Division from the Regional Forest Management Office (Mae Hong Son Branch). The project also provided additional financial support for essential equipment to establish a tissue culture laboratory at Tor Pae Witthaya Community School in Khun Yuam District. This initiative benefits science education for students and offers local people a space to enhance agriculture production and apply skills gained from training. Additionally, the school's participation in the training highlights the potential for future development of similar laboratories in the future. The project organized also training activities on bamboo utilization and the production of Biochar. There were 29 participants coming from 4 participating forest communities and nearby schools. The project organized study visits for community forest and other stakeholders to the Pha Team National Park, Ubon Rachathani to learn how to improve livelihood and to provide knowledge and information of natural resources, conservation and protection of natural resources and park. The participants visited 10 study sites during the 3 days. Key activities included short lectures on Bamboo and Malva nut tree plantation, orchid nursery and orchard, raising stingless bee and eastern honeybee, as well as re-introduction of bamboo and wild orchids into the wild habitat (national parks and wildlife sanctuaries). Bamboo handicrafts and cotton clothes were included.

The Executing Agency has submitted to the Secretariat the project completion report and technical reports which are available on request (English only). The final financial audit of the project has also been completed. The Committee may wish to declare the project duly complete.

\* \* \*