INTERNATIONAL TROPICAL TIMBER COUNCIL

COMMITTEE ON ECONOMICS, STATISTICS AND MARKETS

COMMITTEE ON FOREST INDUSTRY

Distr.
GENERAL

CEM-CFI(LVII)/4
29 September 2023

Original: English

FIFTY-SEVENTH SESSION
13-17 November 2023
Pattaya, Thailand

EX-POST EVALUATION REPORTS

EXECUTIVE SUMMARIES

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Development and Testing of National Forest Stock Monitoring System (FSMS) with Improved Governance Capabilities at all Levels of the Forest Administration
(Philippines)

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(Panama)

[All of these projects were recommended for ex-post evaluation by the Committees at their 56th Session. Complete reports in Spanish (TFL-PD 044/13 Rev.2 M) or English (all others) are available from the Secretariat. Where Executing Agencies provided comments on the ex-post evaluation reports, these are appended to the relevant Executive Summary.]]

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ITTO Project PD 599/11 Rev.1 (M)

Development and Testing of National Forest Stock Monitoring System (FSMS) with Improved Governance Capabilities at all Levels of the Forest Administration

(Philippines)

EX-POST EVALUATION REPORT
[EXECUTIVE SUMMARY]

[The full report (English only) is available on request from the Secretariat]

Prepared for ITTO

by

Mr. Patrick Durst

Executive Summary

1. Introduction

The project was selected for ex-post evaluation by the Committee on Economics, Statistics and Markets and the Committee on Forest Industry (CEM-CFI), at their Forty-Sixth Sessions in November 2022, to establish how well the project served its purposes and to draw up recommendations for future action.

2. Evaluation scope, focus and approach

The ex-post evaluation was conducted per its terms of reference covering a review of relevant documents and information and a work programme to the Philippines.

3. Project facts

The project was intended to help establish greater assurance of the legality of timber harvested, surety of payment of forest fees, and improved transparency of forest-related data in the Philippines. The Specific Objective (SO) of the project was to develop and test an integrated, real-time, multi-tiered, configurable, online National Forest Stock Monitoring System (NFSMS) with improved governance capabilities at all levels of the Forest Administration. This was to contribute to the realization of the Development Objective (DO) of improving forest governance, institutional law enforcement capacity, stakeholder coordination and forest sector competitiveness. The project had three planned outputs: (i) National Forest Stock Monitoring System (NFSMS) module to support 100% “back-to-stump” traceability for wood production; (ii) NFSMS module to support Verifications of Legal Origin (VLO) of timber; and (iii) configuration of an online, multi-tiered and integrated NFSMS environment with field data entry modules.

4. Findings and lessons learned

The Executing Agency (EA) faced an avalanche of adversities in implementing the project, which collectively caused the project duration to extend to 88 months instead of the planned 18 months. Several challenges were beyond the control of ITTO and the EA; others could have been better anticipated and mitigated.

The NFSMS that was developed under the project successfully unified the three project outputs, allowing for traceability of timber and lumber back to the stump of origin, confirming payment of relevant fees and forest charges, and verifying legitimacy of permits and approvals. The system makes use of handheld digital data recorders, radio frequency identification (RFID) nail tags affixed to tree stumps and the associated harvested logs, RFID scanning applications to identify and verify logs in transport, and QR code labels affixed to processed lumber for tracking purposes.

While the project achieved the basic objectives of developing and testing the NFSMS, the system has not been deployed nationwide as originally envisioned, largely due to changed conditions of the forestry sector in the past decade. At the time the project was formulated, the Philippines was still logging timber from natural forests, but just prior to the start of the project, a moratorium halted virtually all harvests of timber from natural forests. The NFSMS developed under the project is well suited for tracking and monitoring high-value timber harvested from natural forests, but is less appropriate for use in tracking lower-value, small-diameter timber harvested from plantations. Without renewed impetus to modify and adjust the NFSMS to focus on plantation-grown timber and imported raw materials) and update the system with newer technologies, there is little expectation of genuine sustainability of the modest gains initially achieved by the project.

Several important lessons can be drawn from the findings related to the project’s implementation, including:

- Consistent and active stakeholder engagement in project formulation and implementation serves to strengthen project design and execution, resulting in more relevant outcomes and stronger buy-in for eventual implementation.

- Retirements and staff movements within EAs can be highly disruptive, threatening the smooth implementation of projects. Contingencies should be planned to ensure continuity of project implementation in the face of possible staff transfers.

- Strong fundamental political commitment to smoothly implement projects is essential to transcend frequent changes in government administrations and leadership.

- To maximize effectiveness and relevance, EAs and ITTO need to remain sharply attuned to changing policies and context and be correspondingly flexible in adjusting project objectives, outputs, and activities, as appropriate.

- Projects that experience long delays between project formulation and effective start-up should be routinely subjected to rigorous review before commencing operations to ensure the original assumptions, risks, planned activities and outputs are still valid.

- Projects aiming to introduce new technological innovations should be cognizant of technological requirements and the corresponding capacities and limitations of countries, especially concerning aspects such as internet connectivity, adeptness of staff to adjust to new technologies, financial resources for maintaining and supporting systems, etc.

- Technological advances occur rapidly and adequate support mechanisms are required for projects that are highly dependent on evolving technologies. When specialized IT systems are being developed, long-term IT maintenance and support services should be contracted well beyond the initial system development phase.

5. Conclusions and recommendations

5.1 Conclusions

- The project achieved the basic objectives outlined in the project document and produced expected outputs, but took far longer to implement than anticipated.

- The changed policies and context of forestry in the country (especially the moratorium imposed on logging in natural forests and the shift to dependence on plantation-grown timber) diminished the relevance and urgency of the originally planned project approach. Reconsideration of the project objectives, outputs, and activities was warranted but did not occur.

- Because of changing needs and the evolving nature of timber harvesting in the Philippines, full deployment of the NFSMS was not accomplished.

- The NFSMS developed by the project could be the basis for a relevant broad-based timber monitoring system, but it requires updating to be compatible with current technologies and additional functionalities are needed to monitor timber sourced from plantations and tracking of imported raw materials.

- Without additional updating and re-orientation of the NFSMS to focus on timber sourced from plantations – particularly those privately owned – and its deployment in the major timber-producing areas of the country, there will be negligible lasting impact from the project.

5.2 Recommendations

For DENR and FMB:

- DENR should undertake a thorough review of the NFSMS developed under the project, determine priorities for needed adjustments and formulate a practical plan for moving forward with systems and modules with utility to meet the current needs of the forestry sector. This may necessitate DENR investing further to update the NFSMS to allow for effective and efficient monitoring of the harvesting, transport, processing and marketing of timber sourced from plantations.

- As the legal and regulatory requirements for lawfully harvesting timber from plantations in the Philippines are relatively minimal, adaptation of the NFSMS for monitoring and tracking plantation-grown timber should likewise be kept simple and easy to use. Consistent with Philippine regulations and international practice, monitoring and tracking of relatively low-value, small-diameter, plantation-grown timber could practically be accomplished with geo-referencing and photo documentation of the plantations being harvested, and tracking of timber by “batches” rather than individual logs.

- If DENR does not have the necessary in-house capacity to maintain and update the NFSMS, the agency should enter a long-term support and maintenance contract with a qualified IT service provider to backstop the deployment and implementation of the NFSMS.

- Once an updated and relevant NFSMS is developed, DENR should follow through with a comprehensive program of training and equipment purchases to facilitate the rollout of the revised NFSMS nationwide, with priority given to the CARAGA region. Implementing rules and regulations should be finalized and issued to facilitate field deployment of the system.

For ITTO:

- The experience of this project points toward the need for more rigorous identification and assessment of risks related to administrative, regulatory, legal, and bureaucratic requirements of member countries and the potential adverse consequences of frequent turnover of staff in EAs. These risks should be acknowledged directly in the formulation of project documents and the appraisal of project proposals.

- Whenever there occurs a lengthy gap (e.g., more than two years) between the time a project is formulated and approved and the start of actual project implementation, a rigorous review of the project context, assumptions, and relevance of the logical framework should automatically be triggered before the project is allowed to commence. Where changing conditions call into question the relevance of the original project approach, appropriate revisions of the planned objectives, outputs, and activities should be made before proceeding with the project.

- For projects with unusually long delays in implementation and/or numerous extensions, the frequency of backstopping monitoring visits should be increased to identify and overcome the causes of delays.

- More effort should be made to facilitate the learning and sharing of experiences from past and ongoing projects of related nature across member countries, to build on best practices, and avoid unnecessary duplication.

ITTO Project TFL-PD 037/13 Rev.2 (M)

Implementing a DNA Timber Tracking System in Indonesia

(Indonesia)

EX-POST EVALUATION REPORT
[EXECUTIVE SUMMARY]

[The full report (English only) is available on request from the Secretariat]

Prepared for ITTO

by

Dr. Gan Kee-Seng

Executive Summary

Introduction

1. The Committee on Economic, Statistics and Markets and the Committee on Forest Industry, during their Forty-sixth Session in November 2022 decided that an ex-post evaluation of TFL-PD 037/13 Rev. 2 (M) to be conducted in order to establish how well the Project served its purposes and to draw up recommendations for future action. The decision of the Committees was based on the Council Decision 3(XXVIII) of 30 May 2000 which specifies the criteria for selection of projects to be ex-post evaluated.

2. Project TFL-PD 037/13 Rev. 2(M) had been implemented by the Government of Australia (GOA) with University of Adelaide (UA) as the executing agency, and Center for Forest Biotechnology and Tree Improvement (CFBTI) and Thünen Institute – German Federal Research Institute for Rural Areas, Forestry and Fisheries (TI) as the collaborating agencies.

Evaluation Scope, Focus and Approach

3. The primary purpose of the ex-post evaluation is to learn lessons from the Project and to draw conclusions for future projects.

4. This evaluation was carried out 52 months after the completion of Project TFL-PD 037/13 Rev. 2 (M), from its inception to its completion regarding administrative and financial matters, organizations, communication, consultation, and cooperation.

Project Facts

5. The project arose from illegal timber trading, which contributes to deforestation, biodiversity loss, and undermines the rule of law. It originated from a workshop in Kuala Lumpur, Malaysia, in 2012, where partners met to plan the project.

6. The development objective of the Project was to contribute to the strengthening of forest law compliance and governance through improved national policy and legal frameworks, strengthened enforcement and other institutions, improved data and knowledge, strengthened partnerships and improved cooperation among the private sector, civil society organisations and other satakeholders. The specific objective of the approved project was: development and implementation of species identification and timber tracking system with DNA fingerprints for two commercial timber tree species.

7. The specific objective of the project was to be achieved through delivery of four outputs derived from 17 activities that had been implemented within the sanctioned financial and time budget i.e. US$ 549,763.28 and 34 months, including about seven months of project suspension due to financial impairment faced by ITTO.

Findings

8. The key problems addressed in the project were not adequately analyzed. The causes and sub-causes relationships in the problem tree were intended to be translated into project outputs and activities. Any adjustments and modifications to the project's outputs and activities would require corresponding changes in the logical framework matrix (LFM) to ensure consistency with the project's specific objectives, and alignment with the project’s development objective.

9. Considering that Indonesia has approximately 1000 timber species traded under around 100 timber trade names, it was important for the project proponents to recognize that the initial databases for DNA barcoding of 50 targeted timber species and DNA fingerprinting of two timber species would be expanded later by the Indonesian partner. These expansions are crucial to fully realize the potential of DNA technology in timber species identification and tracking, particularly for timber control schemes like the SVLK.

10. Technology transfer had been performed through different means: project team members were invited as trainers and presenters to 12 meetings, workshops, and conferences, and two planned stakeholders’ workshops were conducted.

11. Counterpart training and knowledge sharing on DNA analysis: two researchers from Australia, visited the laboratory in Indonesia to support field work planning and implementation, development of SOPs for sampling and to advise on best practice in the laboratory for curation of samples, and one researcher from Indonesia undergone training on laboratory techniques for Advanced DNA Identification and Forensics Facility at the University of Adelaide.

12. The awareness on the potential applications of DNA fingerprinting for wood identification and timber tracking has significantly improved among the target beneficiaries. The databases created as part of this project serve as a crucial groundwork for stakeholders to extend their efforts and encompass a broader range of timber species traded, thereby promoting widespread adoption within the industry.

13. This project had demonstrated the potential for improved traceability through the use of DNA fingerprinting, which is expected to strengthen custom authorities' capacity to monitor and identify CITES species. The active participation of SVLK representatives in project workshops highlights their preparedness to make necessary policy or regulatory adjustments in order to further strengthen the SVLK system.

14. Regarding the physical environment, the collaborating agency or laboratory recently underwent reorganization and made changes to the technical staff. However, thanks to the outputs achieved in this project, the newly assigned agency or laboratory responsible for the initiative can readily resume and expand the DNA fingerprinting databases to cover all species traded in Indonesian. The progress made thus far facilitates a smooth transition and ensures the continued development of the databases by the responsible entity.

15. The sustainability of the project relies heavily on its actual and potential contributions to the primary beneficiaries, which include the forest industries and government agencies. The DNA databases developed for precise timber identification and tracking offer compelling benefits that serve as strong incentives for regulatory agencies to support the maintenance and expansion of the databases established through the project.

16. Overall, the project has achieved a moderate level of success in delivering its planned outputs and meeting its intended objectives, as assessed based on the indicators defined in the Logical Framework Matrix.

17. The sanctioned total amount of project budget was US $ 549,763.28 comprising contributions of ITTO and EA in the amounts of US$ 518,833.28 and US$ 30,930 respectively. A sum of US$ 86,589.28 was retained by ITTO for ITTO Monitoring and Evaluation costs, ITTO Mid-term, Final and Ex-post evaluation costs, and Program Support Cost. At project completion, a sum of US$ 426,278.53 was disbursed to EA.

Lessons learned

18. A thorough problem analysis is essential to develop a conceptually and operationally robust project design. Understanding the direct and indirect causes and consequences of the key problem addressed by the project ensures the relevance and effectiveness of project interventions. This will minimize any realignment or/and refinement of project outputs and activities.

19. To minimize adjustments to planned project objectives and activities during implementation, it is crucial to involve project collaborators and beneficiaries fully in project identification and problem analysis.

20. Clear definition/scope of the involvement of partners and collaborators in project activities and funding requirements are important. Obtaining prior consents and commitments from them are crucial to avoid non-participation during project implementation.

21. Given the large number of timber species (~1000) harvested and traded in Indonesia, it is necessary to justify the selection of a specific number of priority species during project formulation. Proper allocation of resources and manpower needs to be considered in this justification.

22. Members of the PSC should meet more than once a year when there were significant changes or realignment to the outputs/activities needed and be kept informed of the progress in implementation that any delay could receive immediate and timely attention.

23. Any changes to the project outputs/activities or delay shall be discussed in the Project Steering Committee meeting and communicated to ITTO for an official approval with the issuance of No Objection Letter.

Conclusions

24. The report identifies several key findings regarding the project design and contribution to achievements. It highlights that the initial analysis of the key problems addressed in the project was inadequate and suggests the need for adjustments and modifications to align the project's objectives and activities with the logical framework matrix (LFM).

25. The evaluation assesses the achievement of the project outputs and objectives. While some outputs were partially achieved, such as the completion of DNA barcode sequences for 100 timber species and independent timber tracking with DNA fingerprints, significant progress was made. DNA barcoding data was generated for 70 Dipterocarpaceae species, and DNA fingerprinting markers were developed for *Shorea laevis*. Training and communication efforts were successful in providing information to forestry officials and identifying enabling conditions for timber tracking using DNA markers.

26. Regarding the specific objective of developing a species identification system and timber tracking system with DNA fingerprints, the report confirms that the objective was partially achieved. DNA barcode sequences were available for 70 timber species, and DNA fingerprints timber tracking system was ready for use only for *Shorea laevis*. The independent timber tracking with DNA fingerprints in Indonesia was not realized.

27. In terms of the development objective, the report acknowledges that no evidence of a cost-effective and non-paper-based timber tracking system has been developed and implemented in Indonesia to date. However, the databases generated on DNA barcodes for 70 timber species and DNA fingerprints for *Shorea laevis* are seen as valuable contributions to potentially strengthening forest law compliance and governance. Further enhancement and verification are recommended considering the wide range of timber species traded in Indonesia.

28. The report also reflects on the project's impact and relevance. The evaluation mission gathered information indicating that the research institution and agencies involved in the project in Indonesia underwent reorganization. The project's completion and its outcomes were presented to the stakeholders, and collaboration for further work related to DNA barcoding and DNA fingerprinting was expressed.

29. Overall, while the project achieved significant progress in developing DNA-based tools for timber species identification and tracking, there are areas that require further attention and enhancement. The report underscores the importance of depositing the DNA reference databases with the responsible agency in Indonesia to facilitate the ongoing development for wood species identification and timber tracking purposes.

Recommendations

30. For future similar projects should strictly adhere to the existing ITTO Manual on project formulation and ensure full participation of primary beneficiaries to achieve a sound and feasible project design.

31. Minor changes to project outputs and activities may be necessary during project implementation, but any realignment that impacts on the approved project's logical framework matrix should be avoided unless scrutinized and approve by ITTO.

32. During project implementation, additional funding opportunities may be pursued through a separate proposal with defined scope, rather than modifying or amending the existing approved project document to avoid complications in implementation, reporting and monitoring.

33. The completed DNA databases for wood identification and fingerprinting in timber tracking should be officially deposited with a laboratory representing the collaborating agency in Indonesia. Significant efforts are required to enhance or built on the databases.

Executing Agency's Views

<table>
<tr><td colspan="2">Executing Agency's Views on ITTO Ex-Post Evaluation</td></tr>
<tr><td colspan="2">Project Title: Implementing a DNA timber tracking system in Indonesia

Project ID: TFL-PD 037/13 Rev. 2 (M)</td></tr>
<tr><td colspan="2">Overall View on the Evaluation:</td></tr>
<tr><td colspan="2">(Please insert your overall views on the evaluation report, e.g. structure, methodology and its conclusions)</td></tr>
<tr><td>Evaluation Report Recommendations*</td><td>Response to recommendations

(e.g. 'accept', 'partially accept' or 'reject'
– please provide a brief explanation)</td></tr>
<tr><td>Recommendation 1

Future similar projects should strictly adhere to the existing ITTO Manual on project formulation and ensure full participation of primary beneficiaries to achieve a sound and feasible project design.</td><td>Partially accept

We support adherence to the ITTO process for managing projects. However in this case it appears that the project assessment has been undertaken against the original proposal and project plan, rather than the revised project plan. A revised LFM was submitted and we received notification from ITTO that a NOL had been issued. We no longer have access to these documents through the ITTO online system, but attach here the revised contract with ITTO, which stipulates the project objectives and deliverables, and against which the LFM was revised.

Under the revised project, only the Indonesian and Australian partners were contracted for work. Under the original proposal the World Resources Institute, USA, and Thunen Institute, Germany, were involved in the project but due to funding cuts to the project, due to the ITTO financial impairment, these partners were omitted from the revised project plan. Under the revised plan, all project partners were fully consulted and involved in the planning and execution of project work.

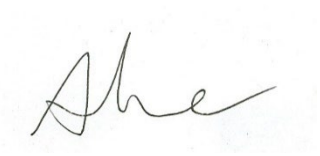
In addition, the financial impairment of ITTO during the early establishment of this project significantly affected the operations and timeliness of response of ITTO, and we undertook the project during a period of immense change in the organization, leading to at least a 2 year impact on the project.</td></tr>
</table>

Recommendation 2 Minor changes to project outputs and activities may be necessary during project implementation, but any realignment that impacts on the approved project's logical framework matrix should be avoided unless scrutinized and endorse by the expert panel.	Partially accept We support adherence to the ITTO process for managing projects. However as noted above for this project, and due to the impact of the ITTO financial impairment, a revised contract was established between the ITTO and Australian and Indonesian partners (see attached). A revised LFM was submitted and we received notification from ITTO that a NOL had been issued.
Recommendation 3 During project implementation, additional funding opportunities may be pursued through a separate proposal with defined scope, rather than modifying or amending the existing approved project document to avoid complications in implementation, reporting and monitoring the current approved project.	Partially accept We support adherence to the ITTO process for managing projects. Additional and follow on works resulting from the project have separate agreements in place (e.g. ITTO fellowship 'Developing a DNA timber tracking system for Southeast Asian timber' 049/20A).
Recommendation 4 The completed DNA databases for wood identification and fingerprinting in timber tracking should be officially deposited with a laboratory representing the collaborating agency in Indonesia. Significant efforts are required to enhance or built on the databases.	Partially accept We support this recommendation. During the project, a significant number of tissue samples were collected and a subset of these were used to develop DNA barcoding loci. Access to these data files was shared, but the data were not formally deposited with the Indonesian partner. As highlighted, significant additional work has been required to produce useable DNA barcoding loci from these data. To address this, the University of Adelaide has funded a PhD student who is also supported by an ITTO fellowship 'Developing a DNA timber tracking system for Southeast Asian timber' (049/20A). The outcome of this work will be DNA barcodes that can distinguish between approximately 137 different Dipterocarpaceae species, and provide geographic origin assignment for Shorea laevis. All DNA barcode and genotype data will be formally deposited with the Indonesian partner as part of our ongoing productive collaboration.

Name, Title and Institution of Respondent:

Andrew Lowe, interim Director, Environment Institute, University of Adelaide

Date: 23rd July 2023

Signature: 

ITTO Project PD 600/11 Rev.1 (I)

Model Capacity Building for Efficient and Sustainable Utilization of Bamboo Resources in Indonesia

(Indonesia)

EX-POST EVALUATION REPORT
[EXECUTIVE SUMMARY]

[The full report (English only) is available on request from the Secretariat]

Prepared for ITTO

by

Dr. Gan Kee-Seng

Executive Summary

Introduction

1. The Committee on Economic, Statistics and Markets and the Committee on Forest Industry, during their Forty-sixth Session in November 2022 decided that an ex-post evaluation of PD 600/11 Rev.1 (I) to be conducted in order to establish how well the Project served its purposes and to draw up recommendations for future action. The decision of the Committees was based on the Council Decision 3(XXVIII) of 30 May 2000 which specifies the criteria for selection of projects to be ex-post evaluated.

2. The ex-post evaluation was carried out approximately sixty-seven months after project completion. This report provides an in-depth diagnosis of the project, presents its successful and unsuccessful outcomes, the reasons for successes and failures, the sustainability of its effects and contributions toward the achievement of ITTO Objective 2000, and draw lessons that can be used to improve similar projects in the future.

3. The project Executing Agency was Forest Research & Development Agency (FORDA), the Ministry of Environment and Forestry, Indonesia. However, after the reorganization of Ministries in Indonesia, Forest Research & Development Agency (FORDA) under the former Ministry of Forestry (MoF), had changed into Forestry and Environment Research, Development and Innovation Agency (FOERDIA), Ministry of Environment and Forestry (MoEF). The Collaborating Agency was Bangli District Forestry Agency (BDFA) Bali Province.

Evaluation scope, focus and approach

4. A review of the project design, logical framework matrix, planned and reported outputs, and intended outcomes was conducted. This report provides an in-depth diagnosis of the project, identifying its successful and unsuccessful outcomes, the reasons for the successes and failures, the sustainability of the project's outcomes, and contribution towards the achievement of ITTA 2006 Objectives and ITTO Strategic Action Plan 2008-2011, and to draw lessons that can be used to improve similar projects in the future.

Project facts

5. Bamboo has undergone significant development in the past two decades and has the potential to replace wood in various industrial applications, contributing to the conservation of tropical forests. In rural areas of Indonesia, bamboo is widely used for construction, mats, baskets, tools, hats, toys, musical instruments, furniture, and popular bamboo shoots in the food sector. Despite Indonesia's abundant bamboo resources, they have not been fully utilized. Recognizing its potential for socio-economic development, the Ministry of Forestry has implemented strategic measures for bamboo industry development through ministerial decrees and executive decisions. These initiatives aim to prioritize non-wood forest products, including bamboo, and promote sustainable forest management. This project, initiated by the Directorate General of Watershed Management and Social Forestry, aligns with the government's efforts to support sustainable bamboo development nationwide.

6. The project aimed to improve the management of bamboo resources for their sustainable use and benefits to local communities. The key problem to be addressed is the weak capacity of stakeholders to develop and utilize bamboo resources in an efficient and sustainable manner. The project specific objective of the project was: to initiate enhancement of capacity amongst stakeholders to develop and utilize bamboo resources in an efficient and sustainable manner.

7. Total budget approved for the project was USD 872,032 comprising of USD 537,095 from ITTO and USD 334,937 in-kind from Government of Indonesia. The total project duration was 44 months including project extension with no additional cost due to project suspension by ITTO due to their internal problem.

Findings and Lessons learned

8. The key problem addressed by the project was adequately defined and analysed. Main causes and sub-causes of the key problem addressed were diagnosed and identified with the cause-effect relationship established. Conceptually, the vertical logic was clear and the project interventions were appropriate to solve the problems at hand.

9. The three project outputs were achieved through the successful implementation of 19 project activities. The achievements specific objectives were verified using the indicators defined in the logical framework matrix. As the specific objectives had been achieved, they must have contributed to achieving the development objective: Improved the management of bamboo resources for their sustainable use and benefits to local communities.

10. In order to construct a conceptually and operationally sound project design, it is essential to perform and adequate problem analysis; relevance and effectiveness of project interventions to resolve the problems at hand are ensured only by knowing the consequence as well as direct and indirect causes of the key problem addressed by the project;

11. Formulation of this project was initiated through a series of consultative meetings involving the main stakeholders of bamboo resource at both the Ministry of Forestry and Bangli Forestry Agency levels. These had provided a strong basic understanding on the issue at hand and identification of the much-needed interventions and strategy for implementation.

12. This project demonstrated a strong major stakeholders' analysis conducted that had provided the necessary inputs for realistic interventions and the commitment and involvement of respective stakeholders in the planned activities with flexibility to include or invite other key players.

Conclusions

13. The project designed to address the sustainable management of bamboo resources has been successful in achieving its objectives and delivering the planned outputs. The project interventions were appropriate and well-targeted to solve the problems identified in the bamboo supply chain, and the vertical logic was clear. The achievement of the specific objectives is verifiable through the indicators defined in the logical framework matrix. The project has contributed to improving the management of bamboo resources for their sustainable use and benefits to local communities, which was the development objective.

14. Overall, the project has had a positive impact on the local communities, and the continuous development of bamboo after the project's completion has been demonstrated through the establishment of a bamboo nursery. The success of this project could serve as a model for similar interventions in other areas with bamboo resources.

Recommendations

15. In enhancing the economic returns to the farmers and local communities, the technology needs for the different locality may be customize based on the local culture and practices. For example, the upper pole/calms left in the bamboo forest/plantation after harvesting in Ngada areas may be used for carbonization and not incense making.

16. In speeding up the development of bamboo to replace timber for engineering applications such as building construction, technical data for design may be developed concurrently with demonstrative applications. It is strongly advisable to make use of the experience of timber utilization in order to convince designers and users to use the material confidently and such uses will increase the viability of bamboo plantations;

17. As local conditions in Indonesia may be vastly different, in developing the bamboo plantation, a few targeted bamboo products may be identified and processing facility developed to create the value for the bamboo in order to convince the farmers or local communities in this venture.

18. It is recommended that follow-up efforts be taken to strengthen the Bamboo Villages in Ngada District and other districts in East Nusatenggara (Nusa Tenggara Timur) Prtovince, where the project had provided bamboo treatment facilities for the local community. The center of excellence will benefit the local community and stakeholders from other regions in Indonesia who will learn and share about the development and utilization of the bamboo.

19. There is a need to develop a comprehensive study or program on the role of bamboo for environmental services as well as for climate change adaptation and mitigation. This could enhance the role of bamboo for environmental and ecological sustainability and may position bamboo as the potential commodity for carbon funds.

Executing Agency's Views

Executing Agency's Views on ITTO Ex-Post Evaluation	
Project Title: Model Capacity Building for Efficient and Sustainable Utilization of BambooResources in Indonesia Project ID: PD 600/11 Rev. 1 (I)	
Overall View on the Evaluation:	
(*Please insert your overall views on the evaluation report, e.g. structure, methodology, andits conclusions*) The evaluation report provides complete information about the PD 600/11 Rev.1(I) projectwith a clear and complete structure, methodology, and conclusions, based on project documents and field visit results. Consultants provide very valuable recommendations based on the results of discussionsand the conditions on site after the project completion. Thank you for writing the evaluation report and the recommendations provided.	
Evaluation Report Recommendations*	**Response to recommendations** **(e.g. 'accept', 'partially accept' or 'reject' – please provide a brief explanation)**
Recommendation 1 In enhancing the economic returns to the farmers and local communities, the technology needs for the different localities may be customized based on the local culture and practices. For example, the upper pole culms left in the bamboo forest/plantation after harvesting for engineered bamboo products in Ngada areas may be used for bio-char/charcoal, bamboo sticks products.	Accept
Recommendation 2 In speeding up the development of bamboo to replace timber for engineering applications such as building construction, technical data for design may be developed concurrently with demonstrative applications. It is strongly advisable to make use of the experience of timber utilization in order to convince designers and users to use the material confidently and such uses will increase the viability of bamboo plantations.	Accept To complement, campaign as well as policy support on the use of engineered bamboo products will be added.

Recommendation 3 As local conditions in Indonesia may be vastly different, in developing the bamboo plantation, a few targeted bamboo productsmay be identified and processing facilities developed to create value for the bamboo in order to convince the farmers or local communities in this venture.	Accept
Recommendation 4 It is recommended that follow-up efforts betaken to strengthen the Bamboo Villages in Ngada District, where the project had provided bamboo treatment facilities for thelocal community. The center of excellence will benefit the local community, students and stakeholders from other regions in Indonesia who will learn and share about the development and utilization of the bamboo.	Accept
Recommendation 5 There is a need to develop a comprehensive research actions or program on the role of bamboo for environmental services as well as for climate change adaptation and mitigation. This could enhance the role of bamboo in environmental and ecological sustainabilityand may position bamboo as a potential commodity for carbon funds.	Accept In Indonesia context, we acknowledge that bamboo development will support and contribute to Indonesia's NDCs target and the Forestry and other Land Uses(FoLU) NetSink 2030.

Name, Title, and Institution of Respondent:

Desy Ekawati

(Technical Cooperation Analyst)

Center for Standardization of Disaster and Climate Change Instruments Ministry of Environment and Forestry (MoEF)

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Date: 20 July 2023

Signature:

ITTO Project PD 737/14 Rev.2 (I)

Developing Supply Capacity of Wood-based Biomass Energy through Improved Enabling Conditions and Efficient Utilization of Degraded Forest Lands Involving Local Communities in North Sumatra Province of Indonesia

(Indonesia)

EX-POST EVALUATION REPORT
[EXECUTIVE SUMMARY]

[The full report (English only) is available on request from the Secretariat]

Prepared for ITTO

by

Dr. Gan Kee-Seng

Executive Summary

Introduction

1. The Committee on Economic, Statistics and Markets and the Committee on Forest Industry, during their Forty-sixth Session in November 2022 decided that an ex-post evaluation of PD 737/14 Rev.2(I) “Developing Supply Capacity of Wood-Based Biomass Energy through Improved Enabling Conditions and Efficient Utilization of Degraded Forest Lands involving Local Communities in North Sumatra Province of Indonesia“ to be conducted in order to establish how well the Project served its purposes and to draw up recommendations for future action.

2. PD 737/14 Rev.2(I) had been implemented by the Government of Indonesia (GOI) with Directorate of Production Forest Development (UHP) of Directorate General of Sustainable Management of Production Forests (DG PHPL), Ministry of Environment and Forestry, Indonesia as the executing agency and Indonesian Sawmill & Woodworking Association (ISWA) as the collaborating agency for forty-eight months starting October 2017 with a total approved budget of USD 787,013 comprising contributions of ITTO and GOI.

Evaluation scope, focus and approach

3. The evaluation commenced with a review of the project design, logical framework matrix, achievement of measurable indicators, and intended outcomes based on the project document, progress reports, technical reports, the completion report and other associated documents provided by ITTO and Project Management Unit. A site visit and meetings with relevant stakeholders were conducted to assess the impact and present conditions after project completion.

Project facts

4. Indonesia faces a shortage of electricity supply, particularly in rural and remote regions, and heavily relies on coal and fossil fuel generated power plants. The government aims to increase the supply of electricity from renewable sources to 15% by 2025. The forest sector is expected to contribute by supplying biomass for energy utilization, but it faces challenges such as undeveloped sources, unsustainable supply of energy wood, lack of manpower, and investment. The ISWA and the Ministry of Environment and Forestry initiated this project in North Sumatra to improve efficiency in utilizing forest resources for wood-based bio-energy, following a regional forum's recommendation.

5. The Development Objective of the project was to increase contribution of the forest sector to renewable energy supply and regional economic development through increased supply of wood-based biomass energy. The Specific objective of this project was to improve enabling conditions for building up capacity to supply wood-based biomass energy in North Sumatera region. Three strategic outputs were identified and supported by 16 planned activities.

6. This project commenced on 1 October 2017 and was completed as planned on 30 September 2021. Project Duration was 48 months with a total budget of USD 787,013: USD 589,853 from ITTO and USD 197,150 from GOI.

Findings and lessons learned

7. A stakeholder consultative meeting was conducted during the project formulation process, involving primary stakeholders of wood-based energy. This meeting served as a platform for information sharing, gathering feedback on the main problem, and aligning interventions and implementation strategies. The State Electricity Company (PLN) was initially identified as a secondary stakeholder but later participated in a Stakeholder Consultation Forum during project implementation. Using the problem tree technique recommended by the International Tropical Timber Organization (ITTO), primary stakeholders analyzed the key problem, identifying its consequences and causes. This analysis facilitated a deeper understanding of cause and sub-cause relationships, leading to the definition of relevant solutions. The project design followed the ITTO manual on project formulation, allowing for smooth implementation with minimal adjustments to planned activities. Operational planning was made easier due to the well-structured project design.

8. The project team completed all sixteen planned activities with a few deviations approved by the PSC/ITTO. Completion of these activities yielded the respective outputs that met the measurable set indicators in the Logical Framework Matrix, LFM. These activity output had contributed to achieving the targeted three Outputs identified in the LFM. Consequently, the Specific Objective was accomplished. This could have created the favorable conditions for realizing the development objective. However, the measurable indicators of Development Objective after three year of project completion have yet to be achieved. It may be premature to measure its achievement as this evaluation was conducted seventeen months after project completion.

9. The key problem addressed by the project had a strong rationale; it was based current issues surrounding the national energy market of Indonesia which was closely linked with the too low share of renewable energy in the national energy mix and this was affirmed by the primary stakeholders: district government, local communities and local private firms. The clear cause-effect relationship had facilitated construction of a sound project design with a strong vertical logic, relevant elements and well-defined interventions. The sound project design had eased the operational planning and facilitated the smooth implementation with only minor adjustments to planned activities.

10. The MOU signed between the Directorate of Production Forest Development of the Directorate General of Sustainable Production Forest Management and ISWA clearly established the roles and responsibilities of each party, thus avoiding any confusion during the course of project implementation.

11. The small Project Management Unit, consisting of only four key personnel (Project Coordinator, Project Secretary, Project Finance Officer, and Field Supervisor), demonstrated its ability to effectively manage project operations and quickly adapt to changing project environments. Close communication and coordination between the Project coordinator and the ITTO Secretariat had significantly contributed to overcoming operational issues and expediting the pace of operation.

12. The Logical Framework Matrix (LFM) indicators of achievement were derived from the project design created during the project formulation. It is essential to refer to these indicators regularly during the course if project implementation as a means of measuring achievement and make necessary adjustments based on the actual progress made. There may be occasions where it is necessary to review the indicators.

Conclusions and Recommendations

13. This project aimed to address the challenges faced in the national energy market of Indonesia, particularly the weak conditions for developing wood-based biomass energy supply in North Sumatra. The problem was analyzed in-depth, identifying its main causes, sub-causes, and consequences. The project design followed a clear cause-effect relationship, ensuring logical and consistent solutions. While policy reforms related to state forest use for energy forest development could have been included, they were considered separate initiatives due to resource and time constraints. The roles and responsibilities of the executing and collaborating agencies were well-defined to avoid any confusion during implementation. The project was efficiently managed by a small Project Management Unit, completing all planned activities within the approved budget and timeframe. However, no investments were made in wood energy-based electricity generation or wood pellet industry during the project.

14. When designing similar projects in the future, it is crucial for project proponents to adhere to the ITTO Manual on project formulation and ensure full participation of the primary stakeholders. This will help create a robust project design that its intended impact or outcome can be realized.

15. To encourage investment in a biomass electricity generation facility, it is essential to incorporate study on policy reforms as part of the project interventions. This should involve collaboration with relevant government agencies responsible for regulating the availability of land for Energy Forest Plantation (EFP) establishment.

16. To accelerate the growth of energy forest plantations on private or community-owned land, it is highly recommended to establish collaborations with established wood pellet manufacturers in the region instead of pursuing new investments and/or creating new markets.

17. Explore the possibility of integrating social forestry into energy forest plantations to encourage the involvement of the local community/farmer. Offering sustained supplementary income to the local community/farmer can serve as a compelling motivation for their active participation in energy forest plantation.

Executing Agency's Views

Executing Agency's Views on ITTO Ex-Post Evaluation	
Project Title: Developing Supply Capacity of Wood-Based Biomass Energy through Improved Enabling Conditions and Efficient Utilization of Degraded Forest Lands involving Local Communities in North Sumatra Province of Indonesia Project ID: PD 737/14 Rev.2(I)	
Overall View on the Evaluation:	
The evaluation has analyzed the comprehensive aspects in developing Supply Capacity of Wood-Based Biomass in the area as well as provided inputs for future projects.	
Evaluation Report Recommendations*	Response to recommendations (e.g. 'accept', 'partially accept' or 'reject' — please provide a brief explanation)
Recommendation 1 When designing similar projects in the future, it is crucial for project proponents to adhere to the ITTO Manual on project formulation and ensure full participation of the primary stakeholders. This will help create a robust project design that its intended impact or outcome can be realised.	Accept This project can be implemented in different region in Indonesia to accommodate the products of EFP developed by concession holders.
Recommendation 2 To encourage investment in a biomass electricity generation facility, it is essential to incorporate study on policy reforms as part of the project interventions. This should involve collaboration with relevant government agencies responsible for regulating the availability of land for Energy Forest Plantation (EFP) establishment	Accept The collaboration among related ministries as policy maker, State-Owned Company (PT PLN) as electricity generation company, local community as the supplier of the biomass (wood, oil-palm) as well as university for R&D is highly required to support development of wood-based biomass to support the implementation of renewable energy generation.
Recommendation 3 To accelerate the growth of energy forest plantations on private or community-owned land, it is highly recommended to establish collaboration with established wood pellet manufacturers in the region instead of pursuing new investments and/or creating new markets.	Partially accept It is necessary to developed research regarding the economic analysis of comparation between chips and pellets as the basic justification to develop the manufacture of renewable energy generation.

Recommendation 4 Explore the possibility of integrating social forestry into energy forest plantations to encourage the involvement of the local community/farmer. Offering sustained supplementary income to the local community/farmer can serve as a compelling motivation for their active participation in energy forest plantation.	Accept The collaboration among related stakeholders including local community as the wood farmer is highly required to support development of wood-based biomass to support the implementation of renewable energy generation.

Name, Title and Institution of Respondent

Dr Rina Kristanti
Directorate General of Sustainable Forest Management
Date: July 5, 2023

Signature

ITTO Project TFL-PD 044/13 Rev.2 (M)

Strengthening of ANAM's Management Capacity to Reduce Illegal Logging and Trade in the Eastern Region of Panama (Bayano and Darien) through Monitoring and Control Mechanisms

(Panama)

EX-POST EVALUATION REPORT
[EXECUTIVE SUMMARY]

[The full report (Spanish only) is available on request from the Secretariat]

Prepared for ITTO

by

Mr. Jorge Malleux

EXECUTIVE SUMMARY

Terms of reference for the consultancy

The main elements of the terms of reference for the ex-post evaluation include the following:

i. Review all relevant project materials, including the precursor and parallel project reports referred to above, project document, final project report and any other outputs provided by ITTO.

ii. Assess the extent to which the development objective, specific objective and project outputs have been achieved.

iii. Assess the impact and relevance of the project and determine the extent to which the project has contributed to strengthening ANAM's capacity to monitor and control forest operations in Panama.

Consultant's work program

The first phase of the consultancy work consisted in a comprehensive review of the project documentation, based on the information received from the ITTO Secretariat and those responsible for the management of the project in Panama. Formal contacts and coordination with these officials were established in Panama, and then a visit to Panama was carried out during a week (7–12 July) during which working meetings, interviews with key stakeholders and field visits were carried out within the project's area of influence.

After this work phase, the consultant prepared a draft report, which was sent to the relevant authorities and project management staff for their information and feedback, and finally the final report was completed.

Evaluation approach and scope

This report is the result of the ex-post evaluation of Project TFL-PD 044/13 Rev.2 (M): "Strengthening of ANAM's management capacity to reduce illegal logging and trade in the Eastern Region of Panama (Bayano and Darien) through monitoring and control mechanisms", implemented between 2016 and 2019 by WWF and MiAmbiente in Panama, and financed with funds from the Government of Japan through ITTO.

In summary it can be said that the main focus of the evaluation was to analyze and assess the efficiency of project implementation and management, including technical, financial and administrative aspects and to recommend follow-up actions, where appropriate, to improve the uptake of project outcomes, particularly related to the ongoing implementation of follow-up project PD 913/20 Rev.4 (M): "Strengthening forest monitoring and extending the coverage of the traceability system in Panama".

Results

The main objective of this project was to **generate changes in the current systems of monitoring, control, traceability and enforcement of existing forestry legislation, in order to strengthen the management capacity of MiAmbiente to reduce illegal logging and trade in the Eastern Region of Panama (Bayano and Darien), ultimately leading to strengthened forest governance in Panama.**

The main results achieved through the project include the following:

A Forest Monitoring and Verification System (*Sistema de Monitoreo y Verificación Forestal* –SMVF) was developed and validated, and a pilot system is currently operational in the Eastern Region of Panama (Bayano and Darien). Integrated monitoring is based on the participation of civil society through the Forest Oversight Program *(Programa de Veeduría Forestal)*, a program that was formally adopted by MiAmbiente, which is consolidated with the improved capacities developed in DIFOR's technical team, both at the national level and in the two operational regions directly benefiting from the project.

The project's area of direct influence has been extended to the Panamanian section of the Choco Darien Ecoregional Complex, a region where 42.8% of Panama's native forests are located, and over 80% of these are located in indigenous territories.

The traceability system validated by MiAmbiente has been implemented and operational, and linked to the integrated control system, under Resolution No. DM-0068-2018 (dated Tuesday, 27 February 2018): https://www.gacetaoficial.gob.pa/pdfTemp/284 78_B/GacetaNo_28478b_20180307.pdf.

The Network for Legal Timber was established with 11 organizations that have signed commitments to incorporate responsible purchasing policies.

A first step towards implementing MiAmbiente's plans was to extend the Forest Traceability and Control System and the Forest Oversight Program[1] to the rest of the country, as a way of consolidating the new Forest Management Model, committed to forest conservation through responsible forest management and trade.

The National Forest Directorate (DIFOR) was established, with 216 trained officials, equipment for control posts in the two pilot regions, and equipment for technicians to carry out inspections in FMUs, including drones.

MiAmbiente now has a strengthened DIFOR, with technical personnel working at high standards and with extensive field experience, advanced technological tools, a group of forest regents, forest and industry owners, and representatives of civil society, all committed to the new management model.

A diagnostic analysis was carried out to assess weaknesses in national capacities for forest policy implementation and monitoring.

A training program was developed for MiAmbiente personnel and other relevant institutions.

One of the main activities was to provide strong support to the operation of the Forest Dialogue Roundtable (*Mesa de Diálogo Forestal* – MDF) aimed at launching a dialogue process to promote a mechanism to identify alternatives to replace the current system of subsistence permits. Support was provided as one of the main goals was to promote sustainable timber harvesting and responsible timber trade.

The project was very successful in generating synergies and strategic partnerships with various international cooperation agencies, such as FAO, IUCN, CATIE and WWF, through which it received significant technical and financial support, enabling it to carry out basically 100% of all activities and achieve expected outcomes.

Conclusions and recommendations
Major conclusions reached in the evaluation include:

Project sustainability is based on the achievement of its main objective: "To strengthen ANAM's capacity to develop effective and efficient forest management", which, as can be seen from the projects that led to this evaluation, have been persistently and effectively geared towards the strengthening and consolidation of a national policy for ongoing improvement in forest sector governance, as well as the strengthening of responsible institutions both at the national and rational levels.

The timber traceability system has been improved and has the capacity to monitor timber production from harvesting to marketing.

This system includes the implementation of a simplified management plan for forest harvesting, which has evolved from the previous system of “permits” that tended to open the way to illegal timber harvesting.

The forest regency element is also an important achievement in the new forest management model, which includes volunteer forest overseers, who together with the community and technicians from the Ministry verify the information of the harvesting plans in the field for their subsequent approval, which has allowed the project to meet specific objective 2 as envisaged in the project document.

The compulsory nature of traceability in the timber trade has helped the communities to better understand the condition of their forests and their value, which has significantly improved their ability to negotiate with third parties and, as a result, has led to substantial improvements in their income and profits from forestry activities, which in turn contributes to the conservation of forest resources.

The achievements obtained in the implementation of this project and previous projects have served to consolidate the reputation of MiAmbiente and DIFOR, to secure very important funds through other sources, as is the case of the GEF-FAO Project, which has been approved at the concept note level, as well as the support received directly from FAO, CATIE, IUCN and WWF.

[1] In 2016, as a result of the Forest Dialogue Roundtable, a Forest Oversight Program was established, jointly promoted by MIAMBIENTE and WWF. Forest Oversight is a mechanism that allows individuals, community organizations and civil society organizations to monitor forest management in the Natural Forest Estate of the Nation.

Recommendations

- It is advisable that an update of the current situation (baseline) be carried out from time to time (3 to 4 years) to objectively assess progress and achievements in relation to timber harvesting and trade, especially in natural forests, and to evaluate the effectiveness of the traceability system, which is continually undergoing technical improvements.

- In view of the long experience gained through the number of projects implemented in the same field, it is recommended that a detailed and comprehensive systematization of processes, systems and past outcomes, as well as short- and medium-term projections, be carried out. This would be an excellent contribution of the project not only for the Panamanian context but also as a model for other countries, especially in Central America.

- MiAmbiente should strive to reactivate the dialogue roundtable with the participation of all stakeholders identified during the project, as this institutional platform can give increased legitimacy and support to project activities and objectives. The parties recognize that through the strengthening of forest governance it is possible to achieve the sustainability of forest resources.

- It has been reported that the donors of project PD 913/20 Rev. 4 (M) are proposing to reduce the project implementation period from 36 months to 27 months. This should be carefully evaluated so as not to affect the development and achievement of all expected outcomes and the implementation of all activities without affecting their quality (for example, in the project's work plan, more than 15 workshops are planned, which would be very difficult to achieve in the 27-month timeframe).

- Review, update and improve the logical framework with success indicators and measurable means of verification.

- A comprehensive baseline needs to be developed during the first phase of project implementation to determine the status of the forest sector in relation to timber logging and trade, as well as deforestation and degradation of natural forests.

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