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REPORT OF COMPLETED PROJECTS AND PRE-PROJECTS

This document highlights the work carried out under project PD 737/14 Rev.2 (I) of the Committee on Forest Industry. The Committees may declare this project complete:

Committee on Forest Industry

- 1. 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**

Budget and Sources of Funding:

Total Budget:	US\$	787,502
Government of Japan:	US\$	589,863
Government of Indonesia/ISWA:	US\$	197,150

Executing Agency: Directorate General of Forestry Utilization Management (BUK),
Ministry of Forestry

Collaborating Agency: Indonesian Sawmill & Woodworking Association (ISWA)

Approved: March 2016

Financed: March 2016

Starting Date: October 2017

Duration: Planned: 48 months
Actual: 59 months

While funds were pledged to this project in March 2016, subsequent events led to the decision to suspend implementation of this project and any disbursement of funds until after the Fifty-second Council Session considered the impairment of ITTO funds. The amount pledged to this project was slightly (US\$489) less than the approved budget. The Secretariat liaised with the Executing Agency and a minor amendment to the project budget was agreed to allow the project agreement to be signed based on the amount of funds received. The project agreement was signed in March 2017 and the Executing Agency submitted the Inception Report and other requirements to the ITTO Secretariat in October 2017. The first installment of funds was sent immediately thereafter.

This project aimed to increase the contribution of the forest sector to renewable energy supply and regional economic development through increased supply of wood-based biomass energy. Its specific objective was to improve enabling conditions for building up supply capacity of wood-based biomass energy in North Sumatra region by efficiently utilizing existing forest resources through development of energy forests on degraded lands involving local communities.

The expected outputs of the project were i) development of sustainable supply of energy wood initiated, ii) skillful manpower for development of wood-based biomass energy available, and iii) investment in wood-based energy industry development promoted. The project is being implemented in close collaboration with local governments, local communities, private sector and other partners.

At project completion, improved enabling conditions for development of the wood-based energy industry supported achievement of national policy objectives of green energy development through efficient utilization of available forest resources. Development of energy forests on degraded lands helped reduce carbon emissions and at the same time opened up larger employment opportunities that augmented incomes of local communities. In addition, operation of power plants for manufacturing of wood pellets or generation of electricity also created large numbers of jobs, thus increasing income of local communities and reducing carbon emissions through reduced use of coal and fossil fuels. By achieving the specific objective and realizing investment in wood-based biomass energy, the project significantly contributed to acceleration of economic growth, creation of employment and reduction of carbon emissions consistent with the basic principles of national economic development adopted by the government.

All planned project activities were completed within the sanctioned time and budget, i.e.: from October 2017 to September 2021. While all planned activities were fully executed, planned outputs were only partially delivered, and the specific objective was achieved only partially due to partial delivery of Output 2. The following table describes the planned versus realized outputs and activities:

Output/activity	Realized
Output 1: Development of sustainable supply of energy wood initiated	No change had been made to the originally defined Output 1; it had been fully realized as planned.
<u>Activity 1.1:</u> To identify suitable lands for development of energy forests in North Sumatra province	No change was made to the original Act. 1.1; it was 100% executed as planned.
<u>Activity 1.2:</u> To formally allocate lands for energy forest development on existing land use plan	At the approval of PSC, the activity was changed to become: To identify suitable lands for forest plantations in 3 FMUs; newly defined activity had been fully realized.
<u>Activity 1.3:</u> To establish energy forest models for purpose of demonstration and training (3 sites, 3 species, 36 Ha in total)	Only 33 Ha of planned energy forest model was realized due to scarce suitable accessible lands.
<u>Activity 1.4:</u> To provide estimates of sustainable supply potential of wood from energy forests.	No change was made to the originally defined activity; it had been fully realized.
<u>Activity 1.5:</u> To assess long-term supply potential of energy wood from non-forest sources	No change was made to the originally defined activity; it had been fully executed.
Output 2: Skillful manpower for development of wood-based biomass energy available	No change had been made to the original Output 2; it had been partially realized.
<u>Activity 2.1:</u> To conduct dialogues with local communities on benefits of energy forest development (50 villages in 25 districts)	The activity had been implemented only at 49 villages in 13 districts as 12 other districts had no sizeable lands for energy forest development; the change was made at the approval of the PSC.
<u>Activity 2.2:</u> To train local communities on technical skills for energy forest development covering nursery, planting and harvesting techniques (100 farmer leaders of 50 villages)	The training realized covered also skills for forest honey production at the approval of the PSC to serve as an incentive for farmers to take part in energy forest development.

<u>Activity 2.3:</u>	To train local communities on cooperative management to support energy wood business (50 farmers leaders of 50 villages)	No change was made to the planned activity but only 35 leaders of 35 villages were trained due mainly to the strict enforcement of protocols on covid-19 pandemic control.
<u>Activity 2.4:</u>	To conduct comparative studies on wood-based energy development for executives and managers (2 trips, 3 persons)	No change was made to the activity; 3 trips were realized with 5 participants.
<u>Activity 2.5:</u>	To develop technical manuals on energy forest development using gamal, kaliandra and lamtoro	No change was made to the activity; it had been fully realized as planned.

Three unplanned activities were implemented using unspent funds of the project with the prior approval of ITTO during the reporting period in October – December 2021 as highlighted below:

- To support forest farmer groups (KTHs) on initiating development of an agro-forestry livelihood project. Under the project, gamal and kaliandra will be grown in combination with quick yielding coffee species and bee raising for honey production. The outputs will be bee honey (short run), coffee beans (mid-term) and energy wood (mid to long run).
- To undertake the final maintenance and growth monitoring of the demonstration plantations. The activity included weeding, application of pesticide as needed and fertilizer as well as monitoring of performance of the plantations.
- To demonstrate the use of the technical manuals for growing energy wood species (gamal, kaliandra and lamtoro) developed under Activity 2.5 of the project. The activity ensured that FMUs and farmers were able to properly use the technical manuals on the ground.

The prospect for sustainability of the project is excellent under one condition: that investment in energy wood processing is realized. If this were true, markets for the energy wood planted by local communities and FMUs on degraded lands would be secured; secured markets would serve as a strong incentive for local stakeholders to get involved in and support wood-biomass energy development. If markets for energy wood were secured, local economies would be growing; small local firms and village cooperatives would be carrying out different activities relating to energy forest development including planting, harvesting, hauling, etc. Also, private firms and cooperatives would be gaining economic incomes from their engagement in energy wood processing activities. It is obvious that security of market for energy wood and for processed energy wood such as chip wood and wood pellets is key to sustainability of the project; and markets can be secured only if investments in wood-based energy development are realized. The government is urged to play a role in realizing the needed investment in energy wood production and utilization, not only for profits but also for social and environmental benefits accruable to North Sumatra region.

The completion report, final financial audit report and technical reports have been satisfactorily received by the Secretariat and are available on request.

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