ITTO 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

PROJECT INFORMATION

- Host Government: Republic of Indonesia
- Executing Agency: Directorate of Production Forest Development (UHP) of Directorate General of Sustainable Management of Production Forests (PHPL), Ministry of Environment and Forestry, Indonesia
- Collaborating Agency: Indonesian Sawmill & Woodworking Association (ISWA)

Total budget approved for the project:

- ITTO: USD 589,863
- Government of Indonesia (in-kind): USD 197,150
- TOTAL: USD 787,013

Approved project duration –48 months

- Started – 1 October 2017
- Completed – 30 September 2021 (48 months including about 6 months project suspension and Covid-19 lockdown)

PROBLEM ADDRESSED

- To improve the enabling conditions for building up supply capacity of wood-based biomass energy are evidently weak due to undeveloped source, unsustainable supply of energy wood, lack of competent manpower and lack of investment in the forest sector in North Sumatra region.

DEVELOPMENT OBJECTIVE

The project aimed to increase contribution of the forest sector to renewable energy supply and regional economic development through increased supply of wood-based biomass energy.

SPECIFIC OBJECTIVE AND OUTPUTS

The project aimed to improve enabling conditions for building up supply capacity of wood-based biomass energy in North Sumatra region through,

- development of sustainable supply of energy wood initiated;
- skillful manpower for development of wood-based biomass energy available; and
- investment in wood-based energy industry development promoted.

PROJECT ACTIVITIES

- 16 project activities
- Activities: identification of suitable land for EFP, establishment of energy forest models, training covering nursery, Planting, tree nursing and harvesting techniques, technical studies on the calorific values of the biomass and feasibility studies
- However, Activity 1.2: To formally allocate lands for EFD on existing land use plan. was considered difficult or even impossible to realize as these required changes to existing land use of the province and would require considerable resources, especially time and efforts. At the approval of the PSC, Activity 1.2 was redefined as “To identify suitable lands for establishing energy forest models in three FMUs using gamal, kaliandra and lamtoro for purpose of demonstration and training”.
- All these activities were carried out and generated the targeted project outputs

ACHIEVEMENT OF SPECIFIC OBJECTIVE

Specific objective: to improve enabling conditions for building up supply capacity of wood-based biomass energy in North Sumatra region

INDICATOR	ACHIEVEMENT
Approximately 36 Ha of energy forest established and used for demonstration and training	33 ha of energy forest model had been established and used for demonstration and training
At least 100 farmers leaders trained on skills for energy forest development and 50 leaders on community cooperative management	The project had trained 205 farmer leaders on development of Energy Forest Plantation and another 35 leaders on community management. The reduced number was due to the Covid 19 restriction on the number of people allowed in a congregation during training.
2-3 companies indicated interest in making investment on wood-based energy industry	Reported that two entrepreneurs expressed interests to invest in wood pelleting manufacturing, however, the long Covid 19 condition may had affected their plans

ACHIEVEMENT OF DEVELOPMENT OBJECTIVE

The specific objective has been accomplished, this would have created favorable conditions for realizing the development objective: To increase contribution of the forest sector to renewable energy supply and regional economic development through increased supply of wood-based biomass energy.

The progress of Energy Forest Plantation (EFP) development is dependent on various factors, including government policies, investments, and participation of local communities. While the project has created trained manpower and technical information on EFP establishment, a clear government policy on the accessibility of land for EFP and investment in the utilization and processing of biomass are still lacking.

CONCULSION

- The achievements of the specific objectives were verifiable through the indicators defined in the logical framework matrix.
- The project designed 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. Policy reforms related to state forest use for energy forest development could have been included, However, this was considered separate initiatives due to resource and time constraints.
- 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.
- 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