

# Revealing Socio-Economic Dimensions of Farmers on HTR Area in South Lampung Regency, Lampung Province

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**Abstract.** Community Plantation Forest (HTR) is one of the social forestry schemes which is a new breakthrough in alleviating poverty in communities around the forest. This study is aimed to reveal the socio-economic conditions of farmers over time to get a measurable picture of the community changes on their socio-economic conditions. The research was conducted in Budi Lestari Village, South Lampung Regency, Lampung Province. Data collection methods include in-depth interviews with selected informants by purposive sampling, field observations and focus group discussions. Data analysis was undertaken through tabulating and examining all data from various sources. Those are using qualitative descriptive analysis. The result shows that land-based income is the main source of income for farmers, who are highly dependent on arable land, which is located in state forests (HTR). Plantation commodities, especially rubber, became the main source of income used to meet the needs of daily life, although their contribution decreased slightly compared to previous year. Some farmers cultivate forestry commodities, although under limited quantities. Some of them started to replace unproductive rubber plants to sengon plants. HTR area was planted with sengon under agroforestry system to support food security programs under intercropping forestry trees, estate crops and agricultural crops.

**Keywords:** Community plantation forest, Budi Lestari, socio-economic dimension

## 1. Introduction

Community plantation forest (Hutan Tanaman Rakyat or HTR) is plantation forest in production forest area developed by communities to improve potential and quality of the production forest by applying silvicultural system that can sustain the forest resources. HTR is a new nuance of forestry management that was created by the government to support community around forests empowerment to alleviate poverty [1-2-3-4]. HTR is part of social forestry scheme which is part of the Indonesian government's corrective action to take sides with the government towards the community, HTR become an alternative tools for resolving tenure conflicts in forest areas [4-5]. Currently, the Government has issued Minister of

Environment and Forestry Regulation No. 9/2021 on social forestry, which replaces the previous regulations related to social forestry.

The development of Community Plantation Forests (HTR) is a government effort in order to increase the participation and responsibility of forest communities in forest management based on principles of production forest management. According to Wahyudiyati, et al. [6] that Three types of hindrances were found upon HTR implementation – political, economical and technical constraints. Politically, it seems limited support from the government in HTR development as the location of HTR was generally far away from villages, difficult access to sites, and situated on critical land. From an economic aspect, investing in the HTR needs a long period of time until harvesting before villagers could generate income from timber [7]. Local villagers in rural forest areas generally prefer short-term income from agricultural enterprises. From a technical aspect, there was poor institutional strengthening of the participant communities to support their application for permits or funding for HTR development [8]. In terms of field implementation, the HTR was not as straight forward as expected. Smallholders found it was quite difficult to legally access and develop timber resources under a HTR program [2].

Several research results showed that the level of public acceptance of the HTR program is still low due to the lack of socialization activities [8-9-6-7]. Based on the researches [10-11-12-13] stated that HTR provided a significant contribution not only in improving the community's economy, but also in improving forest ecology. This studies also describe the other side of the community plantation forest program in South Lampung Regency, whether Community Plantation Forests provided effect to the socio-economic community around forest or not.

Based on research result of Race et al. [16], local economies were found to be dynamic and volatile, with smallholders relying on planted forests to support their livelihoods. This paper is aimed to provide an analysis of the socio-economic conditions of farmers over time to obtain a measurable picture of its dynamics. The research was conducted in Budi Lestari Village, South Lampung Regency, Lampung Province. Through this paper, it is hoped that it can be input or feedback for parties related to Community Plantation Forestry program that is able to improve the socio-economic community without damaging the forest.

## **2. Methodology**

### **2.1. Study Location**

In South Lampung, HTR permit was given in 2017 to five farmer group associations (Gapoktan) namely Tani Maju in Budi Lestari, Maju Bersama in Jati Baru Village, Jati Rukun in Jati Indah Village, Jaya Abadi in Sri Katon Village and Gemah Ripah in Sinar Ogan Village. This research was conducted in Budi Lestari, Tanjung Bintang Sub-district, South Lampung District, Lampung Province, located inside working area of KPH Gedongwani, farmer group association (Gapoktan) Tani Maju, where the HTR area is the largest compare with HTR area in aother villages (1,569.91 ha).

### **2.2. Data Collection**

Data was conducted in February-March 2018, and February-March 2020 using interview and secondary data. Data collected includes primary data at the village level and secondary data at the provincial, district and village levels. Primary data is focused on economic and social dimension (ESD). Secondary data collected in the form of village monographs as well as other related information and regulations.

The majority of respondents came from the same households both taken from data collection in Budi Lestari Village on 2018 and 2020 (except one new household). Interviews were carried out towards 30 household farmer respondents in Budi Lestari I hamlet and Budi Lestari 2 hamlet. There were 21 female respondents and 9 male respondents from all 30 respondents. The reason behind the number of female respondents was that the interviews were undertaken, mostly, in the morning to noon time where most of male farmers were working on their field. However, those situation did not reduce the value of knowledge and information given by female respondents due to they were, in general, manage their own household daily and manage their land as well. The selection of respondents was carried out by taking into account the welfare level of Budi Lestari Village community.

Baral et.al [17] in their research related to household income towards community forestry in Nepal, divided the welfare class categories into low, middle and affluent. This study follows the local agreement in Budi Lestari village. The determination of the level of welfare of welfare is formulated and agreed by the representatives of local community by taking into account the appropriateness and local values that accepted in the village. The agreed level of welfare is 57% of the people are in the 'enough' (medium) category and 43% of the community are in the 'less' (low) category. Local people are not accustomed to claiming that their village members are 'rich people', although they realized from the general point of view or outside society that these residents suites to 'rich people' category. This study follows the local agreement, therefore of the 30 respondents, 16 respondents were categorized to a moderate level of welfare and the other 14 were categorized in a low level of welfare.

**Table 1.** Method of Data Collection

Method	Data source/Respondent	Location
Data record	Government institutions, official reports	Province, district, village
Interview	Farmers group member and key persons	Village, district
Field observation	Condition and management technique of HTR & private land, etc.	Village
Focus group discussion	Stakeholders and farmers	Province, district, village

### 2.3. Data Analysis

Data tabulation was done for data processing. Furthermore, the data was analysed using qualitative descriptive method and presented in descriptive statistics.

## 3. Result and Discussion

### 3.1. General Description

Budi Lestari Village is an extension of Jatibaru Village. The area of Budi Lestari Village is based on the Decree of the Lampung Governor, number G/272/B.III/HK/1991 concerning the village process preparation towards the village definitive in the South Lampung Regency with the area consists of 1,395.25 Ha. The number of hamlets in Budi Lestari Village is 14 hamlets with the agricultural land is 57 Ha of rainfed rice fields and 749 Ha is a productive land and 243 Ha is provided for public facilities such as roads, etc. In the northern part, Budi Lestari Village is bordered by Panca Tunggal Village, Merbau Mataram sub district. At the West, it is bordered by Jati Baru Village, Tanjung Bintang sub district. At the East, it is bordered by Sinar Karya Village, Merbau Mataram sub district.

The population of Budi Lestari Village in 2021 is 4,468 people with 1,124 families (KK), consisting of 2,297 men and 2,171 women. Most of the residents of Budi Lestari Village are

farmers (619 people) and 115 people are farm laborers. other job category are cattle man, traders, carpenters, masons, tailors, civil servants, retirees, Army and Police, village officers, craftsmen, small industries and industrial laborers [18].

**Table 2.** Characteristics of respondent in Budi Lestari Village

Variable	Remark
Age (household-average)	49 year (33-67 year)
Source of income (household)	
farmer	87 % (13% having another job, i.e.: laborer, carpenter, rubber plantation laborer, village officer)
other	13 % (laborer, mason, entrepreneur, mall wooden industry)
Family responsibility (average)	4 person (2-7 person)
Productive laborer (average)	2 person (1-5 person)
Level of household welfare	
Medium (moderate)	57 %
Low (less)	43 %
Land occupation (average)	
Private property	1.15 ha
Non private property (state foresta/HTR)	0.02 ha 1.13 ha

### 3.2. Land Use

Budi Lestari Village lies on, legally, a state forest area. Based on history - the information from the elderly, in the 1960s a group of people came to this area and was doing land clearing o. the real forest. The group consists of Javanese people whose group leader lives in Tulang Bawang Regency, Lampung Province. The cleared land is used to farming purposes to meet their needs for life. The cleared land continues to grow until recently and become a developing and busy area. Budi Lestari Village is within this area. This background history is one of the main reason why the entire area of Budi Lestari Village received HTR permit in 2017. Therefore, all land in Budi Lestari Village is still a state forest (legally) or not being able to be transferred into private property. As a consequences, land certificates are not able to be issued.

In-depth interviews provided some significant results. It was revealed that the granting of HTR permits to the community has made the community having a new perception that their existence was legally recognized by the government and for them, it was safer to manage and use the land they occupied although under some understanding, they lived still on the state forest land. In addition, some Budi Lestari villagers also had another land in other villages – that is not within state forest. Villagers used their all occupied lands as their source of income and to meet their living needs for their family.

**Table 3** Arable land tenure Budi Lestari village, 2020

Type of arable land tenure	Welfare level - large (ha)		
	Medium	Low	Average
Private property	0.02	0.02	0.02
Non private poverty (state forest)	1.52	0.68	1.13
Total	1.54	0.70	1.15

Farmer was the main occupation of the respondent. Estate and agriculture crops were preferred to be cultivated in their farmland than trees, considering agricultural crops with a much shorter harvest duration. Rubber, paddy, cassava and corn were the main commodities cultivated and had become their farming culture in years. These commodities already have

markets with a more certain selling price, they were easy to sell to provide immediate cash to meet their daily needs. Some farmers also planted forestry trees or commodities. Planting trees is intended as a savings for farmers when they need emergency funds, such as cost of education for their children.

Interview results to village officer of Budi Lestari Village showed that the interest to plant forest commodities in their HTR land is low. This is due to they have had experiencing crop failures. Another experience was that when they planted acacia, at harvesting time, they received payment below their expectation (low price). In current situation, villagers has shown their interest on planting Sengon and spending their big hope to Sengon to provide them much benefit. Sengon price is quite high. In 2011, farmers starting planted sengon. Farmers received Sengon seeds from the people's nursery (KBR). After harvesting, they replaced it with acacia, this is because there is no more assistance from KBR.

Most of the land in Budi Lestari Village is dominated with rubber trees, because rubber is a type of commodity that provides great benefits for their livelihood and for their main source of income. However, there is an obstacle on rubber seed sources. The current condition is that the planted rubber by the community is based on random seeds. Some of the seeds come from Palembang. Farmers, then, feel was being cheated because, this type of seeds if already grown up, the rubber sap production is low. The price of rubber is determined by its quality. Sometimes farmers mix rubber lumps with water. This attempt made the weigh becomes heavier. As a consequence, the price is given cheap by the collector or middlemen.

In the year of 2001, the price of raw rubber was Rp15,000/kg, then it was decreasing in 2014 to Rp10,000/kg and Rp8,000 in the year of 2016. The lowest price was on 2017, where the price was Rp2,500-3,000/kg. In the year of 2018, the rubber price was increasing to Rp4,200-6,000. The rubber wood is used as a raw material for producing plywood. The big rubber woods are delivered to the wood processing in Natar. While the small rubber timber is sent to be used as firewood for processing cassava into cassava flour in Neglasari. One of the cassava flour factory is PT. Bumi Waras Waras.

Education plays a very important role in community organization and creativity in managing land. Relating to the Budi Lestari Village program, they have built a reservoir that function to collect water for preparation of the dry season. The village has also sent one person to take part in the composting training.

Management of rubber plantations in various locations also pays attention to gender aspects. In rubber farming households, men and women are equally involved in rubber plantation management activities, such as tapping rubber trees which must be done regularly and time consuming [19-20]. In Budi Lestari Village, farming activities tend to involve the male and female members in the household, in an almost equal sense. The workload between men and women is around 60%:40%. Men have a greater role in overall cultivation practices starting from seed procurement, land preparation, planting, fertilizing, weeding, spraying grass, thinning forest trees, harvesting and marketing. Meanwhile, women's roles re balanced in terms of planting, fertilizing, weeding, thinning forest trees (cloves, cocoa), harvesting and marketing.

Tree had not yet counted as a worthy commodity since cannot provide immediate returns. The farmers still focused on how they could get money quickly to fulfil daily needs. The community is increasingly raising awareness to plant forest commodities after receiving the Master Tree-Grower training course and presentations from business actors in the course.

### **3.3. Contribution of Commodities to Farmers' Income**

The source of income for the Budi Lestari Village community comes from land, especially those from plantation commodities. The type of plant that is the biggest contributor

to community's income is rubber which has been cultivated for generations in the area. Although some rubber fields apply a monoculture system, most farmers generally still rely on local rubber species grown by sharing other types of plants on the same land (agroforestry). The results of the study [16] that community rubber is a source of latex which is one of the non-timber forest products and as a source of livelihood, especially for small farmers in the lowlands and in the highlands as well as in less fertile soils in Kalimantan and Sumatera, including South Lampung Regency.

Every day, farmers, both men and women, go to tap rubber. They left their house around 5.30 am and return back home at noon. Rubber sap sales are collected once or twice a week as much as 30-60 kg per sale. The selling price of rubber fluctuates greatly with a range of Rp 4.000,- to Rp 7.000,- per kg which is determined by the price of the rubber from the factory, the quality of the rubber, and the buyers/traders/rubber stalls. In the plantation category, farmers also grow various types of fruit, some of which are sold and most of them are consumed by themselves. These fruits include oranges, coconuts, coffee, bananas, jackfruit, petai, papaya, and noni (mengkudu).

Result from household survey conducted in research location showed that land-based income was the main household income (Table 4). The research revealed that 67% of family income of the farmers came from land for 2018, while in the year of 2020 was 65%. While income from non-land provided 33 % (2018) and 35% for the year of 2020. Income from non-land included from other (including government subsidies) contributed only 1% from total household income. Probably it was because less alternatives available for working off-farm or less entrepreneur ability. Therefore, they maximize income from land by cultivating agriculture and estate crops. This condition reflected farmers' dependency on land to sustain their livelihood. Furthermore, as farmers were really dependent on income from land, the research also revealed that different lands serve different contribution to household's income.

**Table 4.** Source of income of Budi Lestari village community in the year of 2018 and 2020

Source of income	2018	2020
Land	Rp20,776,387.- (67%)	Rp20,805,617.- (65%)
Non-land	Rp10,403,800.- (33%)	Rp11,060,233.- (35%)
Total	Rp31,180,187.- (100%)	Rp31,865,850.- (100%)

The research result in 2020, as presented in Table 5, where the contribution of land is 65% of the land that comes from owned land, not owned, in this case community plantation forests, and from livestock. Meanwhile, non-land contributions come from labor services.

**Table 5.** Annual source income of Budi Lestari village community in the year of 2020

No.	Source of income	Welfare level – Income					
		Medium		Low		Average	
		Rp	%	Rp	%	Rp	%
<b>I Land</b>							
1	Private property	526,625	1	822,857	3	664,867	2
2	Non private property	24,443,938	66	11,276,393	43	18,299,083	57
3	Cattle	2,765,000	8	786,429	3	1,841,667	6
	Total I	27,735,563	75	12,885,679	49	20,805,617	65
<b>II Non Land</b>							
1	Labor service	3,599,375	10	9,850,000	38	6,516,333	20
2	Entrepreneur	3,856,250	10	1,328,571	5	2,676,667	8
3	Other	1,587,500	4	2,186,929	8	1,867,233	6
	Total II	9,043,125	25	13,365,500	51	11,060,233	35
	<b>Total</b>	<b>36,778,688</b>	<b>100</b>	<b>26,251,179</b>	<b>100</b>	<b>31,865,850</b>	<b>100</b>

Meanwhile, the results of agricultural crops are generally not being sold but for the consumption of their own families only. The main types of agricultural crops are paddy, corn and cassava. According to Iskandar et. al [21], one of the advantages of doing agricultural cultivation is that there is always something ready to be harvested for farmer households to meet their daily needs. In Lampung Province, especially for paddy and corn, farmers often receive assistance with seeds and fertilizers provided by the local Agriculture Service through the 'pajale' program. Government policies with the aim of realizing food security in Indonesia are regulated in the Regulation of the Minister of Agriculture Number 03/2015 concerning Special Guidelines for Increasing Rice, Corn, and Soybean Production through the 2015 Irrigation Network Improvement Program and Supporting Facilities. Regarding forestry plants, only a few farmers have planted forestry commodities, namely acacia, sengon, teak and other types. The culture of planting timber is still less popular compared to the culture of planting rubber. Farmers still rely on wood seeds from government programs or other assistance/cooperation.

The farmland produced a wide range of commodities classified into agriculture crops, estate crops, trees and others. As presented in Figure 4, the research revealed agriculture crops provided contribution to household income as much 19% (2018), and 17% in the year of 2020. While the contribution of estate crops: 73% and 69% for 2018 and for 2020. In the meantime, timber production was considered as the low source of family income in the year of 2018 and 2020, i.e.: 2% and 3%. The matrix levelling that was developed during FGD session at Budi Lestari Village revealed that paddy, cassava, corn and rubber have become the main commodities that contributed towards household income. Farmers also raise livestock such as chickens and goats. Goat farming also contributes significantly to household income. From the results of the focus group discussions, paddy, goats and rubber have a significant role.

Almost all commodities produced in Budi Lestari Village were sold and only very small parts were used directly by the farmer households. It is happened because the farmers already choose commercial agriculture and estate commodities. Money obtained from selling of the harvest then used to fulfil other daily needs and some parts also used to pay costs for the next planting period.

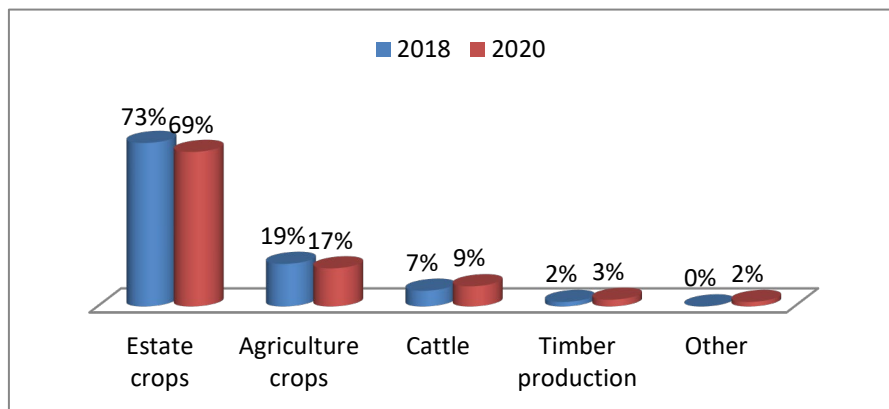


Figure 3. Contribution of Commodities of farmers' land in Budi Lestari Village

#### 4. Conclusion and Recommendation

Land-based income is the main source of income for farmers, especially those from plantation commodities. Therefore, they are highly dependent on the availability of cultivable land, in this case Community Forest Plantation (HTR). Plantation commodities, especially

rubber, although their contribution decreased slightly (in 2020) compared to the previous income (in 2018), are still the main source of income used to meet the needs of daily life. For forestry commodities, although limited, some farmers have planted Sengon, acacia, teak, mahogany, etc. some of them even started to replace rubber plants that were no longer productive with sengon plants. The HTR permit that has been obtained in 2017 will be followed up with a plan to plant sengon using an agroforestry system on some land, in addition to other land to plant paddy and corn in order to support food security programs.

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