



SOCIO-ECONOMIC IMPACT OF PALM OIL LAND CONVERSION TO PADDY

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How to Cite :

Rasoki, T., A. Nurmalia, L. Asnamawati. 2020. Socio-Economic Impact of Palm Oil Land Conversion to Paddy. *Journal of Agri Socio-Economics and Business*. 2(2): 99 - 108. DOI: <https://doi.org/10.31186/jaseb.02.2.99-108>

ARTICLE HISTORY

Received [10 Dec 2020]

Revised [18 Dec 2020]

Accepted [24 Dec 2020]

KEYWORDS

Impact, socio-economy, land conversion.

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ABSTRACT

In recent years there has been a change in the function of oil palm plantations to rice. About 370 hectares of oil palm and swamp plantations in Mukomuko District, Bengkulu, were converted into new rice fields. This research aims to examine the social and economic impacts of land conversion. The location selection was done purposively and the respondent determination was done by using the solvin method, which resulted in 181 respondents. For data analysis using qualitative and quantitative methods. The research results explain the social impact of farmers gathering in the fields more frequently at planting, fertilizing, spraying pests, and at harvest time. Farmers who were previously very consumptive, especially when the price of palm oil increased and experienced difficulties when the price of fresh fruit bunches fell, are now more careful in financial development. The environment around the mainland is now more beautiful and the air quality is getting better. As well as more frequent deliberations related to policies and counseling on paddy farming. The economic impact of paddy farming generates an income of Rp. 36,151,207 / field / hectare / year while oil palm farming is Rp. 28,308,303 / agriculture / hectare / year.

INTRODUCTION

Indonesia is an agrarian country but the agricultural sector actually makes farmers as labor on their own land. Currently farming is a job that is viewed poor and a second-class profession in Indonesian society. The condition results in increasingly the abandonment of the agricultural sector by the labor force because it has less future profitable (Aslam Et Al, 2018). Indonesia as an agricultural country makes the implementation of economic development inseparable from increasing people's welfare through the agricultural sector. In planning, monitoring, and evaluating the implementation of agricultural development, objective, reliable and relevant indicators are needed (BPS, 2019). In 2018, the plantation production index increased from 124.91 (revised figure to 130.27 (provisional figure) or an increase of 5.36 points from 2017. In general, the production index of smallholder plantations and large plantations increased by 0, respectively. , 77 and 13.56 points from the previous year. Based on commodities, an increase in the production index occurred in coconut, palm oil, coffee and cloves. Meanwhile, rubber, tea, sugar cane and tobacco commodities experienced a decrease in the production index (BPS, 2019) Nationally, the production index for paddy and oil palm has increased.

The threat to food production in Indonesia is very strong due to the extremely fast rate of degradation of agricultural land, while slow rehabilitation The conversion of agricultural land to non-agricultural reaches 1580 hectares per year while the printing of agricultural land is less than 50 hectares per year. This condition is exacerbated by the damage to agricultural infrastructure due to age, such as irrigation buildings, roads in rural areas and others (Yuhry, 2011). It is estimated that in the future palm oil (CPO) will still be a product that is in demand by the world market. This has led to the development of oil palm in Indonesia which has increased rapidly in the last decade by converting land for food, due to better income from oil palm farming (Zakiah, 2012). Lestari (2009) states that land use change as a change for other uses is caused by factors that broadly include the need to meet the needs of an increasing population and an increasing demand for a better quality of life.

Plantation in Mukomuko District consists of company plantations and smallholder plantations. In 2017, the plantation area in Mukomuko District reached 116,171.50 hectares. Oil palm plantation area reaches 104,184 hectares or around 89.68 percent of the total plantation area with a production level of 350,633.28 tons (BPS, 2018). This has been a matter of debate for many years due to the increase in oil palm plantations which have continuously eroded land designated for food, especially paddy fields and are considered to be contrary to one of the visions and missions of Mukomuko is *food self-sufficiency*. Fauziah (2005), states that land conversion that occurs in Indonesia is not only due to ineffective laws and regulations, both in terms of the substance of the provisions that are unclear and unclear, as well as enforcers that are not supported by the government itself as an official authorized to grant a permit to function a land. But also not supported by the "unattractive" of the agricultural sector itself. Rare and expensive fertilizers, other means of production, less agricultural labor, and reinforced by the fluctuating price of agricultural products, even tending to decrease drastically, resulting in decreased population interest (or even just maintaining its function) in the agricultural sector.

However, in recent years there has been a change in the function of oil palm plantations to paddy. About 370 hectares of oil palm and swamp plantations in the Mukomuko District, Bengkulu, were converted into new rice fields. The function of oil palm and swamp plantations in this area is not only to increase rice production but also the impact of the drop in the price of oil palm fruit in Bengkulu, in recent years. The community is no longer enthusiastic about developing palm oil because the price has dropped, so that palm oil yields cannot cover operational costs, especially buying fertilizer, which prices continue to creep up (Usman, 2019). This land conversion is related to the rice field printing program, which from an economic aspect is seen by farmers positive indicators of marketing distribution crop yields, help print capital, seen as guaranteeing the life of the farmer from safe indicators meet needs daily food, comfortable inside complementing alsintan in doing business, the quality of rice consumed is better, improve standard of living, improve self-confidence, is seen as creating the dynamics of farmer groups to reach good terminology for farmers, as well is seen to increase knowledge and Farmers' farming skills rice plants (Manulu et al, 2015) in Satriawan et Al (2019).

With these problems, the community is also faced with changes in efforts to fulfill their needs which previously obtained sales results every two weeks, then after the conversion of land functions, farmers have to wait three months later to get results which will certainly affect the Socio -economic conditions of the community. From this, it encourages research with the title of the socio-economic impact of the conversion of land for oil palm farming to paddy in and This research aims to examine the social and economic impacts of land conversion in Mukomuko Regency, Bengkulu Province.

RESEARCH METHODS

This research is planned to be conducted in Mukomuko Regency, Bengkulu Province. The location selection was carried out purposively or deliberately, because Mukomuko Regency is an area that has oil palm plantations where there is already a land use change from oil palm plantations to lowland rice fields.

The definition of sample according to Sugiyono (2011) is part of the number and characteristics of the population, the sample taken from that population must be truly representative. Sample size is the number of samples to be taken from a population. The formula used in this sampling is based on the Slovin formula quoted by Husein (2011):

$$n = \frac{N}{1 + Ne^2}$$

where n = Sample Total, N = Population, e = standard error (5%)

The number of population to be studied has been determined by a total of 331 people, so from this data, the following sample sizes obtained are 181 farmers.

The data collected in this study include primary data and secondary data. Primary data is data obtained through surveys with in-depth interviews with the help of filling out a list of questions (questionnaires) that have been prepared in this study. The questionnaire was prepared by a research team and validated by a team of experts. Meanwhile, the secondary data required were obtained from institutions or agencies related to this research, such as the agricultural office, BPP (Agricultural Extension Center), BPS (Central Statistics Agency). Zulaiha (in Kurniawan, 2014) said that the

factors that have changed are the world economy, domestic environment and technology. Competitive advantage is a tool for measuring the multiplication of private activity or profit which is calculated based on the official market value of money value (based on financial analysis).

To see the social impact using qualitative methods which will be described descriptively. The analysis method for economic impact uses quantitative analysis which will be described descriptively.

$$Pd = TR - TC$$

where Pd = farm income (IDR / year), TR = Total farm revenue (IDR / year), TC = Total cost of farming (IDR / year), To find revenue (TR) or Total Revenue using the following formula:

$$TR = Q \times P_c$$

Where Q Farm production (Kg / year), and P_q = production price (IDR)

RESULTS AND DISCUSSION

Regional Characteristics

This research was conducted in Mukomuko which is one of the districts in Bengkulu Province. Geographically it is located at 101°01'15,1" – 101°51'29,6" BT East Longitude and at 02°16'32,0"-03°07'46,0" LS. The temperature of Mukomuko Regency ranges from 21.10 C to 34.60 C with an average rainfall of 151.2 mm. Mukomuko district has 15 conditions as follows:

Table 1. Mukomuko District Total Area, 2017

District	Area (kilometers)	Percentage (%)
Ipuh	195.99	4.73
Air Rami	116.42	2.81
Malin Deman	861.79	20.78
Pondok Suguh	555.11	13.39
Sungai Rumbai	335.97	8.10
Teramang Jaya	412.55	9.95
Teras Terunjam	84.40	2.04
Penarik	308.87	7.45
Selagan Raya	440.95	10.63
Mukomuko	148.07	3.57
Air Dikit	87.89	2.12
XIV Koto	69.86	1.68
Lubuk Pinang	69.51	1.68
Air Manjuntio	65.24	1.57
V Koto	393.72	9.50
Mukomuko District total	4 146.34	100

Mukomuko Regency has an area of 4146.32 Km². The district that has the largest area is Pondok Suguh District, covering an area of 555.11 KM² or 13.39% of the total area of Mukomuko Regency. While the sub-district with the narrowest area is Air Majunto District with an area of only 1.57% of the area of Mukomuko Regency or 65.24 Km² (Central Statistics Agency, 2018).

Respondent Characteristics

The characteristics of these farmers were identified from the results of a survey of respondents of 181 farmers who converted land from oil palm to lowland rice. The characteristics to be discussed are age, formal education, non-formal education, number of family dependents, area of land ownership.

Tabel.2 Respondents Characteristics

NNo	Characteristics			
		Minimum	Maximum	Average
1	Age (Year)	27	60	43.5
2	Age formal education (Th)	2	17	8.9
3	Number of dependents (Person)	3	6	4.5
4	Rice field area (ha)	0.25	2	0.78
5	Oil palm area (ha)	0.5	7	1.75

Based on the table above, it can be seen that the age of the respondents ranged from 27 years to 60 years with an average age of 43.5 years. Demographically, the respondent's age is classified as productive age, which is between 15-64 years. According to Hasyim (2016) Age can also be used as a benchmark to see farmers' activities at work.

The length of education taken by the respondents ranged from 2 years to 17 years with an average of 8.9 years. From the table, it can be seen that the education of farmers from not completing elementary school until there are farmers who have a bachelor's degree. According to Arikunto (2013), high education can increase a person's ability to think, behave and act in making decisions. The same thing was conveyed by Tambunan (2003), which one that affects the success of farming is the educational factor.

The number of dependents of farming families ranges from 3 to 6 people with an average of 4.5 people. Based on the government program, 2 children are sufficient, the ideal number of family dependents is 3, namely husband / wife and 2 children. The number of family dependents will affect work motivation and decision making, because the more dependents, the greater the cost of living for farmers.

The range of area owned by farmers in planting rice is 0.25 to 2 Ha, with an average of 0.78 Ha. For the range of area owned by farmers in oil palm cultivation is 0.5 to 7 Ha, with an average of 1.75 Ha. This means that farmers allocate more of their land for oil palm plantations than for rice cultivation.

Social Impact

From a social point of view, farmers often gather in the fields during planting, fertilizing, spraying pests, and at harvest time, because rice farming requires more treatment and care so that the time for gathering increases and the farmers become closer to other farmers. Farmers also socialize more by requiring other farmers to help work in planting, fertilizing, spraying and harvesting which is much more intense than oil palm farming. In addition, the farmer's farmer group Gapoktan activities are more active than when they were oil palm farmers because the rice farmers manage assistance from the government such as tractors and harvesting machines that can be used alternately during the rice farming process.

Another social impact of the farming community, which was previously very consumptive, especially when the price of palm oil rose and experienced difficulties when the price of fresh fruit bunches fell, now it is wiser in managing finances and does not really look at one's social strata in terms of ownership of goods. The environment around the land is now more beautiful and the water quality is getting better. As well as holding more frequent deliberations regarding policies and counseling on lowland rice farming.

Economic Impact

Revenue of Oil Palm Farming

Receipt is the result of selling production that is produced in a farm. Revenue can be determined by multiplying the amount of oil palm production by the selling price of the farmers. To find out the amount of farmer revenue, we must first know the amount of production obtained and the selling price at the oil palm farmer level. The average amount of oil palm production, the selling price of palm oil and the average revenue from oil palm farming can be seen in the following table:

Table 3. Average revenue from oil palm farming per year

Description	Averageper ha per year)
Production (Kg)	35,346.14
Selling Price (IDR / Kg)	1080.00
Revenue (RP)	38,173,833.00

From the table above, it can be seen that the average amount of oil palm farming production in Mukomuko Regency, Bengkulu Province is IDR 35,346.14 /farm/acres/year and the average selling price of oil palm in Mukomuko Regency, Bengkulu Province is IDR 1,080 /farm/acres/year From the average production of oil palm and the selling price of palm oil per kg, it is obtained that the average rice farming revenue is IDR 38,173,833 /farm/acres/year.

To be able to find out the amount of farmer's income, we must first know the amount of harvest obtained and the price they receive in selling rice. The average amount of production, the price of rice and the average income of rice farming can be seen in the following table:

Table 4. Average Rice Field Revenue per year

Description	Average per ha per year
Production (Kg)	10,749.94
Selling Price (IDR / Kg)	5,000.00
Revenue (IDR)	53,749,742.00

Sumber: Data primer diolah, 2020

The results showed that the average rice production in Mukomuko Regency, Bengkulu Province was 10,749.94 Kg/Ha/ Year and the average selling price of paddy rice in Mukomuko Regency, Bengkulu Province was IDR 5,000 per ha per year From the average production and selling price of rice, the average rice farming revenue is IDR 53,749,742 per ha per year.

Income

Oil Palm Farming Income

Oil palm farming income or income is the amount of benefit or yield received by farmers which is calculated based on the value of production minus all types of expenditure (total costs) used for the production process. Average oil palm farm revenues, total costs and private benefits of oil palm farming are attached in the following table:

Table 5. Average income of oil palm farming

Description	Average (per ha per year)
TR receipts (IDR)	38.173.833
TC fee (IDR)	9.865.530
Income (TR-TC)	28.308.303

It can be seen from the table above that the average oil palm farm revenue in Mukomuko Regency, Bengkulu Province is IDR 38,173,833 per ha per year and the average total cost of oil palm farming in Mukomuko Regency, Bengkulu Province is IDR 9,865,530 per ha/year, to get income is revenue from oil palm farming in Mukomuko Regency, Bengkulu Province, minus the total cost of oil palm farming in Mukomuko Regency, Bengkulu Province and income from oil palm farming in Mukomuko Regency, Bengkulu Province, IDR 28,308,303 per ha per year From the table above, it can be seen that the average oil palm farming revenue is greater than the total production cost. It means that it can be concluded that oil palm farming in Mukomuko District, Bengkulu Province, is experiencing a profit.

Rice Paddy Farming Income

Rice farm income or income is the amount of benefit or yield received by farmers which is calculated based on the production value minus all types of expenses (costs)

used for the production process. In farming analysis, farmers' income is used as an important indicator because it is the main source of fulfilling their daily needs.

Table.6. Average Rice Paddy Farming Income per Year

Description	Average (per ha per year)
TR receipts (IDR)	53.749.742
TC fee (IDR)	17.598.517
Income (TR-TC)	36.151.207

From the table above, it can be seen that the average rice farming acceptance in Mukomuko Regency, Bengkulu Province is IDR 53,749,742 /farm/acres/year from the average revenue minus the total cost of rice farming, the income for rice farming in Mukomuko Regency, Bengkulu Province, is IDR 17,598,517 /farm/acres/year. It can be seen from the table above that the average income is greater than the total cost of production, this shows that rice farming carried out by farmers in Mukomuko District, Bengkulu Province, has a total profit of IDR 36.151.207 /farm/acres/year. This is in accordance with what is presented by Purba et al (2020) which states that the difference in income earned between paddy and oil palm enterprises is known due to the difference in revenue obtained, the difference in the amount of allocation of production factors between enterprises, especially in the use of production facilities work so as to cause a difference in the total cost to be incurred by each business, thus causing a difference in income.

Economic Conditions

Based on the results of research on lowland rice and oil palm farming income in Mukomuko District, Bengkulu Province, lowland rice farming earns an income of IDR 36.151.207 per ha per year while oil palm farming earns an income of IDR 28,308,303 per ha per year. It can be concluded that the income obtained from lowland rice farming is greater than the income obtained by oil palm farming even though the time period for obtaining income is different, for lowland rice, revenue is obtained within three times a year, while oil palm farmers can earn income every two 14 days. once, or 24 times a year. This means that in terms of income increases after land conversion is carried out.

Another economic impact is that people who have switched functions are smarter at saving until the time for the rice harvest. In addition, the conversion of land to rice also helps the economy of women in the area, generally rice cultivation is carried out by female workers, so that previously women tended to be housewives, now they have jobs and side income as female workers when planting rice.

CONCLUSIONS AND POLICY IMPLICATIONS

Conclusions

From the social impact, farmers often gather in the fields during planting, fertilizing, spraying pests, and at harvest time. Farmers who were previously very consumptive, especially when the price of palm oil went up and experienced difficulties

when the price of fresh fruit bunches fell, are now more prudent in managing finances. The environment around the land is now more beautiful and the water quality is getting better. As well as holding more frequent deliberations regarding policies and mentoring on lowland rice farming. The economic impact of lowland rice farming generates an income of IDR 36.151.207 per ha per year while oil palm farming is IDR 28,308,303 per ha per year. It can be concluded that the income obtained from lowland rice farming is greater than the income obtained by oil palm farming even though the time period for obtaining income is different, for lowland rice, revenue is obtained within three times a year, while oil palm farmers can earn income every two 14 days. once, or 24 times a year. It means that in terms of income, it increases after the land conversion is carried out.

Policy Implications

To support the vision and mission of Mukomuko Regency in the context of food self-sufficiency, the community can be encouraged to switch functions from oil palm to lowland rice by explaining that the income per hectare of land obtained by paddy fields is greater than oil palm farming, so that people are interested in realizing self-sufficiency food of Mukomuko Regency.

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