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# Agricultural Development of Farmers based on the Physical Accessibility in South Sumatra Wetlands

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**ABSTRACT**

Banyuasin district is mentioned as rice center (food barn) in South Sumatera Province. Areas with great potential are given opportunities to develop by providing assistance in supporting infrastructure development, with the hope that the potential can be utilized to the maximum extent possible to assist the implementation of regional development. The research purposed to analyze the impacts of physical accessibility on rural development and to analyze agricultural development of farmers based on the physical accessibility in South Sumatra wetlands. This research is an experimental research using Split Plot Design with two factors, first factor (F) which determines Main Plot is rice farming system that includes ricefields and traditional system. The second factor (R) called Sub plot is the location of Sub-district that reflects the accessibility level (very high, high, medium and low), namely Tanjung Lago; Talang Kelapa; Muara Telang; and Makarti Jaya. The results concluded that **r**ural characteristics are dominantly influenced by physical accessibility, the better the physical accessibility is built, and the rural characters will increasingly benefit farmers as long as the government can manage the physical accessibility for the benefit of farmers. If physical accessibility is more emphases for the interests of urban communities, thus physical accessibility existence cannot support the welfare of farmers in villages. Livelihood sources of farmers are increasingly diverse as the physical accessibility of rural areas could be improved, especially to support life of farmers. Helping farmers taking advantages of increasing levels of physical accessibility can be accelerated by developing a rural employment opportunity; building local initiatives; and re-thinking local extension systems.

**Keywords:**

Agriculture, development, farmers, physical accessibility

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## INTRODUCTION

Agriculture is one of the most vital sectors because a large proportion of Indonesia's population depends on it in terms of food needs [1,2], absorbing so much labor, and so on, that we must be able to increase economic growth through this sector, while the infrastructure becomes a very supportive factor for the utilization of agricultural land [3,4]. Agricultural contribution only reached 13.80% of Gross Domestic Product (GDP), whereas as much as 40% of labor comes from the agricultural sector. The contribution of the agricultural sector is very low compared to other sectors [5,6,7,8,9]. The government needs to encourage the agricultural sector in order to increase agricultural production given the large number of Indonesian agricultural needs per year by 2030. National consumption in 2030 will continue to increase as the population increases per capita above 3,600 US dollars per year with the amount can range 90 million people [10,11]. Every increase in agricultural production is about 6%, it can drive agricultural and fishery revenues up to 450 billion US dollars. For that, it needs a comprehensive effort to increase agricultural production from all levels of government. With great potential in agriculture and fisheries, at least a productivity rate of up to 60% is required [12,13,14].

Challenges in agricultural production are urbanization and people are constantly changing so that labor in the agricultural sector continues to diminish, another challenge is the need for synchronization of government policies that want increased agricultural production with infrastructure development [15,16,17]. The government asked for stable food prices, but it was not accompanied by policies, especially infrastructure development to remote areas, which often made the economic costs of food and agricultural products more expensive. For that, it needs the development of infrastructure and technology to see more clearly about the picture of land use through geospatial approach [18,19].

Banyuasin district is mentioned as rice center (food barn) in South Sumatera Province and has an independent Integrated Area Telang (KTM) indicating to have development potential that can spur the development of the region in particular and regional development in general. Areas with great potential are given opportunities to develop by providing assistance in supporting infrastructure development, with the hope that the potential can be utilized to the maximum extent possible to assist the implementation of regional development. A good understanding of the concepts of accessibility, population mobility, rural development potential, population density, and activity density are some important foundations for making appropriate policies for improving the quality of life of people, especially those living in rural areas.

There are five characteristics of causes of poverty: vulnerability, environment less adaptability, lack of physical endurance, and isolation (due to inadequate accessibility). The isolation of areas that are far from reach keeps the area lagging behind and people in poverty, regional isolation is related to accessibility because access is an important part of economic activity (Fauzia *et al*., 2021; Vilas-Boas *et al*., 2022). The dominant factors affecting poor households are low land area, tidal condition and surrounded by peatlands, limited access and lack of transportation of

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agricultural product distribution, and low selling price of agricultural products [20,21].

Infrastructure agriculture is covering facilities and infrastructure that support the utilization of agricultural land. Means are everything that can be used as a tool in achieving the purpose or purpose; tool; media, while the infrastructure is everything that is the main support of the implementation of a process (business, development, projects, and so on).

Agricultural performance so far shows that farmers do not use or absorb most of the technologies introduced to them. This seems to indicate that there is a wide gap between the increasing technological results of farmers and the results of traditional farming technologies. The gap between available agricultural information on better practice and its use is due to infrastructure availability factor [22,23].

Rural areas with very limited infrastructure, although they have a lot of potential, will become a poor and isolated countryside if regional development policies do not pay adequate attention to development planning, especially transportation development planning to improve community accessibility in rural areas. With increased accessibility, it is expected that the quality of life of rural communities will increase, for example less fertile agricultural land can be increased fertility through the use of production facilities (fertilizer, integrated pest control, superior seeds, irrigation and drainage); Good access to information resources, and various service facilities such as schools, small hospitals, markets and so on will improve the quality of utilization and development of natural resources and human resources, as well as the community's economy. One of the prerequisites for the use of information is the availability of general accessibility. Based on the above problems, the research purposed to analyze the impacts of physical accessibility on rural development and to analyze agricultural development of farmers based on the physical accessibility in South Sumatra wetlands.

## METHOD

The research locations were purposively determined on the considering that each location was to represent each accessibility level and cultivated with rice farming. Sampling method was used cluster sampling. Four sub-districts from Banyuasin District of South Sumatera are considered to represent accessibility levels to be studied and as the center of rice production. From each sub-district, two or four villages were selected for research locations. Selected respondents from each accessibility level were intensively interviewed, where the researcher lived in the village and developed a trust relationship with the person being interviewed; in-depth interviews with key informants; and household surveys to obtain information through interviews.

This research used an experimental research by using Split Plot Design with two factors; the first factor (F) determining Main Plot is rice farming system which includes ricefields and traditional system. The second factor (R) is called as Sub plot that reflects the accessibility level, i.e. Tanjung Lago (very high); Talang Kelapa (high); Muara Telang (medium); and Makarti Jaya (low). The number of treatment combinations was 2x4 = 8, and each treatment combination was repeated ten times (by mentioning the number of respondents in the field). The overall number of treatment

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combinations was 2x4x10 = 80 treatment combinations. The observed data are rice yield, farmer income and others. The data obtained were processed statistically by analysis of variance (two-way ANOVA). If the variance results show a significant difference, then proceed with Posthoc LSD Test (Least Significance Difference) with a 5% confidence level, whereas if the variance results show a significant difference, then proceed with Posthoc LSD Test with 1% confidence level.

## RESULT AND DISCUSSION

The results and discussion will stress in detail various important components, including general descriptions of research areas; physical accessibility effects on migration and population density; education length; household members and land size based on physical accessibility.


Figure 1. Demarcation of Banyuasin district in South Sumatra Province


Tanjung Lago | Talang Kelapa | Muara Telang | Makarti Jaya

Figure 2. Locations of research areas

### *1.1. General Descriptions of Research Areas*

Four sub-district locations were selected on the basis of accessibility level, namely Tanjung Lago (very high); Talang Kelapa (high); Muara Telang (medium); and Makarti Jaya (low). Research locations are presented in Figure 1 and Figure 2.

### Sub-District of Tanjung Lago

Tanjung Lago is located on the south east coast of south Sumatra, dominated by tidal swamp areas and purposed for transmigration area that has been reclaimed since 1980s. The tidal wetlands at Tanjung Lago allow farmers to do rice farming systems, characterized by very high accessibility and located along the main road around 80 km connecting Palembang to international seaport Tanjung Api-api (TAA). In addition to the main road, it will be built also highway and railroad tracks. Tanjung Lago is connected to the capital of Banyuasin district (Pangkalan Balai) about 35 km and Palembang (about 30 km) and can be passed by all types of vehicles. Because accessibility is so high, it is not surprising that farmers in Tanjung Lago have many opportunities to livelihood alternatives not only from the agricultural sector (on-farm), but also from the off-farm sector as well as completed with integrated agricultural market (KTM Telang).

Farmers in Tanjung Lago have achieved a food self-sufficiency rate of over 87%. Farming systems

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with traditional systems are only done by small amount of farmers, estimated at less than 5%. Tanjung Lago is mostly inhabited mainly by Javanese ethnic groups (74%), Bugis and Banjarese (10-15%) and by other tribes (11-16%). Tanjung Lago shows a very good relationship among ethnic groups.

Tanjung Lago is determined as a dissemination area for the agricultural technology, research and development of agricultural results (TTP) located within a complex of a self-contained integrated area (KTM) Telang about 45 km from Palembang towards the Tanjung Api-api Seaport. The TTP area is expected that within the next 5 years it can be self-financing and sustainable. The development base of the TTP is based on commodity combination of rice-corn-soybeans-beef cattle-onion which belong to the national priority commodity. The developed technology is to improve the productivity of food crops, post-harvest improvements, increased efficiency and effectiveness of work through the use of agricultural tools and machines (Alsintan) through the integration system of cattle-livestock and the development of horticultural products.

In the coming year, the head office of the TTP, cattle shed, feed yard, dissemination laboratory and post-harvest laboratory will be built to increase the added value of agricultural products in Tanjung Lago and surrounding areas. The active participation of 80 cooperative farmers around supporting the TTP of 100 ha has also been assisted by new Superior Paddy Varieties Inpari 22 replacing Ciherang and IR 42, insecticides/herbicides and balanced fertilizer technology recommendations that will continue to be accompanied by the government.

**Sub-District of Talang Kelapa**

Talang Kelapa is dominated by the *lebak* swamp and upland areas as well as is also characterized by very high accessibility because Talang Kelapa is also located close to the main asphalt road to the district administration center (Pangkalan Balai) and the provincial capital city of South Sumatra (Palembang). Talang Kelapa is located east of Banyuasin district marked by high accessibility. Talang Kelapa has very high accessibility, but the research villages are located at a high level of accessibility only.

During the rainy season, the river provides enough water to irrigate the ricefields, but in the dry season there is still sufficient water for agricultural activity. Talang Kelapa is connected with the capital of Banyuasin and Palembang about 15 km distance and can be traversed by all types of vehicles, so Talang Kelapa is easily accessible, stretching from Palembang to the capital of Banyuasin District (Pangkalan Balai). Therefore, almost all villages are considered to have good accessibility. Talang Kelapa also often gets government project programs and is frequently visited by extension officers, and benefited substantially from government-sponsored rural development projects and sponsored by foreigners. Most households vary widely in obtaining livelihood. Approximately 56% of the sale of seeds and seeds of plants, vegetables, livestock, and poultry were in local markets.

The productive potential of home-based economy was developed by the local community, namely brick and tile industry, clay ceramic, chicken farm, fish and cow. Talang Kelapa is mentioned as the largest production center of

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bricks and tile industry in South Sumatra Province because within a month at least 2 million bricks and tiles were produced here. Remarkably, the marketing area is not only in Banyuasin district even out of the province to Java. Chicken and fish farms also become a center of broiler farming. The poultry population was around 4.03 million tails, broiler, 5.95 million tails, local chicken 0.29 million tails and 2,331 tails of ducks. The poultry farm is managed and developed by traditional home industry. Talang Kelapa is also determined as a producer of fish seedlings. Various cultivation and fish enlargement range from arowana (arwana); catfish (lele); gurami; nila, patin, betutu, tebakang and any others.

**Sub-District of Muara Telang**

Muara Telang is located in East of Banyuasin district and belongs to the estuary area, namely tidal wetlands. The condition of the road network is less maintained making Muara Telang a little difficult to reach and belongs to the isolated area. Muara Telang can also be reached through the river by speedboat and wood ships, in particular for the main trading to fulfill the daily life needs of farmers. The main market is far from the settlement of farmers and the agricultural production system under investigation is oriented towards most subsistence agriculture.

Muara Telang is determined as a potential ricefield area in Banyuasin. The total area of ricefields in the coastal area reached 26,680 ha. Imagine how many tons of rice can be produced if each one hectare of ricefields is able to produce five to six tons of rice. Muara Telang is generally dominated by residents originating mainly from Java and Bali, which first entered Muara Telang through transmigration program. For years farmers have been cultivating their land with rice monoculture or intercropping with maize. Most rice cropping pattern is done once per year, in some places done planting twice a year. Farmers concentrate rice production on wetlands and cattle fattening have also been developed in this community, which is also accelerated by the availability of cattle forage. Residents also build social capital to implement livestock and fishery management that enables them to produce alternative livelihood.

However, the main rice problem in Muara Telang is that the ricefields are located in the tidal wetlands and the harvest from each ricefield is very large in volume, the farmers are also difficult in the post-harvest stage. Around one plot of ricefield produces 3-4 tons of rice, if it is dried in the normal way. There is no place for rice drying. The irregularity of the water regulation system resulted in the failure of farmers to manage the ricefields. Due to the neglect of the maintenance aspect, the canals built in the tidal transmigration area are not functioning. Damage to the canal doors resulted in brackish water freely flooding tidal ricefields. Rice began to turn salty water (contaminated water) was collapsed. So the canal repair and maintenance of the water gate became one of the priority programs that were disseminated to the farmers in Muara Telang. After the micro water system has been handled, the farmers will be assisted in the post-harvest process. The rice yield in the tidal wetlands is extraordinary because the soil is very fertile. Each hectare of ricefields can produce an average of 5 tons of rice. Currently with a preserved water system, they can grow rice twice a year. Abundant grain production will be useless without proper

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postharvest handling. Before the rice-estate program was introduced, for over a decade the transmigrants in Muara Telang cultivated rice traditionally.

Rice is dried by drying tools. No wonder, when harvest time, in each part of the yard land, village roads, until villages were fully covered by unhulled rice. Farmers harvest when it entered the rainy season, the rice was difficult to dry. Often the rice is left wrapped up for days, as a result of rotten rice, the quality is low. It is called cheap batik rice. With postharvest processing improvements, the rice quality can be improved. Muara Telang can be as the reference of ricefield management in tidal wetlands. Today the welfare of tidal farmers is much better. Not a few farmers are able to buy hand tractors to cultivate their ricefields.

**Sub-District of Makarti Jaya**

Makarti Jaya is located on the east coast of Banyuasin district, most of which have difficult accessibility to reach, except through water transportation. The condition of the underpassed road network makes Makarti Jaya isolated from other areas in terms of terrestrial transport. The main market is far away for the farmers here. The village production system is oriented largely on subsistence systems. The first territorial water transmigration area in South Sumatera in 1969 was named the first marine transmigration area in South Sumatera region and was spearheaded by President, named Transmigration Makarti Jaya. Transmigration Makarti Jaya sent from the Java region, consisting of 25 families from East Java and 25 families in West Java. If there is a highway (overland) that can connect Makarti Jaya with Palembang, there may be many cars in Makarti Jaya. Makarti Jaya is Makarti Jaya is geographically located in tidal swamp area with main result of rice and coconut (Copra). In the dry season tidal swamp land can be planted with cereals as a distraction to wait for the rainy season. In the rising tide the Makarti Jaya area is an average of 0.5 m below the water level, and at low tide is at 2 m above the low tide level.

Makarti Jaya farmers are mostly from Java, indigenous people and spontaneous people (Buginese and Banjarese from South Kalimantan). The farmers focus on the production of rice monocultures and some still use traditional systems and small-scale farms and fisheries capture. The farming area is in the form of tidal wetlands, which is very short of labor in cultivation of food crops. This is also supported by the need for labor that is not routine at all times. The need for labor in farming was especially rice only at the time by land, planting and harvesting.

*1.2.* ***Physical accessibility Effects on Migration and Population Density***

Characterization of respondents is reviewed in a comprehensive statistic from the following aspects; migration and population density; education length; household members and land size; and agricultural markets. All rural characters were strongly influenced by the level of physical accessibility in the research areas (Table 1).

Table 1. Physical accessibility effects on rural characters and LSD test */

| Nr | Research sites | A**/ | B | C | D | E |
|---|---|---|---|---|---|---|
| 1 | Tanjung Lago | 11.45[a]/ | 67[a]/ | 71[a]/ | 4.45[a]/ | 2.05[a]/ |

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| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | Talang Kelapa | 9.34[ab]/ | 63[a]/ | 70[a]/ | 4.19[a]/ | 1.98[a]/ |
| 3 | Muara Telang | 8.78[b]/ | 46[b]/ | 53[b]/ | 4.78[a]/ | 1.96[a]/ |
| 4 | Makarti Jaya | 4.68[c]/ | 39[b]/ | 34[c]/ | 5.76[b]/ | 1.97[a]/ |

Note: */ Values within the each column and indicated with the similar superscript are not significantly different at 5% test according to LSD test
*/ A (education length, years); B (migration, people/years); C (population density, people/km$^2$); D (household members, people); E (land size in ha)
Source : Results of field survey (2021).

Population migration is defined as the movement of people from one place to another. The migration occurrence is mainly caused by several push factors and pull factors. Push factors cover some important factors, including factors of household economics; low economic activity in the villages; sociocultural; and political stability. Pull factors are dominated by some important events, namely migration; they hope to have the opportunity to improve the living standard; opportunities for better education; and favorable circumstances such as favorable climatic conditions, housing, schools and other public facilities; The existence of activities in big cities, places of entertainment, and socio-cultural centers can be also as an attraction for the people of other areas to settle in the big city.

The transmigration project is intended to bring prosperity to the region. Through the transmigration program, most of the state land is given to farmers to private land. Based on field studies, with increasing physical accessibility, the number of people migrating has increased (e.g. migration at Tanjung Lago 67 people/year, Talang Kelapa 63 people/year) and advanced different with low physical accessibility areas (Muara Telang 46 and Makarti Jaya 39 people/year). Tanjung Lago shows a much higher population density (71 people/km$^2$) than other areas. High population density has triggered more intensive land use and increased farmers' prospects for farming. The low migration on physical accessibility is low because the migrants, such as long distances, and high transport costs, make it as a barrier for someone to migrate elsewhere.

Population density is mentioned as the ratio of the population divided by the area. It was found that with increasing physical accessibility, the population density increased and significantly different with the low physical accessibility areas. The low population density of low physical accessibility is due to the community's view that there are not many challenges to life, such as a monotonous pattern of life, which is why people live and live in a region with low physical accessibility. The following causes of population density are among others, increased births; the location of a strategic place that makes residents to settle in the area; economic factors that trigger the opening of employment, so the population flocked to settle in the region; and social factors because the population will be happy with a place that is relatively safe territory. If a region has a relatively insecure condition, then the area will only be occupied by some indigenous residents only.

Tanjung Lago is considered a hinterland of Palembang and many strategic government projects are implemented. In the early 1990s, newly opened areas, had very low population densities. The education level at Tanjung Lago is

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higher than other areas, and that immigrants can quickly find themselves better than the locals.

### *1.3.* ***Physical Accessibility Effects on Education Length***

The length of education of farmers becomes very important to learn because education is able to increase the insight of farmers to the knowledge and technology that is always associated with the life of everyday farmers. Education is the process of guidance, coaching or help provided by an adult to the child's development in order to achieve his maturity with the aim that the child is sufficiently able to carry out his own life task independently less dependent on the help of others.

The level of education of farmers can be expressed in terms of the length of education experienced by farmers. Most of the heads of farm families have achieved compulsory education for nine years. The low level of education clearly has an impact on farmers' ability to absorb and apply limited agricultural technology. In areas with moderate to very high physical accessibility levels, the length of education does not show any significant difference, but if the physical accessibility level is low, the length of education becomes affected because the educational facilities are inadequate and far from the farmhouse. The higher the physical accessibility of the research sites, the higher the education of farmers (Tanjung Lago 11.45 years) and significantly different with the low physical accessibility location (Muara Telang 8.78 years and Makarti Jaya 4.68 years).

### *1.4.* ***Physical accessibility Effects on Household Members and Land Size***

Villages with low accessibility in Makarti Jaya averaged 5.76 people/households respectively. In contrast, villages with high accessibility at Tanjung Lago and Talang Kelapa have smaller households, on average 4.45 and 4.19 people/households respectively. The number of household members will affect the willingness of the labor force in the agricultural sector and affect the large expenditure for food consumption (both food produced by self-farming and food purchased by the household). Grain consumption from self-production is influenced by the variable number of household members and household size also affects consumption expenditure. The average number of household members is 4.19-5.76 people; the highest is shown by the area with low physical accessibility (Makarti Jaya as much as 5.76 people on average). Household members show no significant difference on the basis of physical accessibility of the region, there will be little inclination that with the physical accessibility of a region, the household members are increasing, but not significantly different when tested statistically.

Land size is not affected by physical accessibility because most farmers' lands are located away from the main road. Initially, each head of the transmigrant household was provided by the government of 2.00 ha of land, comprising of 0.25 ha for housing and yard and 1.00 ha for business area (the first area) for both dry and wetlands. Thus 1.25 ha of 2.00 ha is opened by the government, while the remaining 0.75 ha is a business area (the second area) which is opened by farmers. For dry land area, land clearing is done until ready to plant, while for wetland area is opened until ready to cultivate. It turns out that the land size of farmers has not changed much since

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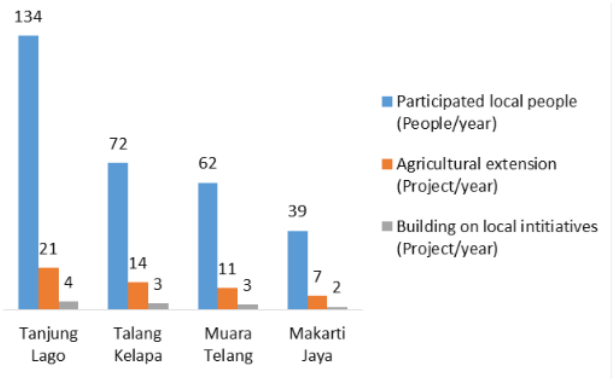
the farmers have received the land from the government.

### *1.5. **Developing Rural Employment Opportunities***

Makarti Jaya and Tanjung Lago differ widely in farmers' access to markets and alternatives livelihood, as well as impact on extension services and incomes derived from off-farm activities. However, the lack of possible diversification in general, and the diminishing resources at Makarti Jaya, pushed most Makarti Jaya farmers into crisis situations that will occur. They are situated not adjacent to Palembang. Income consists mainly of small-scale farming and the exploitation of tightly regulated forest resources. Only in some accessible places, non-farm income becomes important. This unequal accessibility makes a huge difference in the income opportunities and opportunities of people to lift themselves out of poverty. Involving local people in activities of projects based on physical accessibility is presented in Figure 3.

Rural employment opportunities are dominantly influenced by the existence of physical accessibility, such as the presence of roads, buildings, bridges and marketing facilities. Most projects are implemented in areas with high accessibility to very high due to technical reasons, such as easy and inexpensive to run, enthusiastic local communities to respond to government projects and the mindset of local communities are open and accept the changes in the community. Therefore, in areas with poor accessibility, then developing rural employment opportunities is very limited.




Note : Tanjung Lago and Talang Kelapa (very high and high accessibility); Muara Telang (middle accessibility); and Makarti Jaya (low accessibility)
Source: Results of field survey (2021).
Figure 3. Involving average local people in activities of projects based on physical accessibility

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Any project to be carried out in the field requires the participation of local people to be directly involved in the implementation of the project and to mediate between the rural population and the authorities (authority). Local residents who live along the main roads will have a higher chance of participating in the project (for example, the population in Tanjung Lago has a population of 105-162 people/year, compared with local residents from remote areas such as Makarti Jaya participating in only 32-45 people/year.

### *1.6.* ***Re-Thinking Local Extension Systems***

The main objective of agricultural extension is to facilitate local changes in local communities, rather than emphasizing as much subsidization as possible or as much as possible providing incentives to farmers and others. Based on the survey results show that farmers really need information and facilitation about the market, reasonable prices and guarantee their agricultural products can be sold at a reasonable price. However, at present almost all marketing information and facilitation is entirely controlled by middlemen and merchants between retailers and merchants. Farmers feel constrained by a marketing system that benefits more to collector traders and retailers than to farmers. Agricultural extension staff should no longer emphasize what commodities to plant and how to grow them, but agricultural extension staff will be better and more useful when sharing information on how to link potential buyers of agricultural products produced by farmers.

Each extension staff has vested interests that are known only to the extensionists themselves and they are always overshadowed by performance targets to see and pursue how much impact their extension work has on the quality and extension targets. In other words, the extent of agricultural land that has been planted for their extension activities is far more important than what is needed by the farmers or who most need the counseling.

Government-sponsored local extension systems place more emphasis on the ease of how the extension can be implemented in the field, not on the accuracy of the targets to be achieved or who is in great need of the counseling. Therefore, extension system is mostly done in areas that have very high and high accessibility. The selection of the target villages is determined by how well (possibly) the villages are accessible or who have high accessibility, the better the accessibility of a village, the more likely the villages will be selected for the extension target. Therefore, villages with high accessibility will more farmers in the village participate in extension activities or other projects. The amount of extension conducted annually in areas with extremely high and high accessibility was very intensive (Tanjung Lago and Talang Kelapa received 15-25 counseling per year and 10-17 counseling annually respectively); While the area with accessibility was receiving 8-13 counseling/year.

### ***1.7. Building on Local Initiatives***

Many projects are being implemented in Tanjung Lago area, but these projects show very little of the community collective initiative, largely on initiatives from the central government, so that in general government projects are top-down. Some farmers and village heads agree that it is very

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difficult to plant the three-time planting scheme in a year to keep the area as a food barn because farmers have less labor and many other job offers outside the agricultural sector are able to provide higher wages from the agricultural sector.

In village development projects with high accessibility contribute about 25% of household production. When the large plantations and private sectors started planting oil palm in Tanjung Lago although not suitable for land allocation allocations, village heads and local farmers agreed to establish a palm oil management scheme. Partly because of insufficient land information, land speculation and partly due to negative memories during the time of the project that has passed. The existence of projects that meet the size of success, it happens because the local people see the potential benefits of individuals in it. The Tanjung Lago farmers are not paying attention to the ideals and vision of projects that have been very well designed by governments and large corporations. Questions that always appear in the community, can the projects in Tanjung Lago be successful because some farmers have been actively participating and getting income from the activities of these projects?

Makarti Jaya farmers adopted agricultural and spatial laws not because of good ideals and vision, but because of the interests of individual farmers. Makarti Jaya farmers' decision to implement their own agricultural management regulation is unparalleled compared to other research villages. Faced with the constraints of land scarcity and the increasingly growing population, Makarti Jaya farmers began to shift decided that their system could no longer maintain the sustainability of free and new land resources, the farmers would be responsible for overseeing their farms at all times, Fields of others.

Based on the survey results indicate that the building on local initiative is strongly influenced by the available physical accessibility. The selection of target villages for building on local initiatives is determined by how well (possibly) the villages can be reached or reached or who have high accessibility, the better the accessibility of a village, the chances of these villages being selected are local initiative building activities Will be higher to do. So that villages with high accessibility will have more farmers in the village who have managed to build on local initiatives, in areas with very high accessibility are highly intensive (Tanjung Lago and Talang managed to build on local initiatives as many as 3-5 Projects/year and 2-4 projects/year respectively); While the medium-to-moderate areas have successfully carried out building on local initiatives 2-3 projects/year (Muara Telang) and low accessibility of only 1-3 projects/year (Makarti Jaya).

In the activities of building on local initiatives, capacity building activities are also carried out. Capacity building is a process whereby individuals and organizations obtain, improve, and retain the skills and knowledge required to perform their work competently. Community capacity building is a conceptual approach to social change, behavior and leads to infrastructure development in the event of water and sanitation that focuses on understanding barriers that impede people,

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governments, international organizations and non-governmental organizations to realize their development goals while increasing the capabilities that enable them to achieve measurable and sustainable results. Community capacity building often refers to strengthening the skills, competencies and capacities of communities and communities in developing communities, so that they can address the causes of their isolation and isolation from the general public.

## CONCLUSION

From the results and discussion of this research, it can be drawn some important conclusions as inputs for government to make policy decision, namely:

1) Rural characteristics are dominantly influenced by physical accessibility, the better the physical accessibility is built, and the rural characters will increasingly benefit farmers as long as the government can manage the physical accessibility for the benefit of farmers. If physical accessibility is more emphases for the interests of urban communities, thus physical accessibility existence cannot support the welfare of farmers in villages.
2) Livelihood sources of farmers are increasingly diverse as the physical accessibility of rural areas could be improved, especially to support life of farmers.
3) Helping farmers taking advantages of increasing levels of physical accessibility can be accelerated by developing a rural employment opportunity; building local initiatives; and re-thinking local extension systems.

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