Institutional Governance for the Utilization of Post Replanting Sustainable Palm Oil in Riau Province

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Abstract:
Built-in oil palm plantations have multiple functions, namely economic, social and environmental functions that are not owned by other sectors outside agriculture. With this multifunctionality, oil palm plantations contribute, both economically, socially and environmentally, to the achievement of the SDGs. This study aims to determine institutional governance related to utilizing palm sap into brown sugar as a source of post-replanting income in order to improve the sustainable economic aspects of the community. This research chooses a descriptive research with a qualitative approach. The results of this study found that in the management of palm sap in the village of maredan barat, tualang sub-district, siak district, during the replanting period, a strong and well-coordinated management system was needed, so that the management of this palm sap could develop, especially to improve the community's economic level in a sustainable manner, considering the potential of palm oil which is still in nature, global and has a long-term advantage. Increasing partnerships in terms of management is also a major aspect for the realization of this sustainability.

Keywords:
management; institutional; sustainable development

I. Introduction
The discourse on environment and nature preservation today is an important issue in the international world. As part of the international community, Indonesia, which has abundant natural resources, has a moral obligation to manage its natural resources wisely. The palm oil industry has contributed to the achievement of SDGs 2030 in Indonesia covering economic, social, or environmental aspects. Indonesian oil palm plantations, which are currently developing in 190 districts in remote areas of the country, will contribute significantly to the achievement of the SDGs 2030, especially the palm oil districts / provinces in Indonesia.

In addition, the growing awareness of the domestic community that environmental sustainability is a necessity and is a necessity of life. And the agricultural sector is an important aspect in measuring a sustainable environment, both in individual use and in the country's economy. Farmers as the main actors in agricultural development are constrained by the relatively low human resources. Thus, efforts are needed, so that farmers as the main actors can improve their abilities. One of the most strategic efforts is to conduct training for farmers (Sukino, 2013).

Farmers who have been empowered should have high motivation and awareness, have good knowledge about the farmers they process, have a better health status, have sufficient capital, have adequate technology, obtain information that is in accordance with their needs, can accommodate many workers, and selling agricultural products in the market

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that has been provided, and independently or not too dependent on the help of second parties (government) or third parties (private).

Indonesia's economic growth throughout 2017 is one of the highest in the world. Indonesia only lags behind China in first place. The agricultural sector is in the top ranks capable of boosting Indonesia's economic growth, especially in plantations. Oil palm, which is a mainstay in the plantation sector, certainly also gets government attention, especially smallholder plantations.

In Indonesia, in 2019, 4,446 hectares of oil palm were replanted and involved 2,032 farmers who received assistance. Rejuvenation is specifically for smallholder plantations with a maximum land ownership of 4 hectares per farmer. The government is focused on optimizing land by providing assistance to farmers, namely in the form of certified oil palm seeds capable of harvesting up to 4 times the current condition. Oil palm farmers currently only enjoy harvests in the range of 2.5 tonnes of CPO per hectare per year, but with the seeds provided by the Ministry of Agriculture they are able to produce 8 tonnes of CPO per hectare per year or the equivalent of 32 tonnes of fresh fruit bunches.

In addition, the Ministry of Agriculture also provided assistance in the form of corn and soybean seeds to be integrated with oil palm. Thus the farmers will continue to earn income while waiting for the first oil palm harvest. Based on data from the data and information center of the Ministry of Agriculture, there are 5 provinces with promising palm oil commodity potential, namely, North Sumatra, Central Kalimantan, West Kalimantan, South Sumatra and Riau Provinces. However, what is recorded as the largest producer of palm oil is Riau Province with a land area of 4,430.51 hectares and an average production of 8,605.65 tons. And one of the districts / cities that has a source of income for the majority of its population is palm oil, which is Siak Regency.

In general, land area has a direct effect on production, if land area increases, it will automatically increase production. However, at a certain time the planting area and production will not affect directly if there are several factors in it including planting age which directly affects production (Hasibuan et al, 2020).

Siak Regency has a Palm Oil Industry which produces 315,862 tons of CPO and 60975 tons of palm kernel oil per year. And the area of oil palm in Siak reaches 107,420 hectares and within 2 years will produce CPO more than 500,000 tons per year. Tualang District, which is one of the Districts in Siak Regency with the majority of its people working as farmers, be it food crop farmers or as plantation farmers.

Kacamatan Tualang has a tropical climate so that the land is suitable for agriculture, one of which is oil palm. The development of community plantations began in 1977. Thus at present most community oil palm plantations are more than 25 years old and need to be replanted. At least 1.8 million of these community plantation lands are in need rejuvenation. However, this program is constrained by the legality aspect. Rejuvenation problems are not only related to investment financing. But the other most important thing is the source of income during the rejuvenation period. This condition can be found a solution by utilizing oil palm resources. One of them is by utilizing palm oil stems which are extracted from the juice and processed into brown sugar.
Palm sap is a liquid in the form of sap produced by unproductive and felled palm trees. The plasma plantations have entered the replanting period, which means that there will be many old palm trees whose utilization can still be optimized. The old palm stems can still be used, because they still contain sap water in them. According to Sukirno (2010) in Agustira (2019), one old palm tree will produce as much as 10 liters of sap per 24 hours.

Kampung Maredan Barat is one of the villages in Tualang Subdistrict which has 2 hamlets including Harapan Jaya and Suka Advance hamlet with an area of 28.98 hectares where some people work as farmers who take palm sap and process it into brown sugar which initially only produced brown sugar from sugar palm, coconut, and even sugar cane. Now, the people in Maredan Barat Village can produce brown sugar from the palm sap produced from these palm trees. The role of the village government in community empowerment is considered very important for the welfare of the community. What can the palm sap be taken when the oil palm trees have undergone a replanting period.

From 2016 to 2019, the management of palm oil has had a positive impact on the economic development of the community in West Maredan Village. Currently the farmer groups in West Maredan Village consist of 2 groups. The farmer group in West Maredan Village is known as Gapotan, palm oil, which is a combination of West Maredan palm oil farmer groups. There are 50 people involved in the management of palm oil, from 2016 to 2019 based on data from the Office of the Head of the Village of West Meredan in 2019.

Siak Regency is one of the districts that makes plantations an economic base. Siak Regency has become the government’s obligation to be able to make clear regulations related to the oil palm commodity so that it can benefit all parties. However, until now it has been the weakness of the Siak Regency government to carry out good management of the oil palm commodity. This of course also affects the management of oil palm plantations at the village community level, especially Kampung Maredan Barat.

**II. Review of Literatures**

*2.1 Management*

James Stoner and Charles Wankel (2009) define management as a process of planning, organizing, leadership and controlling the efforts of organizational members and the use of all other organizational resources in order to achieve organizational goals. Paul Hersey and Kenneth H. Blanchard (2007) also provide management limitations, namely as an effort carried out with and with individuals or groups to achieve organizational goals.

The management of the local resources of the oil palm plant which is extracted from the sap and processed into brown sugar is a significant handling and this is certainly beneficial for the government, the community, and palm oil managers. More specifically, the development of natural resources of oil palm plants which are extracted and processed into brown sugar is defined as a process that promotes the coordination of development and management of natural resources of oil palm plants which are extracted and processed into related brown sugar in order to optimize the resultant economic and social welfare in a suitable or appropriate manner without disturbing the stability of important ecosystems.

George R. Terry (2016: 9) says that the duties of a manager are to utilize effective group efforts. George R. Terry in his book Management principles there are four management functions as follows:
a. Planning (Planning) Terry (2016: 17) defines planning is determining the work that must be carried out by the group to achieve the goals outlined in planning which includes decision-making activities, because it includes the selection of decision alternatives.

b. Organizing (Organizing) Terry (2016: 73) defines organizing is the basic activity of management carried out for and managing all the required sources including the human element, so that work can be completed successfully.

c. Actuating (Actuating) Terry (2016: 17) actuating, or also known as “action movement” includes activities carried out by a manager to initiate and continue activities determined by planning and organizing elements so that goals can be achieved. Actuating includes placing and satisfying the human needs of its employees, rewarding, leading, developing and compensating them.

d. Controlling According to Terry in Ritonga (2015: 7), controlling (supervision) means determining what has been done to evaluate work performance and if necessary take corrective action so that the work results are in accordance with the plan. This opinion illustrates that supervisory activities are to determine and correct important deviations in the results achieved against objectively planned and implemented activities.

2.2 Sustainable Development

Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area (Shah, 2020).

Sustainable development focuses on three pillars, namely economic, social and environmental development. To ensure harmony between the three pillars, the implementation of development must refer to the principles of sustainable development. According to Zulkifli (2013) there are four principles of Sustainable Development, namely:

1. Equity and social justice. This first principle means that the development process must continue to ensure equitable distribution of natural resources and land for present and future generations. Development must also ensure the welfare of all levels of society.

2. Appreciate the diversity (diversity). Biodiversity and cultural diversity need to be maintained to ensure sustainability. Biodiversity is related to the sustainability of natural resources, while cultural diversity is related to the equal treatment of everyone.

3. Using an integrative approach. Sustainable development prioritizes the link between humans and nature. Where humans and nature are elements that cannot stand alone.

4. Long-term perspective, in this case sustainable development is oriented not only to the present but to the future. To ensure that future generations have the same or even better environmental conditions.

Here are some definitions of sustainable development. Ordóñez and Duinker (2010) state that sustainable development is first a capacity in maintaining ecological, social and economic stability in the transformation of biosphere services to humans, secondly meeting and optimizing the needs of present and future generations, the third persistence of the necessary and desired systems (socio-political or natural) in an unlimited time, the four integration of ethical, economic, social and environmental aspects coherently so that the generation of humans and other living things can live in the present or in the future without limit environmental, social and technological barriers.
In Law Number 32 of 2009 concerning Environmental Protection and Management, sustainable development is defined as a conscious and planned effort that integrates environmental, social and economic aspects into a development strategy to ensure environmental integrity as well as safety, capability, welfare, and the quality of life of present and future generations. Based on the above meanings, the development paradigm which originally focused on economic considerations has shifted to a development paradigm with the environmental and social sectors as an indispensable sector.

2.3 Institutional

Institutions as the rule of game and organizations play an important role in regulating the efficient, equitable and sustainable use / allocation of resources. According to Gerry Stoker (1991), both central and local (local) governments are involved in basic institutional experimentation efforts with various new organizational forms which are expected to further encourage the involvement of the private sector in taking greater responsibility in overcoming economic problems that continue to decline. The social, economic and cultural problems faced are also increasingly complex, so that we can no longer rely solely on conventional forms of government organization to overcome them.

According to Syahyuti (2006), an institution is a stabilizing behavior that lives in a group of people which is something that is stable, steady and patterned; function for specific purposes in society; found in traditional and modern social systems or can take the form of traditional and modern and function to make social life more efficient. North (1990) defines institutions as boundaries that are created to form harmonious patterns of interaction between individuals in political, social and economic interactions. institutions as a number of regulations that apply in a society, group or community, which regulate rights, obligations, responsibilities, both as individuals and as groups.

Djogo (2003) states that an institution is an order and pattern of relationships between members of the community in an organization that has limiting and binding factors in the form of norms, formal and non-formal rules to achieve common goals. It is further stated that institutions have 10 important elements, namely: institutions, norms of behavior, regulations, rules in society, code of ethics, contracts, markets, property rights, organizations, and incentives.

Bogason (2000) suggests some general institutional characteristics, including the existence of a structure based on interactions among actors, a shared understanding of values and the pressure to behave in accordance with what has been agreed upon. Peterson (2003) in Adaryanto (2004) argues that institutions have performance which is defined as the ability of an institution to use its resources efficiently and produce output that is in accordance with its objectives and relevant to the needs of its users.

III. Research Methods

This research is a descriptive qualitative research. It is a method of examining the status of a group of people, a condition, attitudes and views of a phenomenon that occurs in society and telling the data according to the current situation. Through detailed and in-depth data collection involving various sources of information or multiple sources of information (for example, observation, interviews, audiovisual materials, documents and various reports). Then the researcher reported the case description and the theme of the case which was used as research material.
The informants in this study are as follows, consisting of key informants and complementary informants. Data collection was carried out in stages from observation, interviews and documentation with several informants who had been selected by researchers as sources in this study. Primary data obtained in the field through in-depth interviews and observations. Meanwhile, secondary data is obtained through available documentation or obtained from print media or websites. The instrument for obtaining primary data used interview guidelines which were prepared in order to extract the information needed to complete the research. This research uses data collection techniques as a case study research, where data is collected by revealing the phenomena that are the focus of the research. So this research also enriches the data by triangulating data sources by combining several data sources, namely in-depth interviews, secondary data analysis, website searches and news searches in print media on relevant topics. Then the data analysis of this research uses qualitative analysis techniques that are descriptive.

IV. Results and Discussion

Rejuvenation problems are not only related to investment financing. But the other most important thing is the source of income during the rejuvenation period. This condition can be found a solution by utilizing oil palm resources. One of them is by utilizing palm oil stem sap into palm sugar. Oil palm stems can produce palm sap to be turned into brown sugar which has economic value (Fauzi, 2006).

Utilization of palm sap in oil palm rejuvenation areas is very potential as a source of income to finance replanting investments and living costs for smallholders during the rejuvenation period. The market potential is wide open, considering that the development of brown sugar raw materials such as palm, coconut and sugarcane has stagnated. Palm sap also has the potential to be used as sugar, whose needs are now increasing every year (Fauzi 2006). This palm sap business is only carried out on fallen oil palms that are old and rejuvenated as well as young plants that have fallen. The business that is currently carried out is relatively simple, brown sugar craftsmen only look for or buy fallen palm trees and peel and collect palm sap for 30-40 days and the problem now is raw materials.

Nirasawit has the potential for considerable economic value. The economic value of sap for 1 palm (unprocessed / standing before falling) is Rp. 15,813. or in the amount of Rp. 1,897,500 per ha. Meanwhile, if it is processed into palm sugar, it has a potential income per ha of Rp. 18,421,500 to Rp. 22,866,325. This potential can help the cost of living as long as the oil palm is still in its immature period.

To optimize the economic potential of palm sugar production, it is carried out on a large scale through the formation of farmer groups or cooperatives. Through the cooperative, it will be managed in an organized manner, both funding, technical, production and marketing. Because in the life of the village community, the existence of community institutions is very necessary because it becomes a tool to meet their needs. The needs of rural communities in the economic sector will be fulfilled if there are economic institutions. Therefore, according to the needs of the village community, economic institutions are needed. The utilization of this palm sap can be used as one of the activities in the community oil palm rejuvenation program (PSR) which is the government's main program.

However, it is no less important that the implementation of obligations and awareness of environmental sustainability is translated into sustainable development policies. Sustainable development is about achieving a balance between economic sector development, social
sector development, and environmental protection. Because oil palm plantations are one type that can damage environmental ecosystems. Therefore, it takes various actions and efforts, especially from the local government or related institutions that are directly responsible for paying attention to the environmental aspects of the oil palm smallholders.

This means that sustainable agriculture is a management and conservation of natural resources that aims to ensure the sustainability of land, water and plant and animal genetic resources that is carried out well and is economically and socially feasible. The socio-cultural function in the sustainable aspect of the palm oil industry has also been proven empirically, including its role in rural development (improving quality of life) and poverty reduction.

Institutions that participate in collaborating in empowering local communities and education on the use of palm sap during the replanting period are also a combination of local cultural values (local wisdom) and modern management designed (institution engineering) so that small / local farmers participate in oil palm plantations in Indonesia because it is part of the social function of oil palm plantations.

Sustainable development is not only sufficient or exclusive to generate economic benefits, but also provides social and ecological benefits across generations. Sustainable development is relative and country-specific, both sector and industry (Moon, 2012; Feher & Beke, 2013). With regard to this dimension of sustainable development, the development of Indonesian oil palm plantations includes three important pillars, namely sustainability in economic, social and ecological dimensions.

In the economic aspect, the palm oil industry contributes to sustainable development in the form of sources of foreign exchange and state income, regional economic development, and increases in farmers' income. The ecological role of oil palm plantations includes the conservation of carbon dioxide and oxygen cycles, while in the social aspect, the opening of oil palm plantations can be described as a pioneer sector that opens access to remote areas. In addition, oil palm plantations increase the availability of rural infrastructure and increase the availability of education and health facilities, in the aggregate, increasing national palm oil production reduces rural poverty (Susila, 2004; Joni, 2012).

a. Planning is carried out by institutions to achieve goals. In this case The government of West Maredan Village argues that the knowledge of the Gapotan Nira Sawit farmer group in managing oil palm trees is relative. So that the education or knowledge that can be provided by the West Maredan Village Government to farmer groups is only in the form of trainings on the management of palm oil.

At the planning stage, the possibility of obtaining financial assistance in the implementation or production of palm sap into brown sugar, as well as selling brown sugar from palm sap is made. Because if there is capital, then palm oil can be produced better by packaging and labeling it with a brand, permit from the health office, or halal certification. In addition, capital is needed for transportation or transportation of brown sugar from palm oil to the market, and other costs. Currently the existing capital assistance or budget is still used for assistance in the form of production support tools, we are also trying to help this farmer group through BAZNAS to renovate their palm sap production house.

However, technology assistance or tools or equipment that make it easier for farmers to produce palm sap, usually technology in the form of appropriate technology already exists, but is still limited. Even so, the production support tools provided by the village
government of West Maredan such as measuring instruments for moisture content, stainless storage vats, safety equipment and others are expected to assist farmer groups in producing palm sap to turn brown sugar. Technological improvements in palm oil management are needed to deal with problems in the production of palm sap to turn into brown sugar.

Improved technology can increase the productivity of palm oil management through better processing and increase time efficiency in palm oil management activities from extracting palm sap to turning brown sugar.

b. Organizing is the basic activity of management carried out for and managing all that is needed, including the human element, so that the work can be completed successfully. At this stage, the West Maredan Village Government raises awareness of the Gapotan Nira Sawit farmer group on the importance of managing the results of replanting palm kelpaa trees by providing encouragement in the form of the importance of utilizing plantation products that have undergone a replanting period, because it can generate or increase the farmer group's financial income. The West Kamapung Maredan government explained that oil palm trees that have undergone a replanting period, if the juice is taken and processed into brown sugar can produce high economic value or a selling price equivalent to other brown sugar.

c. Implementation / movement (Actuating), at this stage the Head of the West Maredan Village stated that the socialization, counseling, training and mentoring activities carried out were a form of motivating the Palm Oil Gapotan farmer group in running their farmer group business. The motivation carried out by the West Maredan Village government to the Gapotan Nira Sawit farmer group was only limited to counseling, training, and mentoring. However, in reality not all members are motivated by farmer group activities. This is due to the not optimal empowerment provided by the West Maredan Village Government so that not all members of the farmer groups participate in the management of palm oil. As a result, there are still members who work independently.

d. Controlling determines what has been implemented. Besides that, the farmer group of Gapotan Nira Sawit, West Maredan, is easy to get information, especially information about the management of palm oil into brown sugar.

Based on the results of interviews with the chairman and members of the Gapotan Nira Sawit farmer group, Maredan Barat village, it was said that the information they got was only from counseling and training only. This means that farmer groups never take the initiative or directly ask or get information from the village government of West Maredan outside of counseling. With the information, farmers should be able to increase potential and income opportunities and increase the ability of farmer groups in their bargaining position.

With the processing of palm oil into brown sugar, it is hoped that it can absorb more workers from the people of West Maredan Village. So that many people in West Maredan Village can be empowered economically. However, it all depends on the number of oil palm trees that are experiencing a replanting period, if there are a lot of them, of course it can absorb a lot of labor, if in our village for now it absorbs quite a lot of labor, because the majority of plantations are also experiencing a replanting period, so more or less can help the economy of the surrounding community.
In addition, institutional management during the replanting period for the use of palm sap can only sell processed palm sap around the village of West Maredan, they can also sell to collectors who sell their processed palm sap outside the village of West Maredan and even to the city of Pekanbaru. With the empowerment carried out by the village government of West Maredan, farmer groups have already gained a market.

Based on the description above, it can be said that if the Gapotan palm oil farmer group is quite independent, there are only obstacles, so that they still need assistance such as capital assistance, the supply of oil palm trees that are ready to be harvested, of course it affects the production of palm sap, so it is not forever farmer groups can produce optimally because not all farmer groups are independent after being empowered, because there are still many limitations, such as since 2016-2019 we still need capital assistance from the village government.

Regional development carried out by oil palm plantations through various development steps, where the support of central and local governments also have a major role in granting permits for the location of oil palm plantations. Therefore, national oil palm plantations in general have a large role in regional development (Purba and Sudibjo, 2020).

Management of palm sap as a superior commodity is expected to be able to increase regional development so that it will have an impact on improving the welfare of the local community concerned. However, in reality there are still deficiencies in its implementation so that the palm oil commodity which is processed into brown sugar is a management that has not been fully utilized. The reduction in the number of palm sap processing each year in the management of palm oil into brown sugar is also due to the lack of socialization regarding the management of palm oil into brown sugar by the government of West Maredan Village.

The palm oil farmers who manage palm sap into brown sugar in West Maredan Village currently mostly sell their products without using the patent rights that the brown sugar they sell is the result of palm sap. The palm sap farmers have not yet seen the big profit opportunity if they are able to grant a patent for the products they produce which have high economic value.

The chain of selling brown sugar in West Maredan Village, which comes from palm sap, starts with palm sap farmers producing palm sap into brown sugar, which is then sold to tokeh or collectors for Rp.15,000 / kg to Rp.18,000 / kg, then Tokeh or collectors sell to people inside or outside Siak Regency. The length of the brown sugar marketing chain has an impact on the selling price of brown sugar which will be cheaper for farmers and has a major impact on the economic welfare of the palm sap farmers who manage palm sap into brown sugar.

Therefore, the role of the institution that has not been maximal creates problems in terms of managing palm sap as a source of income with a sustainable goal, such as problems such as there are still many people who are not ready to accept community empowerment carried out by the government in the social and economic fields because of untrained abilities. There is still a lack of human resource capabilities that can follow up on community empowerment in the management of palm oil. The lack of supporting facilities and facilities in increasing community empowerment in the socio-economic field, making it difficult for the community to develop their capabilities. And the absence of equipment and technology for palm sap derivative products to produce palm sap into high quality traditional brown sugar.
V. Conclusion

Because the oil palm commodity has value the largest production and land area when compared to other commodities from plantation land, followed by rubber in Siak Regency as a whole, has been proven during the last three years, from 2017 to 2019, the area of oil palm plantations has always increased and has a large plantation area the most extensive. In 2019, the total land area for oil palm plantations was 287,782 hectares. In addition to having the largest area of plantation land, oil palm also has the largest production amount, amounting to 925,010 tons. Then do rejuvenation or replanting in an effort to increase plantation production.

From a sustainable perspective, oil palm plantations are an opportunity to renew the economy of the village community for the better, and when viewed from an ecological point of view, it will have an equal impact both on and negatively on the ecosystem, especially the quality of land that cannot be significantly converted. In addition, the role of institutions in the replanting period of oil palm plants must also pay attention to the less optimal empowering aspects because they do not pay attention to the health status of the group, the lack of appropriate technology assistance. So that the aspect of creating independence is not optimal in the farmer groups of Gapotan Nira Sawit, West Maredan Village, Tualang District, Siak Regency.

Suggestion

The management of palm sap in the village of maredan barat, tualang sub-district, siak district should work together with the private sector and agencies such as the environmental service, such as the CSR program, the involvement of the private sector is very influential in the management of palm sap, so that products from palm oil can be further developed in the effort support the budget and capital for village communities who want to develop palm sap management as a new economic potential in improving community welfare.

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