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The Governance of Downstream Oil Palm Development in the Technopolitan Area of Pelalawan Regency

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ABSTRACT

Oil palm farms are quickly expanding in most Indonesian provinces, including Pelalawan Regency, which has a high potential for the growth of oil palm goods. The purpose of this research is to determine the governance of oil palm downstream development in Pelalawan Regency's technopolitan zones. This research method was carried out qualitatively using interview and focus discussion group with the government, academicians, businessman, and communities. The results showed that development of downstream oil palm in technopolitan areas facilitates the development of ideas, innovations, and know-how from the utilization of oil palm derivative products that have a high selling value and downstream oil palm becomes a support for government, academia, business and the community in implementing Good Agricultural Practice (GAP). The development of governance oil palm downstream in Pelalawan Regency is implemented in an integrated, competitive and sustainable approach. The development with such governance makes it possible for every stakeholders and the community (independent farmers) to receive economic, social, and environmental benefits from the development of technopolitan areas in Pelalawan Regency.

Keywords: Oil Palm Downstream, Governance Management, Technopolitan Area, Indonesia
JEL Classifications: M1, Q5, R1

1. INTRODUCTION

Oil palm plantations are quickly expanding throughout the majority of Indonesia's provinces, covering an area of 11 million hectares. The enormous potential of oil palm farms creates opportunity in a variety of areas (Utomo and Widjaja, 2020). Various studies have been conducted to examine the development of sustainable oil palm plantations in Indonesia and other characteristics in order to determine the extent to which the development of oil palm farms in Indonesia has 14 million hectares (ha) of oil palm; in 2017, oil palm exports were USD 23 billion, and in 2018, they totaled USD 21 billion (Purnomo et al., 2020).

Pelalawan Regency is one of the districts with a lot of potential for developing processed oil palm goods. Pelalawan Regency has a total of 393,327 hectares of oil palm plantations, comprising 119,616 hectares held by smallholders and 273,711 hectares owned by corporate corporations (BPPT Kabupaten Pelalawan, 2019). Oil palm plantations are managed in two ways: plasma plantations, which are activities to carry out cultivation business, and industrial plantation businesses, which are cultivated by individuals on land with Ownership Rights or Cultivation Rights, and company plantations, which are carried out on land with Cultivation Rights and begin from seeding, planting, processing products, and marketing. The second is plasma nucleus pattern plantations as a partnership relation between the partner group and the partner company, in which the partner company acts as the nucleus and the partner group as the plasma.

The average economic growth rate of 4.52% which makes the main economic activity of oil palm in Pelalawan Regency is an important role for the supply of oil palm in Indonesia and

even in the world. Oil palm management activities have a great contribution to community income (Syahza and Asmit, 2019). Observing the potential to increase the economy through oil palm management, Pelalawan district government and BPPT initiated the development of an area called as the technopolitan area of vehicle for collaboration between the government, academia, business and the community in realizing an increase of the economy based on science, technology and innovation.

The total area of small holder oil palm plantations is around 31% the total area. The numbers of independent smallholder families are 40,315 families. Most of the independent smallholders (small holders) are not tied to big companies and have the potential to be developed as an effort to move to the regional economy. The development is also based on the problems faced by independent smallholders in managing oil palm plantations without basic Good Agricultural Practice (GAP) therefore the productivity of farmers' is low (Ahmad and Mohd Nasir, 2020). Besides, the issue of selling price margin of oil palm is also something that could not be separated from the attention of Pelalawan district government.

Various studies have been conducted to observe the development of sustainable oil palm plantations in Indonesia. As the studies conducted by Liu et al. (2020) who found that plantations on tropical peat may result in excessive greenhouse gas emissions and increase the danger of wildfires. Moreover, Widiati et al. (2020) sait that the lack of human resource can cause the delayed in the speed of supply and completeness. They added that the government must promote and encourage all industry participants, including businesses and independent smallholders, to adopt sustainable palm oil standards in their production operations. While the policy of oil palms farm is conducted by Khairiza and Kusumasari (2020), Nurrochmat et al., (2020), Dharmawan et al. (2020), Martens et al., (2020), Naylor et al., (2019) and other various aspects as an effort to observe in which extent the development of oil palm plantations in Indonesia

In order to exploit the economic benefits of oil palm potential, the focus of creating technopolitan zones is on the development of oil palm downstream goods. The technopolitan area is being developed to become the Oil Palm Valley, or the hub for the development of integrated oil palm downstream. Several downstream oil palm goods, including Biofuels, Industrial Vegetables Oil (IVO) development, and tenant items such as Praudi Express (palm chopper machine), JJE Cleaner, are employed as the key sales icons (multipurpose cleaning fluid) (BPPT Kabupaten Pelalawan, 2019).

Sustainable industrial growth is possibly happen through the implementation of key strategies that cover the entire process of chain, from upstream to downstream (Kushairi, 2018). The governance of oil palm downstream development is based on how to develop the downstream and utilize the potential of oil palm downstream in technopolitan areas. It needs a commitment and cooperation from the government, academics, business players and the community in the development of palm oil down streaming. Thus, it can be implemented in an integrated, competitive and sustainable manner. This study aims to explain the governance of regional development through the downstream management of oil palm in Pelalawan District.

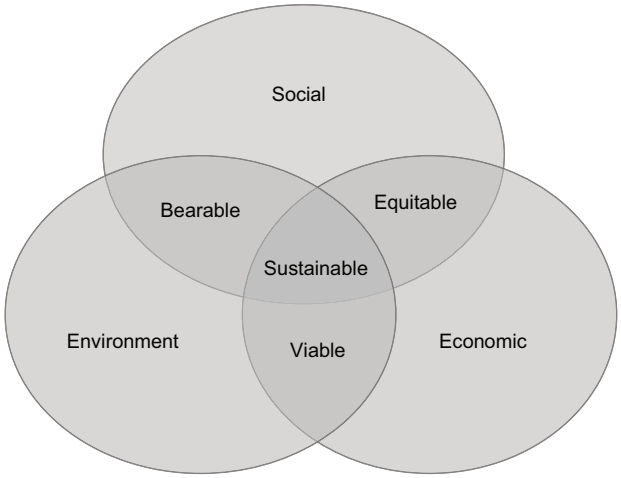
2. RESEARCH FRAMEWORK

Regional development is a development that is carried out based on the principles and spirit of regional community by functioning the potential they have and is oriented to improve the community welfare (Rusli, 2017). The development of an area requires proper planning because by a proper planning, it will direct the development to achieved the goal which can have a positive impact of the area (Murtiningrum and Oktoyoki, 2020). Regional development is a strategy that uses and combines internal (strengths and weaknesses) and external (opportunities and challenges) factors that exist as potentials and opportunities to increase regional production of goods and services that are a function of both internal and external needs of the region. Internal elements include natural resources, human resources, and technical resources, whereas external factors include opportunities and risks that occur as a result of contact with other regions (Rusli, 2017).

Most classic idea of territory by Hagget, et al. (Rustiadi et al., 2018) is classified as: (1) homogeneous region (uniform/homogenous area); (2) nodal region (nodal region); and (3) planning region (planning region or programming region). Regarding the typology of the region, Glason (Putra, 2018) classifies the concept of region into three categories, such as: (1) homogeneous region; (2) nodal region; and (3) planning region. Based on the phase of economic progress, the regions/regions are classified into: a) the first phase is formal region, which is related to homogeneity. Formal area is a geographical area that has the similarity related to certain criteria, such as geographical, economic, social and political physical conditions. b) The second phase is the functional area which deals with functional coherence and interdependence, the interrelationships among the parts of the region. Sometimes, it is also called as nodal region or polarized region which consists of heterogeneous units, such as rural-urban areas that functionally interrelated. c) The third phase is the planning area that indicates the coherence or unity of economic decisions. Zen (Walinaulik, 2016) described regional development as a harmonious relationship between natural, human and technological resources by considering the environmental capacity in empowering the community.

The applicable Sustainable Development Goals (SDGs) based on MDGs which converge towards the post-2015 development agenda in order to promote a focused and coherent action of sustainable development that were discussed at the Rio+20 conference 2012 (Rahdari et al., 2016). The SDGs maintain a triple bottom line approach to keep human well-being, such as economic development, environmental sustainability and social inclusion (Dhahri and Omri, 2018). The concept of sustainable development as introduced in Agenda 21 recognizes that economic development should be compatible with the growth that fulfill human needs and protects the environment (United Nations, 2018). The concept of sustainable development is described in Figure 1 below:

Figure 1: The Three Pillars of Sustainable Development Approach



Port infrastructure development requires a large amount of money, the success or failure of the project will provide a long-term implications (Putra and Djalante, 2016). Sustainable development is a stage of long-term development that is complex and involves various disciplines (Pratiwi et al., 2018). Meanwhile Yan, Wang, Quan, Wu, dan Zhao (2018) evaluate based on sustainable urban development based on limited natural resources and the needs of human welfare. Meanwhile, to assess the sustainability of oil palm, a sustainability model is needed related to the triple bottom line consist of environmental, social and economic (Tang and Al Qahtani, 2020).

An area is defined as a place that has certain functions, where its economic activities, sectors and superior products have potential to encourage the economic growth in surrounding area (Murtiningrum and Oktoyoki, 2020). Furthermore, Tarigan (2016) stated that the area form several clusters. Clusters can be agricultural clusters, in simple terms, planning is setting a goal and selecting the required steps to achieve that goal. Therefore, the application of sustainable development is a wise choice which is recommended to manage the area (Rusli, 2017). This research tries to qualitatively describe the development of oil palm downstream by looking at the aspects of regional development, sustainable development and the development of technopolitan areas in Pelalawan Regency.

3. MATERIALS AND METHODS

The focus of this research is the development of oil palm downstream in the technopolitan area of Pelalawan Regency. The method was carried out qualitatively by analyzing the development, potential and governance of oil palm downstream in technopolitan areas. The data collected from the documents of technopolitan area planning and other supporting documents. Data collection techniques using interviews and Focus Group Discussions (FGD) with the implementing subjects, such as the government, academics, businessman and communities. The data analysis in this study consists of three flow of activities carried out such as data reduction, data presentation, and drawing conclusions (Miles and Huberman, 2014). The analysis started from determining the technopolitan area, oil palm industry activities and potential, and management of oil palm downstream development. After that the data is written in descriptive form. In order to know the sustainable of oil palm downstream development, the identification of downstream oil palm development is done in some points below;

1. Potential Utilization of Oil Palm Products
2. Investment value for the development of Palm Industry
3. Technopolitan area
4. Potential Products of the processed Oil Palm
5. Palm Oil Downstream Development Governance

4. RESULTS AND DISCUSSIONS

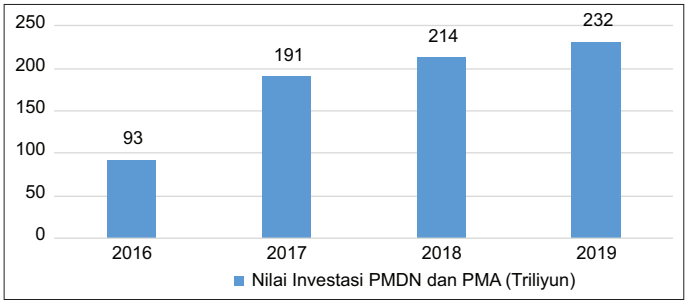
4.1. Oil Palm Downstream Development in Technopolitan Areas

Particularly, a Techno Park or Technopolitan is an area where various activities for the development of science and technology, empowerment and training, and even education take place in an area equipped with a variety of facilities and infrastructure that can support economic growth, innovation, and technology. The goal of technopolitan development is to achieve long-term synergy among universities (academics), industry participants, government, and society. Technopolitan regions may also be employed as centers of industrial product growth and diversification, which can boost industrial competitiveness.

Nationally, Indonesia does not have examples of successful technopolitan areas yet, however the efforts to develop technopolitan areas continue to be carried out, this is in line with the government's efforts to use appropriate technology that is related to the needs of community, which means it can accomplish the problem of community, it can be utilized efficiently and effectively by community, the application and the use of technology did not cause any damage to the environment, and increase the value that can help the movement of economy and environment. In the context of oil palm downstreaming, development is carried out based on updating appropriate technology for the plantation sector. Productive activities and community movements that support the acceleration of the development of innovation, and learning are include as the element of success in development because the application of good technology should be supported by good participation and human resources.

Basically, technopolitan area is a special area that was built based on a commitment to have one or more centers of science and technology activities which will able to create linkages between higher education institutions, research and development institutions, and industry as a vehicle to strengthen the innovation networks within the framework of an innovation system (Warseno, 2014). Downstreaming as an effort to increase and obtain a value that requires a variety of scientific and technological approaches, it is considered related to the goals of technopolitan area. The development of downstream is inseparable from healthy industrial growth, considering the conditions of Domestic Investment (PMDN) and the Investment of Foreign Capital (PMA) in Pelalawan Regency has increased significantly, indicating the better attractiveness and competitiveness. The following Figure 2 below is an overview of the investment value on PMDN and PMA in Pelalawan Regency from 2016 to 2019.

Figure 2: The Graphic of Investment value



Source: Investment Service One-Stop Integrated Services, Pelalawan Regency 2020

The Pelalawan Regency Government and the Agency for Assessment and Application of Technology have developed a technopolitan area since 2012, the basic for its formation is as a vehicle of education, development of palm-based innovation and technology. Pelalawan Technopolitan area is the largest area in Indonesia within the total area of 3,754 hectares and include as one of 5 (five) technopolitan pilot projects in Indonesia.

The need for downstream oil palm development was determined by several factors. First, the growth of coconut, rubber, and oil palm plantations production, which is dominated by oil palm production, by 1,886,470 tons in 2019, while rubber production only obtained 34,780 tons and coconut production only obtained 15,283 tons in the same year (Badan Pusat Statistik Kabupaten, 2019). Oil palm's flexibility, good availability, low cost, and assured supply make it one of the greatest raw materials for food processing industries (Guadalupe et al., 2019). The designation of a Technopolitan area in Pelalawan Regency is a necessary step in the attempt to build regional potential in order to enhance the community's economy, particularly to empower independent smallholders.

Second, the inclusion of Technopolitan Areas in the Sumatra Economic Corridor has an influence on the development of trade route connection among Sumatra Island's regions, as well as the more efficient and effective distribution of oil palm plantation goods. The development of facilities has the potential to enhance the economic mobility of the oil palm plantation industry, particularly the downstream sector, which requires strong connectivity of marketing logistics.

Third, the growth of Pelalawan Regency's key economic activity, such as oil palm. The yield of natural resources (palm plantations) in Pelalawan Regency is relative high, observing the percentage of oil palm production in Riau on 2013-2014 is quite high within the total of 7.84%, compared to other cities in Riau which tend to be decreased, the large production potential can be utilized for other production uses that use palm oil raw materials, such as biofuel made from oil palm.

Fourth, the opportunity for community to be actively involved in every oil palm plantations business activity to become more open. Currently the majority of oil palm farmers are still focused on increasing the yield of fresh fruit bunches. However, within the existence of technopolitan area, the process of transferring knowledge on cultivation, management, and utilization of oil palm plantations products is more optimal. Community empowerment on GAP (Good Agriculture Practice) can be implemented and community-based empowerment can increase the effective and efficient organizers (Amri & Ferizko, 2020), including the organization of independent smallholders in Pelalawan Regency which requires empowerment in the order of oil palm plantations subject such as an independent smallholders. Downstream oil palm development in technopolitan areas that facilitates the development of ideas, innovations, and know-how from the academic world and financial and marketing capabilities of business. The purpose of merger is to improve and accelerate product development and reduce the time required to move the innovations to marketable products which expect to obtain high economic returns (BPPT Kabupaten Pelalawan, 2019).

4.2. Downstream Oil Palm Potential in Technopolitan Areas

In 2010, the planning of downstream oil palm in Indonesia began to materialize. Downstreaming is an endeavor by Indonesia to shift its traditional economic activity as an exporter of oil palm goods into a contemporary one by becoming an exporter of oil palm derivative products. The government plays two responsibilities in enabling structural transformation through downsizing. The jobs are stated as entrepreneur and stated as conflict manager.

Development of the downstream business is required to sustain the upstream to downstream industry's strategic position. Increasing the productivity of oil palm fields and creating technopolitan regions are good circumstances for accelerating oil palm downstreaming. The availability of various facilities and infrastructure in the development of oil palm and educational facilities in field of plantations technopolitan areas can stimulate various innovations of oil palm derivative products in society.

Indonesia's oil palm plantations are growing rapidly in various regions, it is listed that 22 provinces have developed the oil palm plantation sector, five of them have become oil palm plantation business centers, observing from the spread on Sumatra Island that have become the productive areas in plantation development such as Riau, North Sumatra, and South Sumatra. Oil Palm mills as an integrated part of oil palm plantations following the spread of plantations. among the 608 units within a production capacity of 34,280 tons of FFB/hour, most of them are in the five oil palm center provinces, which the average 64% of Indonesia's oil palm plantation area produces around 70% of national CPO.

Based on the data of Food Crops, Horticulture and Plantation Department of Riau Province and Indonesian Oil Palm Statistics in 2017, the number of Oil Palm Mills in Pelalawan Regency is 32 with a production capacity of 1,875 tons/hour, then the area of oil palm plantations in Pelalawan Regency reached 393,327 ha with details of private plantations to 273,711 ha and people plantations within the total of 119,616 ha, if it compared to the total area of Riau, the total area of oil palm plantations in Pelalawan Regency is around 16.04% of all plantations area in Riau.

By the increase of investment and the area of oil palm plantations in Pelalawan Regency, Local government and other parties can take the opportunity to take advantage of the existing potential and absorb

young workers. The ability of agricultural sector, especially oil palm plantations, can create a working environment for younger people to be involved in oil palm plantation sector (Kamaruddin et al., 2018).

Along with the cooperation of various parties, especially the development of palm oil downstream innovation by the Innovation Center located in technopolitan area, it produces various products that can be utilized by the society. The Development result of palm oil downstream, happen in several products such as oleo food (oleofood complex), oleo chemical complex and biofuel complex. First, Downstream Oleo food (oleo food complex) can develop the products that were produced among oleo food products (intermediate oleo food) to the finished oleo food products, as for the products that can be produced are palm oil for cooking material, margarine, and others. Second, Downstream Oleo chemicals (Oleo chemical complex), is a product from basic oleo chemicals, the finished products such as detergents, shampoos, soaps and others. Third, Downstream Biofuel (Biofuel Complex), is the products that produced from biofuels. And the finished products can be the product such as biodiesel, bio avtur and others. The following Figure 3 below is a labor-intensive development on three downstream pathways for oil palm plantations that can be developed in technopolitan areas.

The potential for the development of biofuel industry (vegetable fuel) biodiesel as a fuel oil mixture is currently one of the main targets for development, it was done due to various considerations, including the use of new and renewable energy (EBT) in Indonesia, the effort to increase an added value from raw materials to finished materials that have a higher value.

4.3. The Governance for Downstream Oil Palm Development in Technopolitan Areas

In terms of economic development, oil palm plantations continue to increase. Oil palm is the most productive oil crop with the result per hectare about nine times of soybean (Verneau et al., 2019). The Directorate General of Plantations, Ministry of Agriculture noted, in the next 5 years (2020-2024), The government targets the investment in agricultural sector with a total investment of 2,231.5 trillion rupiahs, an increase of 827%, while the workforce in agricultural sector is targeted to increase by 3.26 million people (an increase of 8.4%) (Dirjenbun, 2019)

According to the concession status, most of the oil palm plantations in 2018, the oil palm area cultivated by large private plantations within the total of 6.36 million hectares (49.81%), 5.81 million hectares (45.54%) are cultivated by smallholders, and the rest 0.59 million hectares (4.65%) are cultivated by large state plantations. (Badan Pusat Statistik Kabupaten, 2019). The comvparison of oil palm plantation area can be seen in Figure 4 below:

Based on the status data of ownership, it can be seen that there is a fairly large oil palm plantation land owned by smallholder farmers, by 45.54% percent, Large area allows the management of oil palm downstream development to focus more on independent smallholders, therefore the efforts to increase the empowerment of independent smallholders to be involved in oil palm down streaming can be properly realized.

Figure 3: Labor-intensive development of oil palm downstream

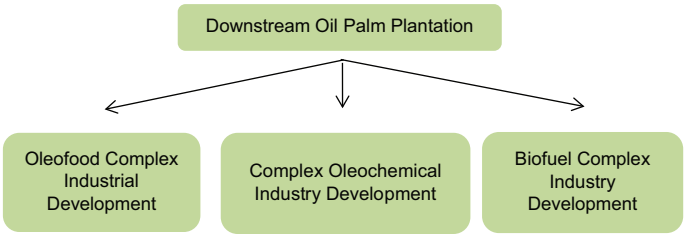
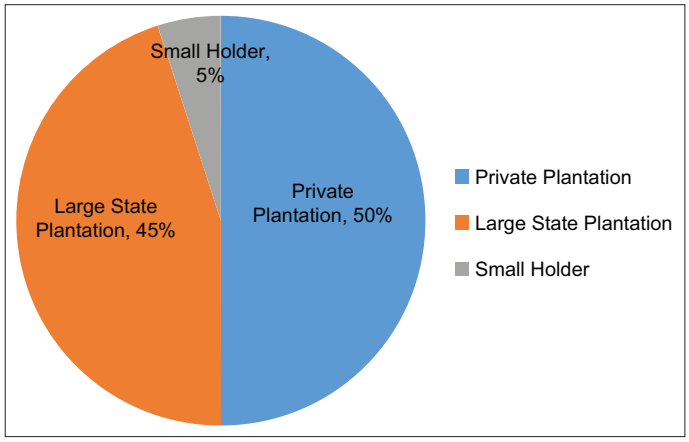


Figure 4: The Comparison of Oil Palm Plantation Area by Concession Status



The achievement of the Indonesian palm oil industry development industry cannot be separated from the contribution of independent smallholder palm plantations. In 2017 it reached 40.01% of the total national oil palm area with a production contribution of 22.64% from the total national production. Based on these conditions, the government has made various efforts to support the strengthening of independent smallholder's role in sustainable oil palm plantations, including the development of the downstream oil palm industry. Smallholder oil palm plantations in Riau are growing rapidly, however this condition is not accompanied by the development of the processing industry which cause a cumulating of raw materials (Syahza and Asmit, 2019)

The development of downstream industry (agro-industry) is very strategic if it is carried out in an integrated and sustainable way. Integrated means that there is a relation between upstream and downstream sector businesses in a synergistic and productive manner and the relation among regions, sectors and commodities. As defined by the World Commission on Sustainability, Sustainability means fulfilling the current needs without compromising the ability of future generations to fulfill their needs. Based on the number of derivative products that can be developed by CPO (Crude Palm Oil) commodities and the extra economic value that can be generated, the efforts of CPO (Crude Palm Oil) downstream needs to be addressed positively. The governance of downstream development of oil palm in Pelalawan Regency is implemented as an integrated, competitive and sustainable approach, this governance offers development that focuses on each planning process, implementation and evaluation that can be used to develop certain area in 7 zones simultaneously, the development

of technopolitan area is developed by applying various aspects of knowledge, technology, environment, economy and socio-culture. Therefore, it is expected to contribute effectively and efficiently to community empowerment which is competitive and sustainable. The following below is a description related to the governance of oil palm downstream development in Pelalawan Regency.

4.3.1. The integrated development

In the development of technopolitan area in Pelalawan Regency, the government and various other parties jointly develop the area based on the fields of expertise and possessed authorities, there are also involved parties in the development of technopolitan area, among others, Pelalawan district government, the Agency of Assessment and Application of Technology, Indonesian Palm Oil Council, PT. Pindad (Persero), PT. Engineering Company, Palm Oil Research Center and Bandung Institute of Technology (ITB).

4.3.2. Competitiveness

Compared to Malaysia, the growth potential of oil palm plantations and the utilization of palm oil products in Indonesia is not sufficient yet (Hashemvand Khiabani and Takeuchi, 2020). This is one of the reasons behind the utilization and potential of oil palm plantations should be done maximally. The Oil Palm Research Center and technological support from Bandung Institute of Technology empowers Independent Smallholders to enter the certified market and have their own factories by developing Industrial Vegetable Oil (IVO) production which made from Industrial Palm Oil (IPO) which will supply the needs for raw materials for Co-Processing Pertamina Oil Refinery in Dumai and will be able to produce biofuel. Beside, in order to create a sustainable implementation of downstreaming, several related parties needs to fulfill the ISPO certification for both companies and independent smallholders, it will help to increase the competitiveness of oil palm in world market, the principles and criteria applied are the efforts of Indonesian government to realize the development of coconut plantations and Sustainable oil palm (Habibie, 2018). Besides, the development of bio refinery refers to the exploration of biomass to be produced into fuel, energy, and chemicals used in daily life. Bio refinery can be developed to enhance its role in fulfilling global sustainability efforts (Harahap et al., 2020).

4.3.3. Sustainable

Public awareness has increased at the local and national levels, and various aspects of policies related to the economy, socio-culture, and the environment are being considered in the area's planning, implementation, and management. Several involved actors are prepared to fulfill the management of oil palm plantations related to the direction of SDGs and the principles of ISPO and RSPO, and the application of GAP (Good Agriculture Practice) has become a guideline for both companies. In an effort to mitigate the detrimental effects of oil palm farms. The public's bad perception of palm oil is the result of greed, corruption, profit, and capitalism (Teng et al., 2020). Besides, the implementation of GAP accompanied by government policies that support GAP can increase the success of sustainable oil palm plantation governance. The government needs to pay attention to policy aspects including the acceptance, adoption, and strategic readiness in managing oil palm plantations (Rusli, 2018).

In its application, the governance of the downstream oil palm development can realize the sustainable development of the industry; it is supported by the high opportunities obtained by independent smallholders to be involved in various production activities and cultivation activities that pay attention to environmental and legal aspects in each of their activities. An important point obtained from the existence of a technopolitan area in the community is community empowerment in oil palm management based on technology, environment and legality.

Support from various involved parties and the active role of community as a form of good development on the government, business, community, and academia to realize Good Agricultural Practice and the fulfillment of various ISPO principles in ensuring sustainable palm oil management. To ensure the active participation of independent smallholders, it is necessary to establish communities or institutions that can facilitate independent smallholders at regional level. An institution is always formed with an aims to meet various human needs therefore the institution has a certain function.

The institution includes a broad understanding, include the definition of farmer organizations, and 'role of the game' which means the rule of behavior that determine patterns of action and social relations, including social unity which is a concrete form of social relation of institution. collaborative arrangements help to support sustainable agricultural production systems (Futemma et al., 2020).

Independent smallholder institutions such as cooperatives are important to influence the implementation of palm oil downstream; (1). The ownership of oil palm land in Pelalawan Regency which is owned by independent smallholders is quite large, within a total of 119,616 ha and there are 40,315 families, (2). Cooperative institution can realize sustainable management of independent smallholder plantations, within the strategic partner of Ellawan College of Technology Innovation Center (PI-ST2P) located in the technoplitan area that can provide advocacy and innovation in the development of palm oil downstream, and (3). Cooperative institutions can contribute to increase the number of ISPO certifications, the existence of Independent Palm Oil Village Program of several cooperatives and UKUI Amanah Association (First Indonesian Self-Help Group that has ISPO certification) can influence other independent smallholder groups to be able to implement oil palm plantation management related to the principles of ISPO.

Considering the approaches of various development models, the following approaches can be found such as, First, the early development of International New Ventures: a multidimensional exploration. In this paper, it is stated that the initial development of new businesses in international world can utilize four types of capital such as, strategic, managerial, financial and social capital to identify and obtain new business opportunities (Kirwan et al., 2019). Paying attention to the potential section, it can be found that the potential of business or investment in oil palm plantations is high, therefore, if it clearly analyzed to the opinion of research, the utilization of oil palm plantation investments can support new businesses in oil palm downstream sector.

Second, library and information science and sustainable development: a structured literature review. In this writing, it finds that based on various existing literatures or articles, sustainable development is currently focused on understanding sustainable approaches, then related to the sustainability, it still focusing on information and communication technology or information systems, only few articles that discuss further topics such as government, city development, or scientific results (Meschede and Henkel, 2019). The current sustainable development model still focuses on finding a suitable approach, then sustainability can be interpreted as the development of information systems, in governance of the development on technopolitan areas, utilizing various meanings of "sustainable development" such as the use of technology and knowledge, education is supported on "physical" development such as construction of buildings, roads and supporting infrastructure for technopolitan areas.

Third, system dynamics models for the simulation of sustainable urban development: A review, analysis and the stakeholder perspective. The purpose of this article is to review regional development models, In this article, a sustainable development model should pay attention to environmental issues, social capital, life support advice and infrastructure such as water resources (soil, water) and waste management (Pejic Bach et al., 2019). The Development governance that was done in technopolitan areas applies the principle of sustainability, paying attention to environmental aspects in various matters such as regional development, downstream industry development and environmental education, environment-based economy.

Generally, the governance of the development of technopolitan area is developed by applying various aspects of education, knowledge and technology, environment, economy and socio-culture on it application of the downstream area in Pelalawan Regency, It needs an integrated, competitive and sustainable approach as a guideline in every implementation of planning, implementation, development of technopolitan areas, it aims to achieve the goals and benefits of technology, such as community empowerment through the downstream of oil palm industry.

5. CONCLUSION

The Governance of palm oil downstream development in Pelalawan Regency is carried out in an integrated, competitive, and long-term manner. The downstream of oil palm development in technopolitan areas facilitates the development of academic ideas, innovations, and know-how, as well as financial and marketing capabilities from the business world, and is part of solving problems related to the management of oil palm plantations that only focus on one aspect of economy. It is envisaged that the development of downstream oil palm would be able to overcome many barriers to the creation of a downstream business that empowers independent smallholders. If carried out in an integrated and sustainable manner, the growth of this downstream business is extremely strategic and competitive. Integrated indicates that there is a synergistic and productive relationship between upstream and downstream sector enterprises, as well as a relationship between regions, sectors, and even commodities. Support from many engaged parties and the active engagement of the community is a type of excellent development on the part of the government, business, community, and academics to produce Good Agricultural Practice and satisfy numerous ISPO criteria in sustainable oil palm management.

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