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Study on The Dynamics of Oil Palm Plantations in East Kalimantan Province

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Abstract: Oil palm plantations, can be utilised as part of agroforestry systems to mitigate some of the negative impacts of deforestation in East Kalimantan. This research was conducted through a desk-based study and field assessment to explore how these expectations play out in the palm oil sector in East Kalimantan. Research find that oil palm plantation poses serious deforestation challenges to the concept of green growth, as 44% of land allocated for plantations is still forested. At the same time, there may be opportunities to avoid deforestation and pursue more sustainable oil palm development pathways, as 87% of concessions have yet to be planted, however it has yet to be seen whether the political will exists to pursue this shift in policy. However, the conversion of forests to oil palm plantations, including those implemented as agroforestry systems, still poses ecological and social challenges. The development of oil palm plantations is supported by several government regulations, although their implementation in the regions creates various obstacles.

Keywords: Forest; Government policies; Oil palm; Plantation.

Introduction

East Kalimantan, there are approximately 6,388,157 hectares of dryland located in the Non-Forestry Cultivation Area (KBNK). In the framework of utilization and management of natural resources in the area, the development of oil palm plantations is carried out, this is one of East Kalimantan's breakthroughs to increase people's economic growth while preparing to anticipate regional dependence on natural resource be renewedces which until now is still a mainstay and non-renewable (Austin et al., 2017).

Palm oil generates significant added value in the economy and in creating employment opportunities, as well as boosting regional economic development. For the case of Indonesia (Purnomo et al., 2020). Palm oils, produced either for domestic uses or global markets, satisfy the needs of food industry, cooking oil, and bio-energy industries. Oil palm economy also promises well-being as well as positive impacts on the dynamics of rural economies at local levels (Krishna & Kubitza, 2020). It also generates socio-economic benefits to local communities, increasing incomes among households.

People's heavily dependence on this crop tends also to make income from oil palm a single source (Yulian et al., 2017), which potentially causes them to become vulnerable in case of serious income disruption (Amalia et al., 2019). There are also changes in local community livelihood from subsistence to become more dependent on market-oriented economy, widening the gap in social inequality among different social strata. Serious conflicts are also reported to occur among farming households or between farming households and plantation companies.

The process of expansion is governed by a system of permits, handed out by the local government. A location permit can only be given for areas that have officially been allocated for plantation development in the district spatial plan (Erwinda et al., 2021). If all requirements are followed, the National Land Agency (BPN) will award an Cultivation Right Permit (HGU), which gives the holder the right to produce palm oil for

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35 years, extendable for another 25 years (Fitrianto et al., 2018).

Based on the description above, East Kalimantan has potential natural resources and the availability of land that is widely spread to be cultivated either directly or through the production process. Agroforestry, which integrates trees with crops or livestock, offers a way to diversify land use, increase carbon sequestration, and enhance biodiversity compared to monoculture plantations (Vijay et al., 2016). In the economic development of the region, one of the sectors that plays an important role is the agricultural sector, namely the oil palm plantation subsector.

Method

To find answers to the problems formulated and the objectives to be achieved as mentioned above, two approaches were taken.

Literature Study. This study was conducted to obtain a comprehensive picture or portrait of the exploitation of oil palm plantations (Snyder, 2019). The Field Study. The second step was to conduct a field study through interviews with various resource persons, as well as FGDs (Focus Group Discussions) with stakeholders in the region (Fitriani & Azhar, 2019).

The data processing methods in the study are literature analysis with descriptive methods. This method aims to describe phenomena or research topics systematically, objectively, and comprehensively based on data that has been collected from written sources without manipulating variables.

The literature analysis method with a descriptive approach is very effective in describing and understanding phenomena based on secondary data (Abideen et al., 2023). The process includes collecting, selecting, analyzing, and presenting data systematically, so that the research results can provide a clear and comprehensive picture of the topic being studied.

Result and Discussion

According to Nurfatriani et al. (2019), the management of oil palm plantations in Indonesia is broadly grouped into three major patterns, these patterns reflect the different entities involved in cultivating and managing oil palm, with varying scales and organizational structures namely: smallholder/people's oil palm plantation pattern: is an oil palm plantation carried out by farmers/people (Zhao et al., 2022), these plantations are typically smaller in scale compared to state-owned or private plantations; state-owned oil palm plantation pattern: They are often larger in scale and may involve extensive land holdings carried out by state-owned plantation companies/SOEs; private oil palm plantation pattern: carried out by privately owned companies. These companies can range from small to large in size and operate under various business models. These patterns reflect the different entities involved in cultivating and managing oil palm, with varying scales and organizational structures (Ismail & Mamat, 2002).

The development of oil palm in Indonesia continues to accelerate, in 2009 it was recorded to reach an area of 7,509,023 ha with a production of 20,900,000 tons of FFB, consisting of 3,013,977 ha (7,599,130 tons) of smallholder oil palm plantations, 608,580 ha (2,729,250 tons) of state plantations and 3,895,470 ha (10,571,620 tons) of private plantations. The data indicates that private plantations accounted for the largest area and production, followed by smallholder and then state-owned plantations. This highlights the significant role of private sector investment in the Indonesian oil palm industry.

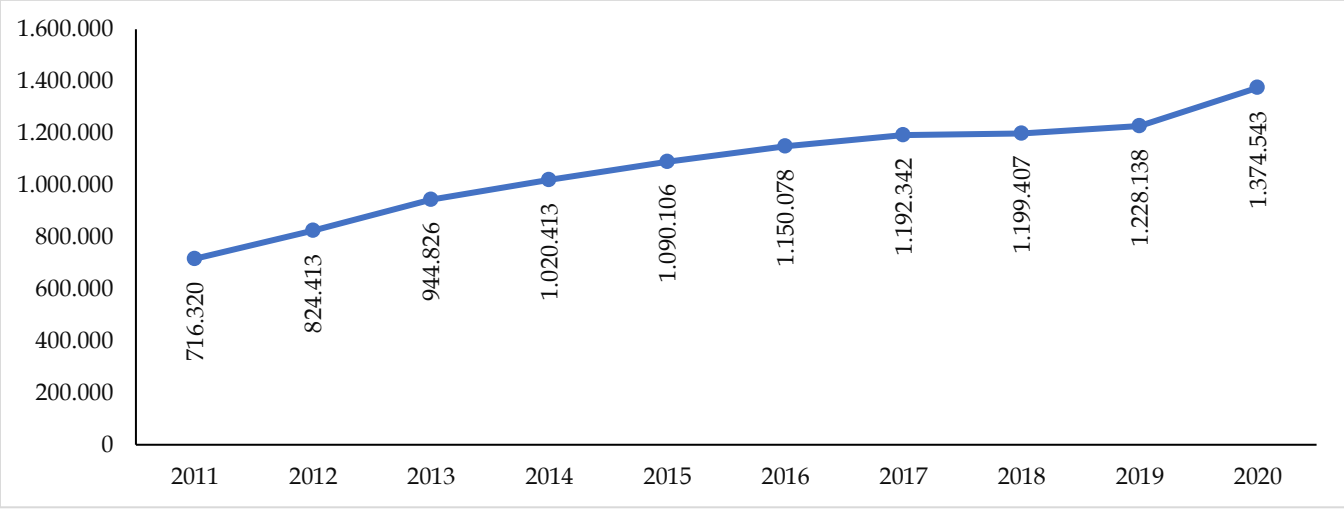

Figure 1. The development of Palm Oil Plantation Area East Kalimantan (Hektares)

As a system, oil palm plantations do not move on their own when raising their palm oil business in the local community. There is a local network that is also a support system to help the company's productivity. In the middle of the local community there is a local elite, the local elite that has an affiliation to the expansion of oil palm plantations is the one that has the human resources to control the land (Euler et al., 2017).

After the launch of the million-hectare oil palm development program in 2003, the development of oil palm plantations in East Kalimantan experienced a very rapid increase in almost all of East Kalimantan, namely Paser, East Kutai, West Kutai, Penajam Paser Utara, West Kutai, Berau, Bulungan and Malinau. One thing to notice that palm oil industries contribute not only the plantations in the province but play important roles in economy.

In December 2013 the province had granted location permits to a total of 344 companies, covering 3.9 million hectares; *Izin Usaha Tambang* (IUP) Mining Licences permits to 215 companies, covering 3.1 million hectares; and HGU concessions to 127 plantation companies, covering 1.1 million hectares. The provincial government seeks to reach 2 million hectares of area under HGU concession by 2018 (Rahman, 2015); this implies an acceleration of plantation expansion over the next three years. Until 2020, the oil palm area reached 1,374,543 hectares consisting of 373,479 hectares as plasma crops/people's plantations, 14,402 hectares owned by State-Owned Enterprises (BUMN) as core companies and 986,662 hectares owned by Large Private Plantations (393 companies).

One of the main problems with the expansion of oil palm plantations, however, is the conversion of tropical forests that serve to maintain the diversity of flora and fauna and the global climate into mono-culture oil palm plantations. oil palm poses serious deforestation challenges to the concept of green growth, as 44% of land allocated for plantations is still forested (Numata et al., 2022).

Economic impacts of oil palm plantation expansion oil palm plantation expansion that is the change in farmers' income (Risal, 2018). Syahza et al. (2023) argues that oil palm plantation development activities have had an impact on acceleration of community economic development in efforts to alleviate poverty in rural areas. Other research suggests that the economic impact of of oil palm expansion can increase diverse diverse investment opportunities and generate stable income (Matualage et al., 2019).

Through the Focus Group Discussion (FGD) activities, it was found that there are several problems and obstacles in the development of oil palm plantations, as follows: the increase in oil palm area is claimed to be partly derived from the conversion of natural forests and peatlands that affect global climate change: The lack of protection of land rights of local communities who use the peatland for their livelihoods while leaving it largely intact, allows large-scale commercial agriculture to contribute to serious harms to the global climate. As peatland is converted to use in commercial agriculture, the widescale destruction of one of the most important carbon sinks in the world, hampering efforts to reduce carbon emissions to avert the worst-case outcomes of global climate change.

The conversion process of natural forest and peatland contributes negatively to deforestation, degraded peatland, and loss of water resources and biodiversity (Adesiji et al., 2015). Conversion to plantations or other forms of agriculture results in several long-term changes in the peatland ecosystem. In peatlands that have been converted to commercial plantations, current management practices involve maintaining sufficiently low water table depths to enable optimal growth of tree crops while also reducing water-table draw down during dry seasons (Miettinen et al., 2017; Wijedasa et al., 2016).

The social problems that arise in oil palm development areas, as summarized by Teoh (2010) from various references, center on questions of land ownership and use and how rights are transferred, and disputes and conflicts arise from differing interpretations and transfers of these rights. The Consortium for Agrarian Reform reported 32% of conflicts (261) were related to these issues, while Sawit Watch cited 570 conflicts. These conflicts underscore the tension between local communities and companies over land control and resource access (Rehman et al., 2015).

Difficulties in obtaining capital because of inability to meet collateral linkage requirements for bank financing, unavailability of technical guidance and market information. Small and medium-sized enterprises (SMEs) often face challenges in securing capital due to a combination of factors, including the inability to meet collateral requirements for bank financing, lack of technical guidance, and limited access to market information. Research from the Bank of England indicates Krishna & Kubitza (2020) that collateral constraints are a significant barrier, particularly for businesses investing in intangible assets. Additionally, the absence of readily available technical guidance and market insights can hinder their ability to develop viable business plans and present compelling loan applications.

The Union of Oil Palm Farmers in East Kalimantan (SPKS) perceives that the FFB pricing mechanism is not transparent. Approximately 22 % of the smallholders (mostly tied smallholders) faced difficulties in repaying

their loan, mainly due to price fluctuations for FFB. These financiers may be willing to pre-finance the revenue of the end product or postpone repayments of loans for products and/or services delivered. This requires not only transparency in the arrangements, but also a system which ensures that FFB is supplied to the buyer who provides such services. While based on the Minister of Agriculture's Regulation, farmers have no opportunity to be involved in the price determination process.

Local governments politicize licensing, stems from a lack of public awareness regarding rights and procedures, which occurs due to individuals' and communities' lack of knowledge of their rights and the processes and procedures to be followed. This can manifest as favoritism, bribery, or other forms of corruption where decisions are influenced by political connections rather than objective criteria. Transparency and public education initiatives are crucial to address this issue.

Palm Oil Plantation Supporting Policies

Through Government Regulation No. 26/2021, there is a minimum and maximum area limit for oil palm plantations. The minimum area for oil palm plantations is 6,000 hectares and the maximum is 100,000 hectares (Rianto et al., 2012). In addition, companies are obliged to facilitate the development of community plantations covering 20% of the land.

Smallholder oil palm farmers (independent Palm Oil Farmers) will also be provided with facilities and infrastructure to receive funding subsidy support through the use of BPDP-KS (Palm Oil Plantation Fund Management Agency) funds. The assistance fund is regulated through the Decree of the Director General of Plantation of the Ministry of Agriculture No. 144/Kpts/OT.050/4/2020 concerning the funding of facilities and infrastructure for smallholders using BPDPKS subsidy funds. Policies to support independent smallholders, including through a massive community oil palm replanting program that aims to help independent smallholders, renew their oil palm plantations with more sustainable and quality oil palm and reduce the risk of illegal land clearing (Lee et al., 2020).

Conclusion

Palm oil governance in East Kalimantan still has a trail of problems. Palm oil plantation development in East Kalimantan faces criticism related to environmental damage, including deforestation, peatland clearing, and forest fires. Land conflicts, particularly those involving communities and companies, are also a significant concern. The development of oil palm plantations is carried out, this is one of East Kalimantan's breakthroughs to increase people's economic growth. The government has done many things related to the development of the palm oil industry.

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Author Contributions

Conceptualization, methodology, validation, formal analysis, investigation, resources, E.E.L.; data curation, writing original draft preparation, writing—review and editing, visualization. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest

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