

Forest Land Conversion for Oil Palm Plantations and Legal Protection and Social Welfare of Indigenous Communities

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Abstract The transformation of forests to other uses poses a significant threat to the existence of forest areas and leads to damage to forest ecosystems, which can have a detrimental impact on the welfare of people depending on forests, notably indigenous communities. Consequently, there is a need to safeguard the social welfare and rights of affected communities in forest conversion policy by recognizing their rights and protecting them from negative impacts. This research seeks to explore the legal protection of rights and social welfare for local communities in the context of forest function transfer for palm oil plantations in Indonesia, mainly examining Law Number 41 of 1999 concerning Forestry. This research employs a sociology of law approach and uses a qualitative method to analyze primary and secondary data, with triangulation as the data validation technique. The study concludes that expanding oil palm cultivation will result in environmental degradation and harm the people surrounding the area, as they lose natural and economic resources obtained from forests. Consequently, there is a pressing need for specific policies and legal regulations that safeguard the social welfare and rights of affected communities. Policies should consider balancing economic development with environmental preservation and prioritizing the maintenance of forest areas as undeveloped land. In particular, palm oil plantation development should only occur on degraded lands that are still abundant in Indonesia, and permits already granted for palm oil expansion must be

reviewed, especially those affecting forested areas. Ultimately, a balance must be struck to promote sustainable economic development and conservation while ensuring that the social welfare and rights of communities depending on forests are protected.

Keywords Ecological Function, Forest, Palm Oil Plantation, Rights Protection, Social Welfare

1. Introduction

Indonesia's palm oil industry has both positive and negative impacts. On the one hand, it contributes to the country's economic growth and enhances factory competitiveness, leading to an improved standard of living for the people. On the other hand, the industry faces mounting environmental challenges, particularly related to deforestation and the alteration of natural ecosystems. As oil palm plantations spread, they displace natural forests and change the shape of the land. Additionally, deforestation is a significant contributor to carbon emissions and greenhouse gases, leading to global warming and the potential for climate change. While the palm oil industry continues to play a significant role in Indonesia's economy, its growth must be managed in a way that takes environmental concerns into account [1]. Careful

planning and conservation efforts could help minimize the negative impacts of the palm oil industry while maximizing its potential benefits.

Forest land conversion refers to the transformation of forest areas into non-forest areas such as agricultural land, plantations, and settlements. This is a growing problem that leads to severe deforestation, which in turn results in negative impacts on forest ecosystems. The conversion of forest land into other uses such as palm oil plantations is proving to be a threat to forest areas [2]. Additionally, the practice of burning forests to clear land for plantations has been known to cause forest fires, which can further damage the ecosystem [3]. The consequences of this destruction can have an impact on the people who are dependent on forests such as indigenous communities who live around forests [4]. Therefore, measures that protect the rights of people affected by the conversion of forest policies are necessary to mitigate the negative impact of forest conversion. These measures must provide social welfare for those communities and recognize their rights in forest conversion policies. With proper protection and welfare measures, affected communities can be shielded from the adverse consequences of forest conversion policies, and the negative effects on forest ecosystems can be minimized.

The safeguarding of both social welfare and environmental protection is a crucial aspect of government policies related to forest conversion. The protection of land and community economic rights is directly linked to forest conservation and should therefore be prioritized. Additionally, any other social rights that may be impacted by such conversion should also be taken into consideration [5]. Furthermore, environmental protection must be taken into account since forest conversion may have a negative impact on the environment. In Indonesia, Law Number 41 of 1999 concerning Forestry was implemented to address forest conversion and ensure sustainable forest management. The law covers various aspects like forest protection, management, utilization of forest products, restoration, and supervision. The law also has provisions to punish those involved in forest conversion without proper authorization. Environmental law is a set of regulations established by the government with the main aim of safeguarding and managing the environment. This body of law addresses several aspects such as safeguarding water, air, soil, and biodiversity, alongside pollution control and waste management. It gives the government an opportunity to take pertinent action and offers a framework for individuals and corporations to fulfill their environmental obligations. The ultimate goal of environmental law is to promote the welfare of society by acting as a guidepost for the preservation and management of the natural environment. In forest conversion policies, there is a need to prioritize the protection of rights and social welfare because the shift from conservation or protection to production or settlement can significantly affect the surrounding communities. Thus, it is critical to consider

the welfare and protection of the community during decision-making and implementation of forest conversion policies. This approach is important as it ensures that the long-term benefits of environmental preservation are enjoyed by future generations [6].

The main intentions of forest management are laid out in Article 3 of Forestry Law Number 41 of 1999, which stipulates that the aim of forestry management should be to achieve the ideal economic, social, and environmental benefits for society while maintaining sustainability and fairness. This includes ensuring that forests maintain a suitable size and even distribution, and the optimization of various forest functions, such as conservation, protection, and production functions, which provide ecological, cultural, social, and economic benefits. Furthermore, forestry management also works towards increasing the watershed's capacity, which can be done by developing community capabilities and promoting the empowerment of local communities. This would contribute to a fair and sustainable distribution of benefits that would promote socio-economic resilience while also ensuring that the environment is not compromised. Law Number 41 of 1999 concerning Forestry outlines the government's forest management objectives, which aim to achieve sustainable and equitable prosperity for society. Therefore, this research emphasizes the significance of supporting the goals and arrangements of the government's planned activities. However, it is necessary to examine the effectiveness and direction of the implementation of Law Number 41 concerning Forestry.

2. Literature Review

Protected forests are a vital part of Indonesia's environment, with numerous social, cultural, economic, and geographical benefits. These forests act as a buffer for soil balance, protect against erosion, and regulate climate. Additionally, they serve as a countermeasure against air pollution and are an essential component in combating climate change. Protected forests are home to various wild animals, supply much-needed natural resources for local communities, and have unique social and cultural values. Therefore, it is crucial to properly manage and protect these forests sustainably to achieve optimal benefits for society and the environment [7, 8]. Proper management will ensure that the protected forests continue to maintain the balance of ecosystems and their important functions. The role of these forests demands that they remain untouched and protected despite the possible economic benefits that could be gained from exploiting the natural resources within them. By doing so, society can enjoy the social, cultural, and economic value of the protection while maintaining a balance with the environment [9]. Indonesia's Law Number 41 of 1999 outlines the definition of a forest as an ecosystem unit consisting of a stretch of land containing natural resources mostly dominated by

trees in their natural environment. The law is in place to manage and regulate the forestry sector in the country, to ensure the protection, conservation, and sustainable use of forest resources. It also states that forest areas are specific areas designated or determined by the government to remain permanent forests. The law covers everything from managing forest areas, granting permits for utilization and conservation, and outlining the rights and duties of both the government and forest users.

Forested areas across the globe provide significant advantages for the survival of communities due to their ecological functions. Forests play a crucial role in regulating the natural ecosystem, which enables them to maintain ecological balance. The importance of forests lies in their ability to absorb carbon dioxide from the atmosphere, which facilitates the process of photosynthesis and produces oxygen [10]. However, widespread deforestation has resulted in severe environmental degradation across Indonesia. Examples of such destruction include landslides, flooding, and an increase in the greenhouse effect, which has led to rising temperatures across the country. This destruction of forests is often caused by people converting land into residential areas or expanding agricultural and plantation areas [11]. Forests also have political value, depending on the control and ownership of the area, with different consequences for the function assigned to the forest area, such as conservation, protection, or production [12, 13]. For example, forest areas that serve a production function in Indonesia tend to involve more human activities than areas designated for protection or conservation. Changing the function of a forest area could impact the livelihoods of those who have relied on it previously. Therefore, when determining changes in the function of a forest area, a thorough assessment of potential losses and possible conflicts is necessary [14]. The demands of development, such as agriculture and settlements, can lead to alterations in the partial function of forest areas. Nonetheless, ecological and environmental balance in forest areas must be maintained, even if the function of the forest area changes. Forest areas' distribution must be optimized, taking into account environmental balance, which can provide benefits to the community's welfare and serve as a life support system [15, 16]. In this context, the ecological and political importance of forested areas necessitates the preservation, protection, and strategic use of these areas. Forests' ecological function is why their destruction has led to environmental damage across Indonesia, highlighting the importance of regional and global efforts to reduce deforestation. Therefore, the implementation of an effective strategy and policy may ensure that the welfare of the community is maintained and forest areas are preserved for future generations.

The Ministry of Agriculture in Indonesia views plantation crops as a means of earning foreign exchange and promoting development. Under the New Order

government's leadership, the plantation industry became a top priority in national economic development, and a rapid plantation program was initiated to increase commodity exports. The total area of plantation crops increased from 597,362 hectares in 1985 to 5.6 million hectares in 2005. Despite its economic benefits, land conversion for plantation crops can decrease land quality due to slash-and-burn practices. After clearing the land, burning wood and branches can increase the soil's leaching and depletion process. This leads to a reduction in the soil's organic matter content, which further decreases the soil's physical and chemical properties. As a result, the land becomes less productive and may even become unsuitable for cultivation [9, 16].

3. Method

The purpose of this study was to examine how the transfer function of oil palm plantations impacts indigenous communities and to determine the level of legal protection provided for their social welfare and rights. The research utilized the sociology of law as a qualitative approach. Qualitative approaches are relevant in environmental science because they uncover hidden environmental concerns and reasons behind them, which is essential in creating relevant adaptation strategies for various groups [17]. In this study, qualitative methods were utilized to investigate the impact of oil palm plantation transfer functions on the social welfare and rights of indigenous communities, focusing on the severity and identity salience at the social identity level. By utilizing qualitative methodology, the study aimed to provide robust insights into the impact of oil palm plantations on indigenous communities while highlighting the need for legal protection to ensure their social welfare and rights.

In this study, secondary data sources from legal materials regulating forestry and land transfer were utilized for data collection, along with empirical data from relevant sources. The purpose was to investigate the impact of the transfer function on oil palm plantations. Data source triangulation was used for validation, which is a technique for validating qualitative research data [18]. This technique was deemed suitable for research on protecting the rights and social welfare involved in forest conversion policies because it allowed for multiple perspectives from various stakeholders, such as local communities, government officials, and decision-makers [19]. Qualitative analysis with descriptive statistics was used as the analysis technique for the data. The data collection technique in this study relied on secondary data sources from legal materials, as well as empirical data from relevant sources. This approach is commonly used in other studies investigating the impact of oil palm plantations [20, 21]. To validate the collected data, the study employed data triangulation, which involves gathering information from multiple sources with different perspectives to ensure data validity.

This technique is commonly used in qualitative research [22] and has been shown to be effective in studies related to forest conversion policies [23].

4. Results

Forest conversion refers to altering the planned function of a forest area, resulting in negative impacts on the environment and the forest's potential. This change can entail converting the forest to other uses, such as agriculture, plantations, or residential housing, often due to factors such as increasing population levels or government expropriation. This phenomenon is increasingly concerning due to its growing prevalence and the adverse effects it has on surrounding ecosystems. The conversion of protected forests in different regions contributes significantly to this trend. Legalization by local or central authorities may allow the change of forest use to happen, leading to further degradation of ecological conditions. Despite its negative consequences on the environment, forest conversion continues to occur at an accelerating rate, thus highlighting the need for more effective measures to protect forests and their potential functions [11].

According to [24], the conversion of forest land to non-forest in the watershed can lead to increased run-off discharge and disruption of the hydrological cycle. This phenomenon was observed in South Kalimantan in early January 2021, where flooding occurred in 10 districts due to reduced forest area in several watersheds [25]. Using the random forest classification method for Landsat imagery from 2010 and 2020, LAPAN reported a decrease in forest area and an increase in a plantation area in the Barito Watershed of South Kalimantan [26]. The results were presented in Table 1.

According to research conducted by [27], the Tabunio Watershed in South Kalimantan experienced a decline in forest area by 26.27% and an increase in plantation area by 2,169.16% from 2000 to 2018. Similarly, there was also a decrease in forest area in Banjar Regency, South Kalimantan, with a loss of 11.35% between 2007 and 2017 [28]. In Jorong District, Tanah Laut Regency, South Kalimantan, mangrove forests declined by 28.36% or 659 hectares in the 2010-2020 period due to land conversion to plantations [29].

According to [30], South Kalimantan has a significant potential for oil palm plantations due to the large land area suitable for this type of farming. The study found that over 81% of the total area in Tanah Laut Regency is suitable for oil palm cultivation, as determined using the Spatial Multi Criteria Analysis method. This type of business requires specific weather conditions such as a yearly rainfall of

more than 2500 mm, a consistent temperature between 28-32 °C with long daily exposure to sunshine and a specific soil type, which South Kalimantan's climate and terrain satisfy. The current administration's efforts to develop road infrastructure, including the Banjarbaru - Batulicin toll road, is one factor attracting investors and entrepreneurs to the oil palm plantation business in this province.

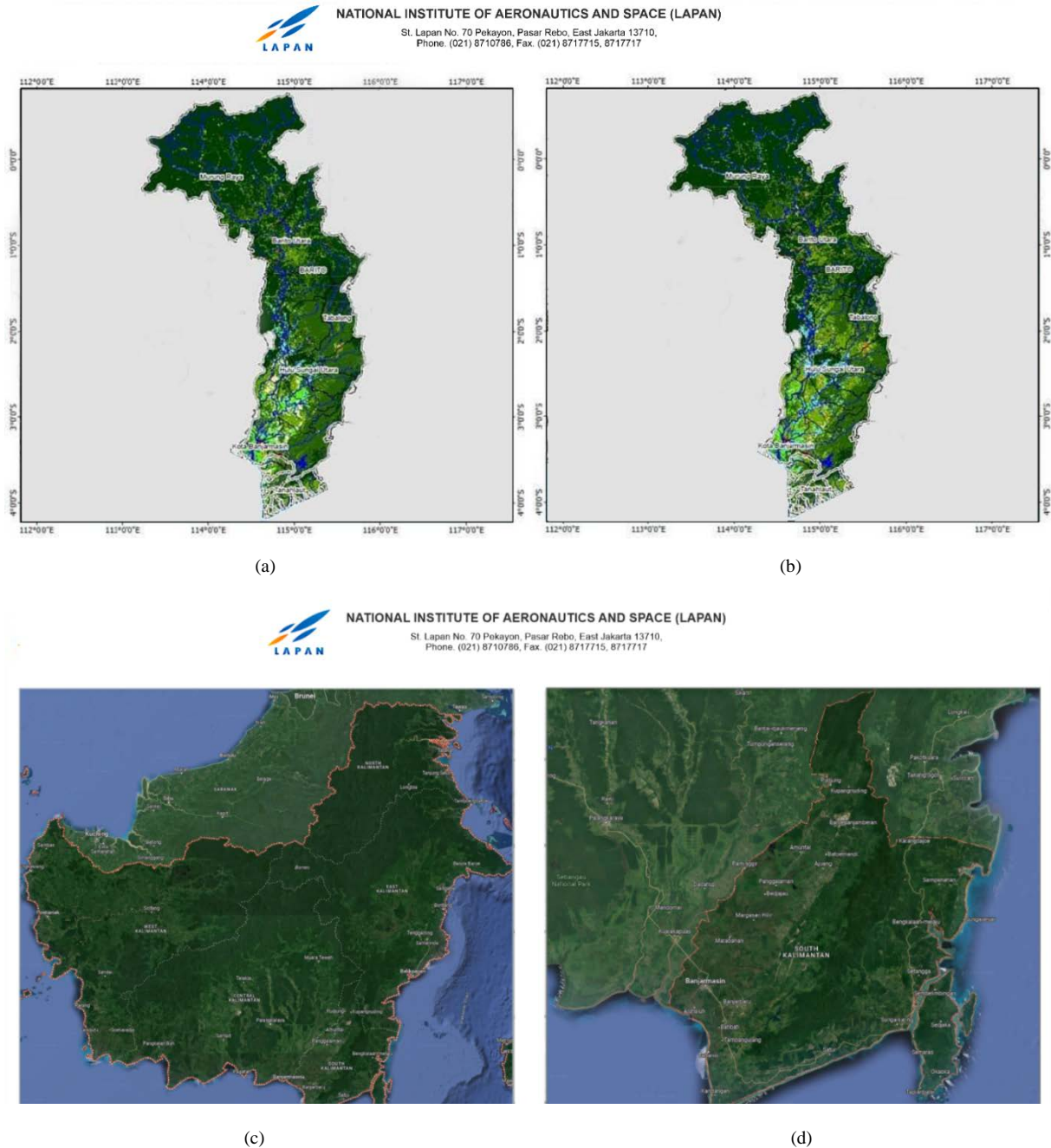
Table 1. Changes in Land Cover 2010 -2020 Barito Watershed

No.	Land cover	Decrease in Land Cover Area
1	Primary Forest	- 13.000 ha
2	Secondary Forest	- 116.000 ha
3	Rice field	- 146.000 ha
4	Shrubs	- 46.000 ha
5	Plantation Area	+ 219.000 ha

Source: [26]

There has been a rise in the plantation area in South Kalimantan, which can be attributed to the growing demand for palm oil around the world. This demand has been fueled by the worldwide increase in population and the growing desire for products made with palm oil such as food and cosmetics, as well as its use as a biofuel [27]. The palm oil industry has the potential to greatly benefit the national economy through increased exports and their value. For many countries that depend on commodity export, the growth of this industry is crucial [31, 32]. As such, the expansion of the plantation area in South Kalimantan represents an important development for the global economy.

According to data from Global Forest Watch, South Kalimantan lost 794 thousand hectares of tree cover between 2001 and 2019, with 10.4% of it including primary forest areas [27]. The loss of forests in Kotabaru and Tanah Bumbu Regencies was particularly high, with 266 thousand and 160 thousand hectares lost, respectively. Deforestation is considered to be the main cause of many disasters resulting in high losses. Forest Watch Indonesia (FWI) emphasized the importance of intact forests in their report on deforestation numbers as an "alarm" for deteriorating Indonesian forests, stating that disturbed forests lose their ability to absorb large amounts of rainwater, increasing the risk of flooding. The change in forest cover over the past decade from 2010 to 2020 in Kalimantan, South Kalimantan is presented in Figure 1. These findings highlight the urgent need for effective conservation efforts to protect the remaining forests and their ecosystems.



Source: [26]

Figure 1. (a) Land cover in South Kalimantan 2010; (b) Land cover in South Kalimantan 2020; (c) Kalimantan (Borneo) Island; (d) South Kalimantan Regency

When governments prioritize development policies, they often conflict with the need for environmental preservation. For example, the expansion of oil palm plantations can cause harm to both the environment and the local populations. Forest cover is converted into plantations, causing the loss of natural resources and economic opportunities for those who rely on the forest. It is essential to strike a balance between economic growth and environmental conservation. Therefore, policies that promote sustainable development must be implemented. The government must evaluate the environmental impact

of development projects and work to minimize negative effects. Providing protection and fair compensation to those who are impacted by development is also necessary [33]. Sustainable development can be achieved by implementing measures such as the use of more eco-friendly practices in industry, combining economic growth with social and environmental welfare, and supporting green technologies and renewable energy sources.

Forest privatization policies can result in an increased rate of forestland conversion if licensing requirements are

eased. When regulations for obtaining permits to use forest land were relaxed, it became easier for companies and individuals to obtain permits to convert forest land for other purposes. This is linked to the loss of natural habitats and biodiversity and can negatively impact the livelihoods of local forest-dependent communities. Moreover, forestland conversion contributes to climate change and can counter sustainable development goals [34]. This suggests that strict regulations and oversight on the issuance of forest land permits are necessary to ensure the protection of local community rights and the environment. Furthermore, [35] also argues for the implementation of robust regulations and monitoring of forest land use to reduce forestland conversion.

Forest conversion policies aim to protect the rights of communities and ensure their social welfare in the face of the impact of forest conversion. This involves ensuring that communities affected by forest conversion have their rights to land, natural resources, decision-making and economic protection protected. Additionally, social welfare includes access to vital services such as healthcare, education, and proper housing [36]. To achieve the sustainable management of forests, collaboration between government and local communities is pivotal, as this will guarantee comprehensive participation in the decision-making process of forest conversion policies. Through proper consultations and coordination, appropriate compensation and protection can be given to the community and the environment to achieve sustainability [7, 21, 37]. Therefore, it is imperative that forest conversion policies are directed toward the protection of community rights and social welfare for the sustainable use of forests.

5. Conclusions

In conclusion, developing a sustainable economy requires balancing the needs of society and the environment. The government must prioritize environmental protection while striving for sustainable economic development. Conservation regulations must be implemented to ensure that forest resources are preserved, the welfare of local communities is prioritized, and environmental impacts are minimized. The adoption of these policies will help prevent or mitigate the environmental damage caused by oil palm development and ensure that future generations benefit from these natural resources. The rapid expansion of oil palm development has led to concerns about environmental damage and adverse effects on the livelihoods of people living in and around forest areas. It has become crucial to balance economic development with environmental preservation and enact policies that reduce or mitigate these negative impacts. The Indonesian government must play a pivotal role in this regard by paying close attention to the environmental impact of development projects and ensuring sustainable and environmentally sound

development.

To safeguard the environment and society, the government has issued various regulations such as Law of the Republic of Indonesia Number 41 of 1999 Article 3 concerning Forestry. This law aims to achieve maximum prosperity for the people in a sustainable manner by prioritizing the welfare of the local community, striving for economic development, and preserving and sustainably using forest resources. These measures include safeguarding biodiversity, maintaining ecosystem services, and reducing greenhouse gas emissions. In addition, forestry management should be based on the principles of social justice, economic efficiency, and environmental protection, with the rights and participation of local communities respected. Although development is necessary, special considerations must be given to the implementation of oil palm expansion. Areas still possessing good forest vegetation must be maintained as forests and not converted into plantations. The development of oil palm plantations should be directed towards degraded lands that are still extensive in Indonesia. Furthermore, permits granted for the expansion of oil palm plantations, especially in forested areas, should be reviewed.

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