

*Regional Case Study*

## Land Tenure of Forest Fringe Communities and Their Impact on Deforestation: A Case Study in Soeharto Forest Park

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### Abstract

Soeharto Forest Park is a forest area located in East Kalimantan, Indonesia. Soeharto Forest Park has an area of about 61,840 hectares and is one of the critical forest areas in Indonesia. Soeharto Forest Park primarily serves as a conservation area and nature preservation. It contains high biodiversity, including various species of flora and fauna that are protected. The research methods involve field surveys, structured interviews, and secondary data analysis. Data was collected to understand community land tenure, including tenure rights, land use, and agricultural practices. In addition, deforestation impacts are identified through mapping land cover change and vegetation density analysis. It is just that over time, the connection of the surrounding community with Soeharto Forest Park is very high. Many people use the Forest Park area to become open land. This lasted from 1957 until 2022. The total land area of Soeharto Forest Park that has been opened is 335,994 m<sup>2</sup> or 33,6 hectares. Many communities on the outskirts of Soeharto Forest Park that cleared land and used it as settlements, plantations, and rice fields from 1957 to 2022 highlights the deforestation in land use around the area over a long period. These changes reflect social, economic, and policy dynamics that affect local communities and the surrounding environment.

**Keywords:** Deforestation; landfringe communities; land tenure; soeharto forest park

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### 1. Introduction.

Soeharto Forest Park is one of the critical forest areas in Indonesia, located on the edge of the forest and inhabited by local communities. Land tenure of forest fringe communities is an important issue related to the area's sustainability. The land around the forest is often inhabited by people who live traditionally, depending on the natural resources in the woods for their livelihood. However, in recent decades, forestry fringe communities' land tenure has become a grave concern. Population increases, socio-economic changes and pressures on natural resources have led to changes in land use patterns by forest fringe communities. This phenomenon often occurs when local communities have traditionally inhabited and used the land around the forest daily (Rakotonarivo et al., 2023). Land tenure by forest-fringe communities in Soeharto Forest Park presents complex challenges. On the one hand, people feel they have the right to access and use the natural resources around them to meet their living needs. They rely on forests for activities such as agriculture, forest product collection, and other resources that are their source of income and sustainability (Pinuji et al., 2023). On the other hand, community land tenure within the forest park area can also conflict with conservation and environmental protection efforts that are the government's primary focus. Governments often have policies to maintain forest integrity, reduce illegal deforestation,

and restore threatened ecosystems (Camino et al., 2023). In this context, land tenure by forestry fringe communities can be complex; it requires a balanced and comprehensive approach.

One of the main impacts of this land tenure is the increasing rate of deforestation in Soeharto Forest Park. Deforestation, the permanent loss of forests, has become a severe problem in Indonesia, contributing to global climate change, biodiversity loss, and ecosystem imbalances. In the context of Soeharto Forest Park, land tenure of forest fringe communities has become one of the main factors causing deforestation in the area (Pinuji et al., 2023). Based on research (Rakotonarivo et al., 2023; Shirzad et al., 2022). Forest fringe communities often use forests for their needs, such as to fuel wood and build wood and fields. In some cases, they also engage in unsustainable agricultural practices, such as illegal timber looting and land clearing by burning forests. These practices contribute to deforestation, which damages valuable forest ecosystems. The gap analysis highlights the need to investigate the historical context of local communities, identify drivers of land use change, assess policy effectiveness, and explore sustainable livelihood alternatives to address deforestation in Soeharto Forest Park. Case studies of land tenure of forest fringe communities and their impact on deforestation in Soeharto Forest Park are essential for understanding the complex dynamics between local communities and forest conservation. This study will provide a better understanding of the factors that influence land tenure, the practices that contribute to deforestation, as well as their impact on the sustainability of forest ecosystems. By gaining deeper insight into this issue, it can become a source of the latest information that can be developed into more effective strategies and policies for managing land use on the forest periphery and protecting Soeharto's Forest Park from destructive deforestation.

## **2. Methods**

### **2.1 Time and Location of Research**

This research was conducted in the Bukit Soeharto Forest Park Forest Area, in Kutai Kartanegara Regency and North Penajam Paser Regency, East Kalimantan Province. In contrast, data collection, processing, and analysis were conducted in Samarinda City. The study was conducted for two months, including one week of preparation and data collection, four-week research implementation, and three-week data processing.

### **2.2 Research Methods**

Research methods include field surveys, structured interviews, and secondary data analysis. In this study, the methods used included field surveys, structured interviews, and secondary data analysis. Field surveys were conducted to collect data from forest fringe communities in Soeharto Forest Park. The research team visited the site and observed field conditions, identified land use, and obtained information about community practices and needs to be related to land tenure around the forest (Mutolib et al., 2020).

In addition, structured interviews were also conducted to gain a deeper understanding of the perspectives and experiences of forest fringe communities. The research team interviewed representatively selected respondents to interview them about their land use history, tenure rights, environmental changes, and their feelings regarding conflicts between land tenure and conservation efforts. Then, in addition to primary data sources, secondary data analysis was also carried out in this study. Secondary data includes pre-existing information and records, such as government reports, previous studies, location maps, and statistical data related to forests and land in the region. These secondary data provide a broader context and support findings from field surveys and structured interviews (Kaehe, Ruru, and Rompas, 2019). Data was collected to understand community land tenure, including tenure rights, land use, and agricultural practices. Data analysis uses descriptive qualitative analysis using graphs and tables associated with previous research (Ibrahim & Syarifuddin, 2018).

### **2.3 Data Analysis**

Data analysis in this research involved a descriptive qualitative approach, wherein the collected data from field surveys, structured interviews, and secondary sources were meticulously compiled, organized, and cleaned. (Crabtree and Miller, 2023). Data categorization was performed to identify various aspects

related to land tenure and deforestation, including land use patterns, tenure rights, agricultural practices, environmental changes, and community perspectives on conservation (Ning et al., 2018). Through coding and theme identification, the research team unearthed recurring trends and common themes within the dataset, facilitating a deeper qualitative analysis. Moreover, the impact of deforestation was assessed using land cover change mapping, comparing historical and current satellite imagery, and conducting vegetation density analysis to understand forest degradation (Pereira et al., 2022). Visual aids, such as graphs and tables, were created to effectively present the findings, while the interpretation of results provided valuable insights into the intricate relationship between forest fringe communities and conservation efforts. The conclusions drawn from the data analysis guided the formulation of recommendations for policymakers and stakeholders to develop balanced and sustainable strategies for forest management and conservation, taking into account the needs and rights of local communities (Nugroho et al., 2023).

### 3. Result and Discussion

Forest areas in Indonesia are divided into 3 (three). parts: Production forest areas, protected forest areas, and conservation forest areas. Conservation areas are divided into 2 (two). more areas, namely nature conservation areas and nature reserve areas, where the Forest Park area is included in the category of nature conservation areas (Law of the Republic of Indonesia No. 5, 1990; Government Regulation No. 68, 1998; PP RI No 34, 2002; PP RI No 45, 2004). The Forest Park area in East Kalimantan, precisely in the Kutai Kartanegara Regency and North Penajam Paser Regency, is called the Bukit Soeharto Forest Park, last established in 2009. Bukit Soeharto forest area is a Conservation Area called Taman Hutan Raya based on the Decree of the Minister of Forestry of the Republic of Indonesia Number: SK.577 / Menhut-II / 2009 dated September 29, 2009, concerning the Establishment of Bukit Soeharto Botanical Forest Park located in Kutai Kartanegara Regency and North Penajam Paser Regency, East Kalimantan Province covering an area of 67,766 (sixty-seven thousand seven hundred sixty-six). hectares. The Bukit Soeharto, Forest Park area, has a complete type of forest ecosystem from coast to hills, which includes, among others: mixed forests of lowland Dipterocarpaceae, kangas forests, swamp forests, coastal forests, and those that are degraded into shrubs and reeds (Ministry of Environment, 2010).

This area has the potential for flora, fauna, nature tourism, and environmental education. While the ecosystem of this forest area has been dramatically degraded, fragile, and threatened due to various internal and external factors, this area is very disturbed due to human activities (Olagunju et al., 2023; Suryadi et al., 2018). The disruption of forest areas is caused by several factors that result in one or a combination, such as the increasing area of open and damaged areas, decreasing the diversity and population of flora and fauna and declining quality and quantity of wildlife habitat, and decreasing the natural aesthetic value of Bukit Soeharto forest (Perum Perhutani, 2004; Salmerón-Manzano and Manzano-Agugliaro, 2023). The results showed that the degradation that occurred due to the area of the Soeharto Forest Park had mainly been controlled individually and in groups by forest fringe communities. This can be seen in the land tenure map obtained from secondary data analysis.

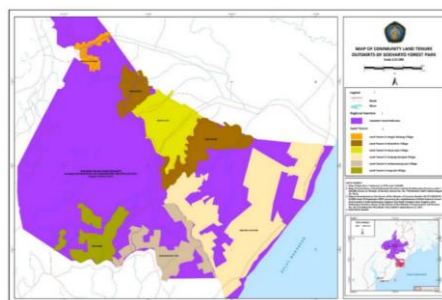


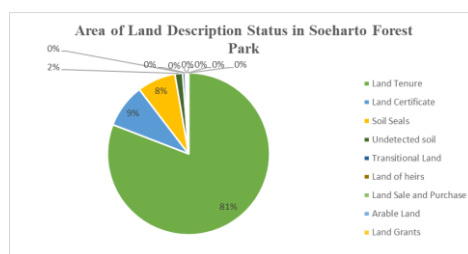
Figure 1. Map of land tenure by Soeharto's Forest fringe communities

Soeharto Forest Park is included in several villages: Sungai Seluang, Wonotirto, Karya Jaya, Tanjung Harapan, Ambarawang Laut, and Argosari. Based on the existing map, the most significant land tenure

occurs in Tanjung Harapan Village. Tanjung Harapan Village appears to be facing significant challenges regarding land tenure within the Soeharto Forest Park. Factors that might affect the extensive land tenure in these villages could include valuable natural resources, better accessibility to roads and infrastructure, and more intensive economic activity in the area. Based on field observation data and semi-structured interviews, it was found that the people of Tanjung Harapan Village were dominated by farmers and converted forest land into plantations. Field observations indicate significant land use changes in this village. Many local communities have shifted from traditional agricultural practices to plantation activities, including oil palm, rubber, and other commodity plantations. Communities see better economic potential in plantation development, which can provide them with more stable and sustainable incomes (Katusiime et al., 2023). Semi-structured interviews with communities in the Tanjung Harapan sub-district also reinforced these findings. Communities explain the reasons behind their land use changes, such as efforts to seek more profitable livelihoods and meet their living needs (Yeshey et al., 2023). Overall, each neighborhood found land tenure with various characteristics of land description status. Data shows that the community carries out ten land information statuses to control land in the Soeharto Forest Park. The status of the land information is in the form of land tenure, certificates, seals, transitions, inheritance, buying and selling, arable, grants, compensation, and state land and has not been detected. The area of each land status is listed in Table 1.

**Table 1.** The extent of land description status in Soeharto Forest Park

Information	Total Area (m <sup>2</sup> ).
Land Tenure	15,536,393.69
Certificate Land	1,681,910.77
Soil Seals	1,474,918.34
Undetected soil	292,691.40
Transitional Land	100,392.59
Land of heirs	49,912.14
Land Sale and Purchase	36,920.30
Arable Land	23,023.67
Land Grants	11,161.44
Land Indemnity	3,524.96
State Land	954.14



**Figure 3.** The comparative ratio of the extent of land information status in Soeharto Forest Park (m<sup>2</sup>).

### 3.1 Land Tenure

The highest land information status is in the form of land control covering an area of 15,536,393.69 m<sup>2</sup> or 1,553.63 hectares. Then the land that has been certified covers an area of 1,681,910.77 m<sup>2</sup> or 168.19 hectares and seal land cover an area of 1,474,918.34 m<sup>2</sup> or 147.49 hectares, and undetected land covers an area of 292,691.40 or 0.029 hectares. Each land information status has a different ownership process. The status of land information in the form of land tenure indicates that the community has control and ownership over the land. Land tenure can include the use, management, and certain rights related to the land because it has been going on since 1939 or approximately 84 years. Over a significant period, the 84-year land tenure can be relevant in considering community land claims and rights. In some cases, customs, traditions, or sustainable practices for decades can provide the basis for legal recognition and protection of

land tenure by communities (Rakotonarivo et al., 2023). According to research (Salmerón-Manzano and Manzano-Agugliaro, 2023). Land tenure carried out by the community is based on the results of clearing their parents' forests, which are then passed on to the next generation. The tenure lasted for a long time, convincing the community that the land they controlled was property rights arising under customary law (Camino et al., 2023).

### 3.2 Certified Land

In the case of certified land, in the Bukit Soeharto Forest Park area of 1,681,910.77 m<sup>2</sup>. Then the land that has been certified to have been managed by the community since 1972 shows that the community has obtained a certificate that officially recognizes their ownership or uses rights to the land for approximately 51 years. A land certificate is a legal document that provides certainty and protection of land ownership or use rights. The certificate indicates that the community has managed the land by applicable terms and conditions (Suchá and Dušková, 2022). Hal demikian juga pernah terjadi di beberapa kawasan hutan di Indonesia. Based on (Febrina, 2018). The basis for consideration of the designation of the protected forest area of Balang Pesoang is based on partial designation, confirmation and determination by the Ministry of Agriculture based on criteria that include three main components, namely slopes, soil types according to their sensitivity to erosion and average rainfall. Then, the legal protection of holders of Land Ownership certificates after being designated as a Protected Forest Area with the Government's efforts to protect holders of property rights certificates, namely legal protection in the form of enclaves with changes in forest area boundaries and revisions to provincial and district or city spatial plans is carried out after a review process (Abab et al., 2023). There are two ways of solving the third party settlement mechanism in protected forest areas, namely through the Joint Regulation of the Minister of Home Affairs, Minister of Forestry, Minister of Public Works and Head of National Land of the Republic of Indonesia and Regulation of the Minister of Forestry No. P.44 / Menhut-II / 2012 jo P.62 / Menhut-II / 2013 concerning the Inauguration of Forest Areas.

### 3.3 Soil Seals

The case of land sale and purchase that occurred in Suharto Forest reached 1,474,918.34 m<sup>2</sup>. Usually, state-owned lands controlled and cultivated by the community have proof of a land certificate from the village head or lurch as preliminary evidence before being certified. Land tenure or land is mainly indicated by a piece of stamped paper commonly called a soil seal (Katusiime et al., 2023). Making this land seal is mainly done through Village government officials, this land certificate, whose actual name is a Certificate of Physical Control of Land Parcels, explains the control of land or land by the person concerned. Land offices often do not check the status of the land/land to the sub-district or local area to be able to issue certificates, and even worse, the land office can issue double certificates, where previously, in the same object, there was already a certificate (Abab et al., 2023). This is due to the many applicants and the lack of maximally competent Human Resources in administrative services, especially in the land sector. According to Article 3 of the Basic Agrarian Law, the rights of indigenous peoples, as long as they exist, are still recognized, as long as they do not conflict with laws and regulations. So even though the land seal is still recognized, to provide legal protection and certainty by the Basic Agrarian Law, it can be said that certificates are essential, for the community must seriously pay attention to proof or letters of ownership of their respective lands (Sediono, 1984; Suhardiman et al., 2023).

### 3.4 Transitional Land

The amount of transitional land in Suharto Forest Park reached 100,392.59 m<sup>2</sup>. Transfer of land rights is the transfer of land rights from the old right holder to the new right holder. There are 2 (two). ways of transferring land rights: switching and transferring. Switching indicates the transfer of land rights without any legal action taken by the owner, for example, through inheritance. At the same time, transfer refers to the transfer of land rights through legal acts carried out by the owner, for example, through buying and selling. For land rights to transfer from the seller to the buyer, another legal action is needed, namely in



juridical surrender (behind the name). (Zainal and Edo, 2022). According to research (Labatjo and Sucipto, 2020). It is known that the Regulation governing the Settlement of Land Tenure in Forest Areas, namely Presidential Regulation Number 88 of 2017, provides directions and guidelines in the implementation of land release for the benefit of the community can be implemented if it meets the criteria, requirements and mechanisms that have been determined in the context of settling land tenure in forest areas controlled and utilized by the community and social institutions. The problem is that there are still difficulties in meeting the requirements and mechanisms by the community. The process and mechanism are quite long which is possible where at that time there were changes in regulations and policies from the Government and there was no institution that provided supervision of restrictions to recipients of land ownership rights (Shirzad et al., 2022).

### **3.5 Land of Heirs**

Land in the Soeharto Forest Park Area which has become an inheritance area of 49,912.14 m<sup>2</sup>. When a person with title to the land dies, the matter of the land passes to his heirs. The testator may or may not be in a will. Who is entitled to the inheritance, and how much the share depends on the Law of Inheritance that applies to the person concerned (Suhardiman et al., 2023). This happens a lot in several forest areas in Indonesia, because there are still many indigenous people who live on the edge of the forest. This was also reported in the study (Ansar, 2022). In Enrekang Regency itself, especially Masalle District, where most of the people are farmers, land is the most important thing in people's lives. In the Masalle sub-district, there are land rights derived from customary law obtained by inheritance which the community calls Mana land'. Mana' itself means heritage or heirloom, it can be in the form of heirlooms or heirloom objects. So in general, the definition of Mana land is inheritance land 4 (relics). left by the heir, which is not divided but jointly controlled by the heirs. This land of Mana' is controlled and managed jointly in rotation by heirs in one family family. But over time, where the order of society has changed and the need for land continues to increase also affects people's lives.

### **3.6 Land Sale and Purchase**

The status of land sale and purchase in the Suharto Forest Park area was recorded at 36,920.30 m<sup>2</sup>. In a legal sense, where the seller surrenders the land, he sells to the buyer in perpetuity when the buyer pays the price of the land to the seller (even if only partially). Since then, the title to the land has been passed from the seller to the buyer. Sale and purchase is a transfer of rights resulting from an agreement by which one party binds himself to give up a Brendan (land). and the other party to pay the promised price ((Paltasingh et al., 2022). According to the results of the study (Institute for the Assessment of the People's Consultative Assembly of the Republic of Indonesia, 2018). defense policies and land management practices enter into a very free market with a weak and distorted role of the state. As a result, there is concentration and high land ownership gaps. The phenomenon of land conversion with high economic value and land tenure dominated by corporations on a large scale that occurs a lot explains the problem. Land is used as an ordinary commodity that can be traded freely in market mechanism.

### **3.7 Arable Land**

The periphery of the Soeharto forest park is dominated by farmers, most of whom are recorded to have arable land up to an area of 23,023.67 m<sup>2</sup> located within Soeharto forest area. Arable land is a piece of land that has or has not been attached with a right that is worked on or utilized by another party either with the consent or without the consent of the entitled with or without a specific period. In practice, the definition of arable land developed by cultivators, government officials, and legal actors does not comprehensively approach the understanding specified in the above laws and regulations, especially the provisions in the Decree of the Head of BPN. Instead of being considered an illegal occupation, arable land is equated with freehold land. Arable land is considered property because the cultivator can show letters proving that he has a pedestal or proof of title to the land. To buy and sell land and obtain compensation, these letters are equated with rights certificates (Katusiime et al., 2023). Communities cultivate forest land

by clearing land and resulting in deforestation. Based on research from (Mutolib et al., 2020). In general, West Sumatra Province has high local wisdom in forest management, but judging from data related to forest area, the rate of deforestation is also relatively high. In 25 years, West Sumatra has lost 578,372 ha of forest due to forest conversion, illegal logging, and illegal mining in the forest. This is interesting to study more deeply related to what causes deforestation in West Sumatra Province. Research that has been carried out in the working area of the Dharmasraya Production Forest Management Unit, West Sumatra is different from most research that claims local communities are able to protect forests. There was a conversion of forests into rubber and oil palm plantations initiated by local communities. In general, deforestation in Indonesia is believed to be sporadic and unplanned events caused by the economic needs of people living around forests (Yeshey et al., 2023).

### **3.7 Land Grants**

In the Soeharto Forest Area, the land area categorized as grant results was recorded at 11,161.44 m<sup>2</sup>. Grant is a rights transfer through an agreement between the grantor and the grantee. In a grant, the grantor voluntarily and unconditionally delivers an object to the grantee to fulfill its needs. Grants are often made in family relationships, where a person wants to give gifts or support to needy family members. However, grants can also be made between parties who are not related, such as in the situation of charitable donations (Paltasingh et al., 2022). This was triggered because the control and management of land in the area lasted for decades and involved generations for generations. Then, it makes it seem as if the arable land becomes property and can be given to the next generation to remain the source of family livelihood. This is an interesting material to review specifically through further research. This phenomenon enriches the variety of tenure problems that occur in conservation forest areas (Ranjan et al., 2022). This is related to the absence of specific regulations in the first generation as land managers. The existence of local communities who settled and managed forest areas before regulations were made made land ownership clearly registered. Therefore, it is important to conduct further studies and formulate policy instruments to accommodate the resolution of tenure issues such as the status of land grants so that they can be legally recognized both for conservation purposes and the fulfillment of community welfare.

### **3.8 Land Indemnity**

The area of land with indemnity land status is 3,524.96 m<sup>2</sup>. Indemnity in the land acquisition process is a form of compensation given to owners or parties entitled to land taken over by the government or other entities for a public interest, such as infrastructure development or other public projects. The principle is to provide decent and fair reimbursement to landowners so they are not economically disadvantaged due to losing their land (Camino et al., 2023). This issue is similar to the status of grant land, where land ownership that was originally limited to arable land is believed to have become private property because there is no clear legal status. This phenomenon is very interesting because there are parties who make the land as a guarantee for agricultural economic activities carried out. This shows the existence of a reciprocal relationship between the cultivator of the land and the recipient of the guarantee in which land without clarity can be accepted as a medium of exchange or guarantee. This tenure issue is interesting to explore further considering the many economic and legal motives underlying this issue. Local people's awareness of the clarity of land status is considered undeveloped with these findings. Local communities still adopt the principle of mutual trust when conducting economic negotiations using land as collateral. Even though the land has no clear proof of legality (Suchá and Dušková, 2022).

### **3.9 State Land**

The area of land recorded as state land in the Forest Park covers an area of 3,524.96 m<sup>2</sup>. Where this area is classified as narrower than the land recorded in land control by communities around the forest periphery. In Law, Number 5 of 1960 concerning Basic Regulations on Agrarian Principles, the term used for state land is "land directly controlled by the state." State land appears in land administration practice, where land authorities carry out control. Article 1 or Article 2 also states that the land controlled by the

state describes the state's control rights over earth, water, and space. However, it is still the wrong use of state land in many legal products. State land connotes that the land belongs to the state. In fact, in reality, this is not the case. This term is a translation of *staatsdomein*, so it is no longer appropriate. The term land controlled by the state should be used as regulated by Law Number 5 of 1960 concerning Basic Regulations of Agrarian Principles (Shirzad et al., 2022). Based on the results of research from (Suchá and Dušková, 2022). Weak local government control has led to this conservation forest area becoming *de facto* open access. This situation is a pull factor that causes many social actors from various backgrounds and access mechanisms to take advantage (Olagunju et al., 2023).

### **3.10 Undetected Soil**

The area of land controlled by the community in the Soeharto Forest Park area with unidentified status is 292,691.40 m<sup>2</sup>. Undetected land status may refer to situations where the ownership status or legal status of the land is unclear or has not been officially decided by the competent authority (Salmerón-Manzano and Manzano-Agugliaro, 2023). This land with unidentified status is an opportunity for the community to be able to use existing land illegally. Clearing as much land as possible to meet the needs of life is the main factor. This will certainly result in the expansion of the Soeharto Botanical Park Forest which is affected by deforestation. This also happens a lot in other Forest Parks, such as Nipa-Nipa Forest Park where the initial program was in the form of Forest Reforestation which then in practice eliminated the existence of local communities. This is also due to the dualism of control that is *de jure* owned by the state, but *de facto* controlled by the local community (Suhardiman et al., 2023). From the case study above, it can be seen that the Forest Park has different sociohistorical conditions and governance arrangements in each region and span of periods of political regimes. It can be seen that before the forest is designated as a forest area, it is generally already a community management area, the designation as a forest area and changes in tenure after that generally lead to the exclusion of local communities. It can be seen that forest management carried out collaboratively and involving multistakeholders as illustrated above has proven to be able to reduce the level of forest destruction due to differences in perceptions and interests (Ranjan et al., 2022).

### **3.11 Land Tenure by Forest Fringe Communities in Soeharto Forest Park**

All land status in Soeharto Forest Park began due to agrarian reform. The imbalance of land ownership (Agrarian). causes the most problems and misery for the people. Conversely, the indication of whether the people of a country are prosperous is determined by the equitable distribution of ownership and control of the country's agrarian land. The term agrarian reform is a translation of agrarian reform, which in a limited sense is land reform, where one of the widely known programs is land redistribution (Paltasingh et al., 2022). Land has an enduring relationship with people. Even land is a matter related to life and death; even in the beliefs of many peoples, land has a sacred meaning. This is because humans meet their needs and come from the land. The overhaul and renewal of agrarian structures, especially land, was carried out to improve the welfare of the people, especially the peasants who initially did not have cultivated land to own land. Therefore, according to (Olagunju et al., 2023)., a country that wants to progress and prosper its people in absolute terms must carry out land reform. The implementation of agrarian reform in Indonesia in its subsequent development took a dozen years to realize a national agrarian law as the incarnation of national agrarian politics. Sukarno's thoughts were followed up by the Minister of Agriculture, Soenaryo, who collaborated with academics from Gadjah Mada University in drafting an Agrarian Law (RUU). The bill was finally approved and enacted for the first time on September 24, 1960, as Basic Agrarian Law (UUPA). No. 5 of 1960. This law contains six main elements of the Agrarian Reform program, namely (i). maximum ownership restrictions, (ii). prohibitions on absentee land ownership, (iii). redistribution of land that exceeds the maximum limit, absentee land, former *swapraja* land, and another state land, (iv). arrangements for the return and redemption of mortgaged agricultural land, (v). rearrangement of agricultural land production sharing agreements, (vi). determination of maximum limits on agricultural land ownership, accompanied by a prohibition on doing actions that result in the division of agricultural land ownership into too small a part (Edeh et al., 2022). The issuance of Law No. 5 of 1960 concerning Basic Regulations on



Agrarian Principles (abbreviated as UUPA). on September 24, 1960, which was further followed by the issuance of Government Regulation instead of Law (Perpu). No. 1 of 1960 concerning the Maximum and Minimum Area Limits of Land Ownership, on December 24, 1960. This Perpu was later passed into Law Number. 1 of 1961 concerning the Determination of Agricultural Land Area. This law is better known as the Land Reform Act. For the implementation rules, Government Regulation (PP). No. 224 of 1961 concerning the Implementation of Land Distribution and Indemnity was issued (Trilaksana, 2020). In Indonesia, forests are natural resources controlled by the state and used as much as possible for the prosperity of the people. Forests controlled by the state are natural or cultivated forests (plants). in state forest areas. For community prosperity, state forest management is implemented to encourage community-based forestry development. These activities can include Forest Resource Management with village communities. This activity is carried out by encouraging the cultivation of forestry commodities on people's lands (Suchá and Dušková, 2022). The role of communities living around forests is expected to participate in forest security, forest product utilization, and forest rehabilitation and conservation to achieve these goals. This community-based forestry development continues to grow so that pressure on natural forests in the form of exploitation for the fulfillment of legal and illegal industries will be reduced. Community-based Forest development is expected to provide a significant role for the community to participate as a guarantee for the sustainability of the national forestry industry. Forest development is a conscious and planned effort to create better environmental conditions (Rakotonarivo et al., 2023). The right to open land and collect forest products can only be owned by Indonesian citizens and regulated by Government Regulations. By this, intercropping is very suitable for implementing community forests. Community forests are expected to empower communities, especially those close to forest areas (Perum Perhutani, 2004).

However, at the end of the new order and the occurrence of the monetary crisis, the decline in the rupiah exchange rate against the dollar (inflation). has resulted in the economic decline of rural communities, including people living around forest areas. This resulted in the low income of villagers around the forest. Therefore, to meet their needs, people encroach on the contents of the forest. Forest encroachment at that time severely damaged forest land (Rakotonarivo et al., 2023). Activities in forest encroachment by the community due to the lack of patrols that should be carried out to maintain the security of forest areas. Knowledge about the sustainability and benefits of the community's forests is minimal. In addition, most people living around forest areas do not have other skills to meet the needs of life except farming. On the other hand, the area of village agricultural land is narrowing to meet the people's daily needs around the forest, and encroaching on the forest becomes inevitable (Salmerón-Manzano and Manzano-Agugliaro, 2023). This practice has been going on for decades. It continues to the next generation, where the land area cultivated initially was only for the needs of farmers and families as if it had become private property. Not to mention the ownership status and boundaries of the area that are not neatly recorded in administration and documentation make this even more biased. In such cases, it is essential to involve competent authorities, such as the East Java Natural Resources Conservation Center (BBKSDA). or relevant government agencies, to understand the situation more deeply and legally resolve land status issues and accordance with applicable law ( Paltasingh et al., 2022). Initial data collection is essential to identify and verify land boundaries and ownership status. This can help keep a neat record of administration and documentation related to the land. Authorities can mediate and consult with landowners and other relevant parties to find a fair and acceptable solution for all parties involved. In this case, consideration must be given to the interests of environmental conservation and sustainability of Soeharto Forest Park (Suchá and Dušková, 2022).

If necessary, an administrative and documentation update process can be carried out to record the area's boundaries and the existing land's status. This can involve the process of legalization or updating ownership documents (Katusiime et al., 2023). In addition, it is essential to engage legal experts who are competent and experienced in land matters to help understand and navigate these situations appropriately. Experts can provide appropriate guidance based on applicable laws and procedures to resolve land status issues in Soeharto Forest Park so that land tenure carried out by forest fringe communities does not expand (Ranjan et al., 2022). Besides that, Governments and regulatory bodies can implement robust policies that

prioritize sustainable forest management. This can include stricter regulations on logging practices, protection of endangered species, and the establishment of protected areas (Rakotonarivo et al., 2023). Recognizing and incorporating traditional ecological knowledge held by indigenous communities can contribute to sustainable forest maintenance. Indigenous practices, such as rotational farming or sacred grove protection, can offer valuable lessons in preserving forest ecosystems. These scenarios highlight various approaches that can be employed to improve forest maintenance. Implementing a combination of these strategies, tailored to specific regional contexts, can help ensure forest ecosystems' long-term health and resilience (Camino et al., 2023).

#### 4. Conclusions

Soeharto Forest Park is one of the critical forest areas in Indonesia, located on the edge of the forest and inhabited by local communities. Land tenure of forest fringe communities is an important issue related to the area's sustainability. Land ownership among forest fringe communities in Soeharto Forest Park is often unclear or poorly documented in administration and documentation. This creates legal uncertainty and can lead to conflict and uncontrolled deforestation activities. Decades of farming and family practices have created the perception that the land has become privately owned. This may result in land use changes incompatible with Soeharto Forest Park's conservation objectives. Blurring land ownership status and legal uncertainty can trigger uncontrolled deforestation activities. Forest fringe communities may clear land for agriculture, settlements, or other activities without considering the negative impacts on forest sustainability and the environment. The study highlights the complexity of land tenure and deforestation issues in Soeharto's Forest Park. Handling must involve a collaborative effort and a comprehensive approach to balance environmental conservation and community interests. In addition to sustainable forest management and the integration of indigenous knowledge, future research in Soeharto Forest Park should explore the effectiveness of community-based forestry development initiatives to reduce deforestation and enhance local livelihoods. Understanding the socio-economic factors that drive forest encroachment and exploring alternative income-generating activities for forest fringe communities can contribute to better conservation outcomes. Moreover, conducting comprehensive studies on the legal recognition and resolution of land tenure issues in the area can help prevent conflicts and ensure the sustainable use of forest resources. By addressing these research areas, policymakers and conservationists can develop more effective strategies to protect the forest ecosystem while promoting the well-being of local communities

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