

Community Vulnerability in Agrarian Conflict Areas: A Case Study in the Perum Perhutani KPH Indramayu Area

Churniawan Triatmojo¹, Soni Akhmad Nulhaqim², Wandu Adiansah³

^{1,2,3} Social Welfare Department, FISIP, Padjadjaran University

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Abstract

Agrarian conflict is one of the main factors contributing to the increasing vulnerability of communities, especially in rural areas that depend on natural resources. This study aims to analyze community vulnerability in the context of agrarian conflict in Loyang Village, Cikedung District, Indramayu Regency, which is within the working area of KPH Indramayu. This conflict involved the cultivating community, Perum Perhutani as the manager of the forest area, and PG Jatitujuh as the holder of the Right to Use Business (HGU), which was triggered by the change in the function of the forest area into sugarcane plantation land. This study uses a qualitative approach with data analysis from interviews and literature studies, and refers to the concept of vulnerability according to Moser which includes seven dimensions, namely labor, human capital, housing and infrastructure, household relations, social capital, natural capital, and financial capital. The results of the study show that the vulnerability of the people of Loyang Village is multidimensional and interrelated between dimensions of livelihood. High dependence on the agricultural sector, limited non-agricultural skills, and uncertainty of access to land are the main factors that strengthen structural vulnerability. In addition, inequality of access to financial resources and limited alternative economic opportunities further narrow people's adaptive capacity. On the other hand, household relations and social capital play a role as an adaptation mechanism, although they are limited and have not been able to overcome the root of the problem. Agrarian conflicts not only have an impact on economic aspects, but also affect social, ecological, and institutional stability. Thus, the vulnerability of the people of Loyang Village is the result of an interaction between structural, social, and ecological factors. Therefore, a comprehensive handling approach is needed through strengthening adaptive capacity, increasing access to resources, and improving agrarian policies that are more inclusive and equitable.

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Corresponding Author:

Churniawan Triatmojo

Universitas Padjadjaran

Email Coresspondent: churniawan22001@mail.unpad.ac.id

1. INTRODUCTION

Vulnerability is an important issue in social welfare because it relates to the ability of individuals or groups to survive and adapt to social, economic, and environmental pressures, where social well-being is measured not only by the fulfillment of basic needs, but also by the capacity of communities to manage risks and changes that threaten the sustainability of life (Mah et al., 2023; Rapp & Humer, 2023). Vulnerability is a condition of insecurity and sensitivity of households and communities due to limited access to assets, institutions, and socioeconomic opportunities, which ultimately weakens the ability to adapt to social, economic, and environmental changes (Moser, 1998 in Wianti et al, 2018).

One of the causes of community vulnerability is agrarian conflict. Agrarian conflict refers to disputes or tensions that arise due to claims and disputes over agrarian resources, such as land, water, and other natural resources, which involve various actors with conflicting interests, and are closely related to the emergence of vulnerabilities in society (Christianty, 2016 in Lestari & Maryanah, 2025). In Indonesia, agrarian conflicts continue to develop by showing a fairly high rate of escalation every year, this is illustrated in table 1 which illustrates the development of agrarian conflicts in the 2020-2024 time frame.

Table 1. Data on Indonesian Agrarian Conflict 2020-2025

Year	Number of Conflicts	Number of Affected Households	Area (Ha)	Number of Villages/Cities
2020	241	135.332	624.272,711	359
2021	207	198.895	500.062,579	517
2022	212	346.402	1.035.613	459
2023	241	135.608	638.188	346
2024	295	67.436	1.113.577,47	349
2025	341	123.612	914.574,963	428
Total	1.537	2.120.285	4.826.306,72	6.458

Sources : KPA Year-End Report 2020-2025

Based on a series of conflicts that occurred from 2020-2025, agrarian conflicts have a variety of serious impacts on society, especially in exacerbating household vulnerability through loss of access to natural resources that lead to food insecurity, increased dependence on irregular employment, multidimensional poverty risk, and forced migration (Nulhaqim et al., 2019; McCarthy et al., 2021; Alamsyah et al., 2023). Fluctuations in the number of cases that are not in line with the number of affected families reflect changes in the pattern of community vulnerability due to inequality in land tenure and access that weakens the assets and bargaining position of the community in an unequal agrarian structure. (Putri et al., 2025). One of the real examples of agrarian conflicts occurred in Loyang Village, Cikedung District, Indramayu Regency, which is within the work area of KPH Indramayu. This conflict involves the cultivating community, Perum Perhutani as the manager of the forest area, and PG Jatitujuh as the holder of the Right to Use Business (HGU). The problem starts from the change in the status of forest areas to sugarcane plantations, which directly limits people's access to their living space and livelihoods. The change in land function gives rise to an overlap of interests between the economic needs of the local community and the interests of land management and utilization by the state and the company. In its development, this conflict is characterized by restrictions on land access, the emergence of claims of control from various parties, and the dynamics of social interaction that trigger prolonged tensions. This condition shows that agrarian conflicts are not only related to land ownership issues, but also related to the sustainability of livelihoods and fair access to resources for local communities.

Community vulnerability and agrarian conflict are not only economic or legal phenomena, but also social welfare problems because they have an impact on decreased access to basic needs, social insecurity, and loss of sustainable livelihood assets (Fajar et al., 2022; Sihaholo & Sita, 2021). Previous research has shown that community vulnerability is a multidimensional condition influenced by socio-economic factors and access to various livelihood assets (Wardica, 2018; Puspitotanti & Karmilah, 2021; Setyasih et al., 2024). In this context, education and health as part of human capital play an important role in determining the level of vulnerability of individuals and households (Wardica, 2018; Setyasih et al., 2024). Meanwhile, financial capital, which includes land asset ownership, income, savings, household expenses, and access to social assistance, is the main indicator in identifying the level of vulnerability and poverty (Puspitotanti & Karmilah, 2021; Setyasih et al., 2024). On the other hand, gender aspects and certainty of land ownership as part of natural capital also strengthen vulnerability, especially in women groups of heads of households, smallholders, and marginalized groups (Wardica, 2018; Setyasih et al., 2024).

This research focuses on community vulnerability in agrarian conflict in the Perum Perhutani area of the Indramayu Forest Management Unit, namely Loyang Village using the concept of vulnerability according to Moser which examines vulnerability multidimensionally through seven dimensions owned, accessed, and utilized by the community. Research on the vulnerability of the community in Loyang Village is important to understand the dynamics of farmers in fighting for access to livelihood assets. Using the concept of vulnerability Moser (1998; 2008), this study analyzes vulnerability multidimensionally through seven dimensions, namely labor, human capital, housing and infrastructure, household relations, social capital, natural capital, and financial capital.

2. RESEARCH METHODS

In this study, the researcher used a descriptive method with a qualitative approach. Qualitative research is a research method that focuses on natural and deep observation and understanding, and is presented descriptively and comprehensively explained (Waruwu, 2024). This study uses a descriptive qualitative approach because the main focus is to describe the vulnerability of communities in agrarian conflict areas in Perum Perhutani KPH Indramayu.

The data types in this study consist of primary data and secondary data. Primary data in the main source of information is obtained directly by the researcher during the research process, through non-participatory observation and in-depth interviews, while secondary data is a source of research data obtained from various sources, such as documents, government publications, industry analysis by the media, websites, and the internet. (Sulung & Muspawi, 2024).

In this study, the researcher uses the triangulation technique in qualitative research, which is combining various types of data obtained from the data collection stage, then the data obtained is checked for validity, after which conclusions are drawn.

3. RESULTS AND DISCUSSION

This part of the results and discussion describes the level of vulnerability of the people of Loyang Village as a result of the agrarian conflict that occurred, using seven main dimensions. The seven dimensions include labor, human capital, housing and infrastructure, household relations, social capital, natural capital, and financial capital. The analysis was carried out based on the results of the categorization of field interview data, so that it was able to comprehensively describe the empirical condition of the community in dealing with structural pressures and post-conflict dynamics. Through this approach, vulnerability is not

only understood as a condition of scarcity, but also as a limitation of people's capacity to access resources, adapt to change, and maintain the sustainability of their livelihoods.

3.1 Conflict Overview

Agrarian conflict in Loyang Village is a tenure conflict related to the struggle for control, utilization, and claim of forest land between the community and Perum Perhutani. This conflict does not only concern the legal-formal aspects of ownership, but also the practice of land use as a source of livelihood for the community. Forest lands that are the object of conflict have undergone a change in function to agricultural land for commodities such as rice, sugarcane, and palawija, indicating a shift from ecological to economic function. The conflict is rooted in the inequality between the economic needs of forest village communities that are heavily dependent on land and forest management policies that limit access. This condition was exacerbated by post-forest looting in the late 1990s to early 2000s that opened up space for communities to cultivate land and build de facto claims, which were then reinforced by slow reforestation and policies that were less responsive to local socio-economic conditions.

In its development, conflicts are dynamic and fluctuating, triggered by various policy interventions such as land management, reforestation programs, changes in management schemes from PHBM to partnerships, and plant conversions. Conflicts involve various actors with complex relationships, ranging from Perhutani as a formal authority holder, farming communities, farmer groups, to external actors such as farmer organizations and local elites, with cooperative and conflictual relationships. Historically, conflicts have lasted since 1999 until now with a recurring pattern, especially when there is a change in policy. Efforts to resolve through collaboration and partnership schemes have not been fully effective because there are still inequities in the implementation and distribution of benefits. On the other hand, people develop various adaptation strategies to maintain their livelihoods. All of these dynamics show that agrarian conflicts in Loyang Village are complex and layered, and reflect the structural vulnerabilities of the community that continue to be reproduced in social, economic, and institutional aspects.

3.2 Research Result

The results of the study show that the vulnerability of the people of Loyang Village in the labor dimension does not lie in the lack of availability of jobs, but in the high dependence on the informal agricultural sector. Almost all residents depend on living as farmers with a relatively high wage rate for farm workers compared to other regions, which ranges from Rp120,000-Rp130,000 per half day. This high wage is influenced by the limited productive workforce due to the tendency of the younger generation to migrate to cities or work abroad. To fill the time outside the harvest season, people diversify their jobs that are still limited in the agricultural sector, such as becoming sugarcane workers, planting crops, or raising small-scale livestock.

In the dimension of human capital, there is an increase in the level of education in the productive age generation which is now dominated by junior high school to high school graduates, although the previous generation was mostly only elementary school graduates. Awareness of the importance of education is increasing, one of which is driven by the administrative requirements for village apparatus positions. However, the increase in formal education has not been accompanied by the mastery of non-agricultural skills, so that people do not have alternative jobs outside the agricultural sector. In terms of health, people face various problems such as physical fatigue, metabolic diseases, and HIV cases related to work mobility. However, the psychological condition of the community today is relatively stable compared to the previous conflict period.

In the housing and infrastructure dimension, the living conditions of the community are relatively invulnerable because most of the houses have been permanent and have the status of private property. Some houses are even used as productive assets. Basic infrastructure such as electricity and clean water are also well available. However, the main vulnerability lies in the status of agricultural land which is state land, both in HGU schemes and forest areas. Although communities feel de facto secure in managing their land, the absence of formal legality creates long-term uncertainty over the sustainability of their livelihoods. In addition, limited access to road infrastructure to agricultural land also increases production costs and reduces the efficiency of farming businesses.

In the dimension of household relations, the family plays a role as the main unit in supporting economic resilience. All family members are involved in agricultural activities, including women and children. This condition creates a double burden for women who have to carry out domestic roles as well as be productive. Decision-making in the family is generally carried out deliberatively, although during times of conflict women's participation tends to be limited. The family also functions as a buffer mechanism in dealing with crises, with strategies such as savings, loans between family members, and asset sales as a form of adaptation to economic pressures.

Furthermore, in the dimension of social capital, the people of Loyang Village still maintain the value of mutual cooperation and strong social trust, especially in agricultural and religious activities. Local traditions and communal activities continue to run and become social glue in the community. However, after the agrarian conflict, social fragmentation emerged in the form of affiliations of different farmer groups, such as STI, Ampera, and LMDH.

In the natural capital dimension, the community has a very high dependence on vast land resources, both forest areas and HGU land. Planting patterns are greatly influenced by ecological conditions, especially rain-fed systems that limit the intensity of rice production to only once a year. This condition makes people have to adjust their planting patterns with other commodities such as sugarcane and palawija. Vulnerability in this dimension arises from dependence on uncontrollable natural conditions, so climate change or extreme weather can have a direct impact on production and economic stability of the community.

Finally, in the dimension of financial capital, although people's income is relatively stable and tends to increase, access to financing sources is still uneven. Sugarcane farmers have greater access to formal financial institutions through credit schemes such as KUR, while small-scale rice farmers tend to have limited access due to the absence of collateral and non-inclusive schemes. As a result, many smallholders rely on informal sources of financing such as loan sharks or emok banks. In the face of economic uncertainty, people rely on physical assets such as gold, livestock, or grain reserves as a form of savings.

3.2 Discussion

Based on the results of the research, the vulnerability of the people of Loyang Village in the context of agrarian conflict shows a multidimensional character and is interrelated between aspects of livelihood. Although in general the community seems to have relatively stable economic conditions, their livelihood structure is actually built on a high dependence on the agricultural sector which does not have tenure certainty. This condition puts the community in a structurally vulnerable position, especially

when there is a change in policy or disruption to access to land that is the main source of livelihood.

In the labor dimension, the vulnerability of the people of Loyang Village shows a pattern of high dependence on the agricultural sector as the main source of livelihood. This condition shows the limitation of society's adaptive capacity in dealing with the changes that occur, as explained that vulnerability is related to the ability of individuals or groups to survive and adapt to pressure (Mah et al., 2023; Rapp & Humer, 2023). Dependence on one sector also shows the weak diversification of people's livelihoods, which in the context of agrarian conflicts is further exacerbated by limited access to productive resources (McCarthy et al., 2021). Thus, the visible income stability does not necessarily indicate community resilience, but can hide structural vulnerabilities that occur due to limited work options.

In the dimension of human capital, the limitation of non-agricultural skills explains that the improvement of formal education has not been fully able to increase the adaptive capacity of the community. This is in line with the finding that education and health as part of human capital have an important role in determining the level of vulnerability, but their effectiveness is highly dependent on access to relevant economic opportunities (Wardica, 2018; Setyasih et al., 2024). In Loyang Village, the limitation of alternative skills shows that there is a gap between the potential of the mausia resources and the existing coherence structure, thus strengthening the condition of vulnerability as explained that limited access to assets and opportunities will weaken the community's adaptability (Wianti et al., 2018).

In the dimension of housing and infrastructure, people's vulnerability does not lie in the condition of housing, but in the uncertainty of access to land as a source of livelihood. This condition is in line with the finding that agrarian conflicts have a direct impact on the loss of access to natural resources that are the basis of people's lives (Nulhaqim et al., 2019; Alamsyah et al., 2023). This tenure uncertainty weakens the bargaining position of the community in an unequal agrarian structure, as explained that inequality of land access is the main factor that shapes the pattern of community vulnerability (Putri et al., 2025). Thus, vulnerability in this dimension is structural because it is related to the land tenure system that is unbalanced between housing and land cultivated by the community. Because in the process of cultivating the land, people often live in residential huts in the middle of the land without access to electricity, clean water, and good sanitation. In addition, there are no irrigation facilities in the Loyang village area, so the community relies solely on rainwater to irrigate their fields.

In the dimension of household relations, the involvement of all family members in economic activities shows that there is a family-based survival strategy. This strategy reflects people's efforts to manage risks due to economic pressures, as vulnerability is not only related to the lack of resources, but also the ability to manage these risks (Mah et al., 2023). However, this strategy is short-term and has not been able to address the root of structural problems. In addition, the existence of a double burden on women shows that the gender aspect also strengthens vulnerability, especially in groups with weaker social positions (Setyasih et al., 2024). People also use their land as a place of refuge when they have problems with other family members, so they stay in their huts for a while until the situation calms down.

In the dimension of social capital, the existence of the value of mutual cooperation shows the existence of social forces that can be a buffer mechanism for vulnerability. However, post-conflict group fragmentation shows that social capital can also be a source of vulnerability when there is a polarization of interests. This is in line with the view that vulnerability is a condition that is influenced by unequal access to institutions

and social relations (Wianti et al., 2018). In the context of agrarian conflicts, the existence of external actors and farmer organizations also affects the dynamics of social relations and has the potential to strengthen horizontal conflicts in society. In addition, traditional customs remain deeply ingrained in the social life of the Loyang community, particularly those related to their activities on the land, such as performing rituals or holding traditional ceremonies in certain situations.

In the natural capital dimension, people's dependence on land as the main source of livelihood shows a high level of sensitivity to environmental changes and agrarian policies. This condition is in line with the findings that agrarian conflicts cause loss or limited access to natural resources, which has an impact on livelihood insecurity and increased risk of poverty (Nulhaqim et al., 2019; McCarthy et al., 2021). Thus, ecological vulnerability is affected not only by natural conditions, but also by the policy structures that govern access to those resources.

In the financial dimension, limited access to formal sources of financing indicates inequality in distribution *financial capital*. This is in line with the findings that asset ownership, income, and access to social assistance are the main indicators in determining the level of economic vulnerability (Puspitotanti & Karmilah, 2021; Setyasih et al., 2024). Reliance on informal financing shows a weak inclusive economic protection system, leaving communities vulnerable to debt cycles and economic instability. This reinforces the argument that vulnerability is not only related to low incomes, but also limited access to safe and sustainable financial resources.

The vulnerability of the people of Loyang Village shows a multidimensional character and is interrelated between dimensions of livelihood. These findings reinforce the view that vulnerability is a complex condition that is influenced by limited access to assets, institutions, and socio-economic opportunities (Wianti et al., 2018). Agrarian conflict in this context plays a structural factor that not only limits access to land, but also affects other dimensions such as labor, human capital, and finance. The widespread impact of conflict on various aspects of livelihoods shows that people's vulnerabilities are not singular, but are continuously reproduced in unbalanced social, economic, and policy structures. Therefore, vulnerability management requires a comprehensive and integrated approach, which focuses not only on economic aspects, but also on improving the access structure and distribution of resources.

4. CONCLUSION

Based on the results and discussion, this study found that the vulnerability of the Loyang Village community in the context of agrarian conflict is multidimensional and interrelated, with the main root lying in the structural dependence on agricultural land that has the status of state land. Although the public can see that conditions are relatively stable, characterized by an increase in income, decent housing conditions, and strong social relations. Vulnerabilities remain inherent in the form of limited adaptive capacity to structural change, especially when access to land is disrupted.

The main findings of this study show that vulnerability is not solely caused by poverty, but rather by limited livelihood diversification, low access to legal and sustainable productive resources, and inequality in access to formal support systems such as financing and skills training. On the other hand, the strength of social capital and household relations acts as a buffer mechanism that is able to mitigate the impact of the crisis in the short term, but is not enough to overcome structural vulnerabilities in the long term.

Thus, this study confirms that agrarian conflicts not only have an impact on aspects of land ownership, but also form complex patterns of vulnerability in people's livelihood

systems. Therefore, efforts to address vulnerability need to be directed not only at resolving tenure conflicts, but also at strengthening the adaptive capacity of communities through economic diversification, increasing access to productive resources, and building a more inclusive and sustainable social protection system.

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