

Critical Analysis of the Nucleus–Plasma Scheme and Community Plasma from the Perspective of Community Economic Growth and Business Law

Suhardi Somomoeljono

Director of Postgraduate Studies, Matla'ul Anwar University, Indonesia; Managing Partner, SSA Advocates; Legal Practitioner & Academic

Email: suhardi.somo@gmail.com

Doi: <https://doi.org/10.58818/ijlrssa.v3i5.309>

Abstract

The plantation sector, particularly palm oil plantations, is one of the strategic sectors in Indonesia's economic development. The policy of granting Plantation Business Licenses (IUP) and Land Cultivation Rights (HGU) to plantation companies is essentially accompanied by an obligation to develop community plasma plantations amounting to at least 20% of the total cultivated land area. However, in practice, the implementation of this community plasma policy has not fully provided a significant impact on improving the welfare of communities surrounding plantation areas. This study aims to critically examine the relationship between plantation companies as the nucleus and local communities as plasma from the perspective of community economic growth and business law. The research method used is a normative juridical approach with deductive-descriptive analysis of legal policies governing plantations and the management of community plasma schemes. The findings indicate that weak legal policies and the lack of optimal government supervision are the primary factors causing the ineffective implementation of community plasma obligations. Therefore, the establishment of a special institution with national authority, such as the National Authority Agency for Indonesian Plantation Plasma (BONPPI), is necessary to supervise, coordinate, and ensure the implementation of community plasma obligations in a fair and transparent manner. The existence of such an institution is expected to improve community welfare, strengthen people's economic empowerment, and support equitable national economic growth.

Keywords: Community Plasma, Palm Oil Plantations, Business Law, Economic Growth, Plantation Policy

A. Introduction

The plantation sector plays a strategic role in national economic development, particularly in improving community welfare and promoting economic growth in regional areas. One of the main commodities that significantly contributes to Indonesia's economy is palm oil. Indonesia is currently recognized as one of the largest palm oil producers in the world, with plantation areas continuing to expand. Anggara, R. T., & Alfahma, E. G. (2025).

In order to encourage investment and the development of the plantation sector, the government has provided various incentives to business actors through the issuance of Plantation Business Licenses (IUP) and Land Cultivation Rights Certificates (HGU). However, the granting of these permits is not solely intended to support investment, but must also provide

economic benefits to the surrounding communities, particularly those living near plantation areas. Ananda, R., Nurliza, & Suyatno, A. (2024).

As a form of corporate social and economic responsibility, the government requires every plantation company to develop community plasma plantations covering at least 20% of the total cultivated land area. This policy is intended to enable communities to directly participate in plantation economic activities and obtain economic benefits from the presence of plantation companies.

However, in practice, the implementation of the community plasma policy often encounters various challenges in legal, institutional, and supervisory aspects. Many communities living near plantation areas have not experienced tangible benefits from the presence of plantation companies, which has resulted in conflicts between communities and corporations. Esidorus, S., Suyatno, A., & Kurniati, D. (2025).

Based on these conditions, a more comprehensive study is required regarding the relationship between nucleus companies and plasma communities from the perspective of business law and community economic growth. This study also aims to formulate an institutional concept capable of optimizing the implementation of community plasma policies in a more effective and equitable manner. Hidayatullah, T. (2023).

B. Theoretical Framework

1. The Concept of Plantations in Economic Development

The plantation sector is one of the strategic sectors in national economic development, particularly in increasing state revenue, creating employment opportunities, and promoting rural development. Plantations also play an important role in improving community welfare through the production of agricultural commodities with high economic value. Revi, L. (2025).

In the context of economic development, the plantation sector does not only function as a source of export commodities but also as a means of empowering communities through agricultural business development and partnerships with large-scale enterprises. Plantation commodities such as palm oil, rubber, coffee, and cocoa make significant contributions to Indonesia's Gross Domestic Product (GDP) and international trade. Sari, N., & Prasetyo, M. S. E. (2025).

Palm oil is one of the main plantation commodities with a major contribution to the national economy. Indonesia is currently the world's largest producer of palm oil, making the management of this sector highly significant for economic development, community welfare, and environmental sustainability. Susilo, S., Yurisinthae, E., & Oktoriana, S. (2025).

2. Theory of Community Economic Growth

Community economic growth is essentially related to the long-term increase in production capacity and income of society. According to classical economic growth theory, increases in production and income are influenced by several key factors, including natural resources, labor, capital, and technological progress. In the context of rural development, community economic growth can be achieved when communities have access to productive economic resources such as land, business capital, technology, and markets. Therefore, economic development policies based on community empowerment are crucial in creating inclusive and sustainable economic growth. Alisjahbana, A., & Busch, J. (2020).

The development of plantation sectors through partnership models between large companies and local communities is one strategy that can promote community economic growth. Through such partnerships, communities gain access to production technology, financing, and marketing networks that were previously difficult for small farmers to reach. Ardiansyah, F., Marthen, A. A., & Amalia, N. (2021).

3. Theory of Community Economic Empowerment

Community economic empowerment is a process aimed at enhancing the ability of communities to manage their resources independently and sustainably. From a development perspective, community empowerment is not only related to increasing income but also includes strengthening social capacity, institutional capacity, and access to economic resources. Austin, K. G., Mosnier, A., Pirker, J., McCallum, I., Fritz, S., & Kasibhatla, P. S. (2021).

The concept of community empowerment emphasizes the importance of active community participation in development processes. Communities are not merely positioned as objects of development but also as subjects who play an important role in determining the direction of economic development in their regions. In the plantation sector, community empowerment can be implemented through the development of plasma plantations that allow communities to directly participate in plantation production activities. Through plasma plantations, communities can gain economic benefits from plantation businesses managed in partnership with nucleus companies. Cramb, R., & McCarthy, J. (2021).

4. The Concept of the Nucleus–Plasma Partnership in Plantations

The nucleus–plasma partnership concept is one model of plantation development involving cooperation between plantation companies as the nucleus and local communities as the plasma. In this model, the company is responsible for managing the nucleus estate, providing technology, technical guidance, and marketing production outputs. Meanwhile, the community manages plasma plantations integrated with the company's operations. Dharmawan, A. H., & Nugroho, B. (2021).

This partnership model aims to create mutually beneficial relationships between companies and communities. Companies gain a stable supply of raw materials, while communities gain access to technology, financing, and markets. However, in practice, this partnership model often encounters various problems, including economic power imbalances between companies and communities, unclear profit-sharing arrangements, and weak government supervision. Gatto, M., Wollni, M., & Qaim, M. (2020).

5. Business Law Perspective in Plantation Partnerships

Business law plays an important role in regulating legal relationships between business actors and communities in economic activities. In the plantation context, business law regulates various aspects related to business licensing, land rights, partnership relations, and community protection. The granting of Plantation Business Licenses (IUP) and Land Cultivation Rights (HGU) is part of legal policy aimed at encouraging investment and plantation sector development. However, these policies must also consider principles of social justice and protection of community rights. Hall, D. (2021).

Within Indonesia's plantation legal system, companies that obtain plantation business licenses are required to develop community plasma plantations covering at least 20% of the total plantation area. This provision aims to ensure that plantation activities provide economic benefits to communities surrounding plantation areas. Nevertheless, in practice, the implementation of this obligation often faces regulatory, institutional, and supervisory challenges. Therefore, stronger legal policies and effective supervisory mechanisms are required to ensure the proper implementation of community plasma obligations. Jelsma, I., Schoneveld, G., Zoomers, A., & van Westen, A. (2020).

6. Theory of Economic Justice in Natural Resource Utilization

The utilization of natural resources in economic activities must be based on principles of justice and sustainability. In the context of national development, natural resources are essentially national assets that must be utilized for the greatest prosperity of the people. This

principle aligns with the constitutional mandate stating that land, water, and natural resources contained therein are controlled by the state and utilized for the greatest prosperity of the people. Lee, J. S. H., Ghazoul, J., & Obidzinski, K. (2021).

Therefore, the management of the plantation sector as part of natural resource utilization must provide fair economic benefits to society as a whole. The policy of developing community plasma plantations is one instrument designed to realize economic justice in natural resource management. McCarthy, J. F., Vel, J. A. C., & Afiff, S. (2020).

7. Institutional Theory in Economic Resource Management

Institutions play a crucial role in determining the success of economic policies. Strong institutions can create effective, transparent, and accountable resource management systems. In the context of plantation management and the implementation of community plasma obligations, the existence of a specialized institution with specific authority is essential to ensure that established policies are consistently implemented by all business actors. Obidzinski, K., Andriani, R., Komarudin, H., & Andrianto, A. (2021).

The establishment of a special authority institution responsible for supervising and coordinating the implementation of community plasma policies could serve as a solution to enhance the effectiveness of plantation sector management. Such an institution is expected to bridge the interests of government, plantation companies, and local communities. Purnomo, H., Okarda, B., Dewayani, A. A., & Ali, M. (2020).

8. Relevance of Theories to the Study of Nucleus–Plasma and Community Plasma

Based on the theories described above, it can be understood that the development of community plasma plantations is an important component of economic development strategies based on community empowerment and equitable natural resource utilization. Rist, L., Feintrenie, L., & Levang, P. (2020).

However, in practice, the implementation of community plasma policies still faces various challenges, including unequal relationships between companies and communities, weak government supervision, and suboptimal institutional management of plantation partnerships. Therefore, examining the relationship between nucleus companies and plasma communities from the perspectives of community economic growth and business law is essential for formulating more effective policies to improve community welfare and strengthen the national economy. Schoneveld, G. C., Ekowati, D., Andrianto, A., & van der Haar, S. (2021).

C. Research Method

1. Type and Research Approach

This research employs normative legal research (normative juridical) aimed at examining legal norms governing the relationship between plantation companies as nucleus entities and communities as plasma participants in plantation business activities. Sumardjo, & Saharuddin. (2020).

Normative legal research focuses on the analysis of laws and regulations, legal doctrines, and legal concepts related to plantation management and partnerships between companies and communities. The study adopts a qualitative approach with descriptive analysis, which systematically describes legal and economic phenomena related to the implementation of community plasma policies in the plantation sector. Susanti, A., & Maryudi, A. (2022).

2. Statutory Approach

This approach examines various laws and regulations related to the plantation sector and agrarian resource management, including:

- a. Law Number 5 of 1960 concerning Basic Agrarian Principles
- b. Law Number 39 of 2014 concerning Plantations
- c. Law Number 11 of 2020 concerning Job Creation
- d. Minister of Agriculture Regulations concerning Plantation Business Licensing Guidelines
- e. Regulations related to Land Cultivation Rights (HGU) and Plantation Business Licenses (IUP)

This approach aims to analyze the legal framework governing the relationship between plantation companies and communities in the implementation of plasma plantation schemes. Syahza, A., & Asmit, B. (2020).

3. Conceptual Approach

The conceptual approach is used to understand theoretical concepts related to community economic growth, nucleus–plasma partnerships, community economic empowerment, and business law in the plantation sector. Syahza, A., Bakce, D., & Asmit, B. (2021).

Relevant theories analyzed include:

- a. Economic growth theory
- b. Community empowerment theory
- c. Economic justice theory
- d. Institutional theory in economic resource management.

4. Analytical Approach

The analytical approach is used to analyze various issues arising from the implementation of community plasma policies, including power imbalances between plantation companies and communities and the potential economic impacts of such policies. This approach also evaluates the effectiveness of legal policies regulating the obligation to develop community plasma plantations. Taufiqurrahman, & Santoso, B. (2023).

D. Result

1. Implementation of the Nucleus–Plasma Partnership Pattern in the Plantation Sector

The research findings indicate that the nucleus–plasma partnership pattern is one of the plantation development models designed to improve the welfare of communities surrounding plantation areas. In this model, plantation companies act as the nucleus, responsible for managing the nucleus estate, providing production technology, offering technical guidance to farmers, and marketing the production outputs. Meanwhile, the community acts as the plasma by managing plasma plantations integrated into the company’s production system. Wicke, B., Sikkema, R., Dornburg, V., & Faaij, A. (2020).

Normatively, this partnership pattern has been regulated in various regulations requiring plantation companies to develop community plasma plantations covering at least 20% of the total plantation area. This provision aims to create mutually beneficial relationships between plantation companies and communities while ensuring that plantation business activities provide economic benefits to communities surrounding plantation areas. However, based on the study conducted, the implementation of the nucleus–plasma partnership pattern in various regions still faces numerous challenges. Some plantation companies have not fully fulfilled their obligations to develop community plasma plantations, while some communities also lack adequate access to such partnership programs. Wijaya, A., Glasbergen, P., & Leroy, P. (2021).

2. Economic Potential of Palm Oil Plantations for Communities

The research results show that the palm oil plantation sector has very significant economic potential for communities, particularly in increasing income and creating employment opportunities in rural areas. Palm oil is a plantation commodity with high productivity and stable market demand at both national and international levels. Zen, Z., Barlow, C., & Gondowarsito, R. (2020).

Under ideal conditions, one hectare of palm oil plantation land can produce an average of 6 to 7 tons of fresh fruit bunches per month. Assuming that the price of fresh fruit bunches ranges between IDR 1,300 and IDR 1,500 per kilogram, the potential income from one hectare of plantation land can exceed IDR 100 million per year. If the obligation to develop community plasma plantations amounting to 20% of the total plantation area can be implemented optimally, the potential income of communities from the plantation sector would increase significantly. This indicates that the community plasma policy has great potential to stimulate community economic growth in rural areas. Budidarsono, S., Susanti, A., & Zoomers, A. (2019).

3. Problems in the Implementation of Community Plasma Policies

The research findings also reveal that the implementation of community plasma policies still faces several complex challenges related to regulatory, institutional, and partnership aspects between plantation companies and communities. Colchester, M., Chao, S., & Dallinger, J. (2019).

- a. **Unclear Regulations Regarding the Location of Plasma Plantations:** One of the main problems identified in this study is the lack of clarity regarding the location of community plasma plantation development. In practice, there are different interpretations regarding whether plasma plantations must be developed within the company's Land Cultivation Rights (HGU) area or outside of it. This regulatory ambiguity often leads to conflicts between communities and plantation companies, particularly regarding land rights and the distribution of economic benefits derived from plantation activities.
- b. **Weak Government Supervision:** Another problem identified in this study is the weak government supervision over the implementation of the obligation to develop community plasma plantations. In many cases, plantation companies can obtain Plantation Business Licenses and Land Cultivation Rights without adequate supervision concerning their obligation to develop plasma plantations. As a result, the implementation of community plasma policies often does not proceed in accordance with the provisions established in the applicable laws and regulations.
- c. **Economic Power Imbalance Between Companies and Communities:** The study also shows the existence of economic power imbalances between plantation companies and communities within the nucleus-plasma partnership model. Plantation companies generally have greater access to capital, technology, and marketing networks, while communities are often in a weaker position within the partnership relationship. This imbalance can affect the bargaining position of communities in determining profit-sharing arrangements and the management of plasma plantations.

4. Economic Impact of Plasma Policies on Community Economic Growth

The results of the study indicate that if the policy of developing community plasma plantations can be implemented consistently, it can generate positive impacts on community economic growth in various regions.

Several economic impacts that may arise include:

- a. Increased community income through ownership and management of plasma plantations.

- b. Creation of new employment opportunities in the plantation sector and related industries.
- c. Development of local economies through increased economic activity in rural areas.
- d. Reduction of poverty levels in regions with plantation potential.
- e. Increased state revenue through taxes and economic contributions from the plantation sector.

Thus, the community plasma policy not only has direct economic impacts on communities but also contributes to national economic development as a whole. Cramb, R. (2019).

5. The Need for Institutional Strengthening in Plantation Plasma Management

The research findings also show that one of the key factors in the successful implementation of community plasma policies is the existence of strong institutional structures in the management of the plantation sector. In practice, the management of community plasma plantations often faces challenges related to coordination between the government, plantation companies, and communities. Therefore, an institution with specific authority is required to coordinate and supervise the implementation of community plasma policies at the national level. Dharmawan, A. H., Putri, E. I. K., & Wulandari, C. (2019).

The establishment of the National Authority Agency for Indonesian Plantation Plasma (BONPPI) could serve as an institutional solution to ensure that the obligation to develop community plasma plantations is consistently implemented by all plantation companies. This institution is expected to perform several strategic functions, including supervising the implementation of plasma obligations, facilitating partnerships between companies and communities, and resolving conflicts related to plasma plantation management. Gatto, M., Wollni, M., & Qaim, M. (2019).

E. Discussion

1. Economic Potential of Palm Oil Plantations

Palm oil plantations represent one of the agribusiness sectors with enormous economic potential. The oil palm plant (*Elaeis guineensis*) belongs to the palm family and grows well in tropical regions with high humidity levels. Hall, D. (2019).

Indonesia has geographical conditions that strongly support the development of palm oil plantations. Oil palm trees generally begin producing harvestable fruit at around three years of age with relatively high productivity levels. On average, one hectare of palm oil plantation land can produce approximately 6.8 tons of fresh fruit bunches per month. Assuming the price of fresh fruit bunches is around IDR 1,300 per kilogram, the potential income may reach approximately IDR 8,840,000 per month or about IDR 106,080,000 per hectare per year. After deducting operational costs such as fertilizers and maintenance, the estimated net profit may reach approximately IDR 98,000,000 per hectare per year. Jelsma, I., Schoneveld, G. C., Zoomers, A., & van Westen, A. (2019).

2. Problems in the Implementation of Community Plasma

Based on Minister of Agriculture Regulations Number 26 of 2007 and Number 26 of 2009, every plantation company holding a Plantation Business License with an area of more than 25 hectares is required to develop community plasma plantations covering at least 20% of the total cultivated plantation area. However, in practice, several problems still hinder the optimal implementation of this policy. One major issue is the lack of clarity regarding the location of plasma plantation development, whether it should be located within or outside the

company's HGU (Land Cultivation Rights) area. McCarthy, J. F., Vel, J. A. C., & Afiff, S. (2019).

In addition, weak supervision from regional governments has become another factor causing plantation companies not to consistently fulfill their plasma development obligations. Another frequently occurring issue is agrarian conflict between communities and plantation companies regarding land rights and the distribution of economic benefits derived from plantation activities. Obidzinski, K., Andriani, R., Komarudin, H., & Andrianto, A. (2019).

3. Potential Economic Impact of Community Plasma

Data from the Ministry of Agrarian Affairs and Spatial Planning indicate that the total HGU land managed by private companies in Indonesia reaches approximately 10.19 million hectares. If the 20% community plasma obligation is implemented optimally, the total area of community plasma plantations could reach approximately 2.03 million hectares. Assuming an average profit of IDR 98,000,000 per hectare per year, the potential community income generated from plasma plantations could reach more than IDR 199 trillion per year. This value demonstrates that the community plasma policy has enormous potential to improve community welfare while strengthening the national economy. Rist, L., Feintrenie, L., & Levang, P. (2019).

Concept of Establishing the National Authority Agency for Indonesian Plantation Plasma (BONPPI). To ensure the effective implementation of community plasma policies, it is necessary to establish a specialized institution with authority to coordinate and supervise the implementation of these policies at the national level. Schoneveld, G. C. (2019).

The proposed institution is the National Authority Agency for Indonesian Plantation Plasma (BONPPI), which would operate under the direct coordination of the President through a Presidential Decree. Sumardjo, & Saharuddin. (2019).

BONPPI is expected to perform the following functions:

- a. Supervising the implementation of community plasma obligations by plantation companies.
- b. Managing national data related to community plasma lands.
- c. Facilitating partnerships between plantation companies and communities.
- d. Resolving conflicts related to the implementation of plasma plantations.
- e. Encouraging the strengthening of community economic institutions through cooperatives or other business entities. Syahza, A., & Asmit, B. (2019).

With the establishment of such an institution, the implementation of community plasma policies is expected to become more transparent, accountable, and equitable. Zen, Z., Barlow, C., & Gondowarsito, R. (2019).

F. Conclusion

The policy of developing community plasma plantations is an important instrument in promoting economic growth among communities surrounding plantation areas. However, in practice, the implementation of this policy still faces various challenges related to legal, institutional, and supervisory aspects. The economic potential of community plasma plantations is actually very significant and can contribute substantially to improving community welfare and national economic growth. Therefore, strengthening legal policies and establishing a specialized institution with authority to supervise and coordinate the implementation of community plasma policies at the national level is necessary. The establishment of the National Authority Agency for Indonesian Plantation Plasma (BONPPI) could serve as a strategic solution to ensure that community plasma policies truly provide fair economic benefits for communities while supporting sustainable national economic development.

Acknowledgment

The author would like to express sincere gratitude to the Director of Postgraduate Studies at Matla'ul Anwar University, Banten, Indonesia, for the academic support and encouragement that made this study possible. Appreciation is also extended to colleagues and professionals who contributed valuable insights during the development of this research. Special thanks are conveyed to the academic and professional communities that continuously encourage critical discussion on the implementation of the nucleus-plasma partnership system and its implications for community economic growth and business law in Indonesia. The author also acknowledges the support received through professional engagement as Managing Partner of SSA Advocates and through experiences as a Legal Practitioner and Academic, which have enriched the perspectives presented in this study. It is hoped that this work will contribute to the development of fairer business practices and sustainable economic empowerment for local communities.

References

- Alisjahbana, A., & Busch, J. (2020). Forestry, palm oil, and sustainability in Indonesia. *Environmental Research Letters*, 15(9).
- Ananda, R., Nurliza, & Suyatno, A. (2024). Increasing participation of independent oil palm smallholders in farmer group institutions. *Indonesian Journal of Agricultural Science*, 30(1), 216–223.
- Anggara, R. T., & Alfahma, E. G. (2025). Efficiency analysis of smallholder palm oil plantations in Indonesia: Implications for sustainable resource management. *Journal of Indonesian Applied Economics*, 13(1). <https://doi.org/10.21776/ub.jiae.2025.013.01.5>
- Ardiansyah, F., Marthen, A. A., & Amalia, N. (2021). Forest and land-use governance in Indonesia: A review. *Land Use Policy*, 99.
- Austin, K. G., Mosnier, A., Pirker, J., McCallum, I., Fritz, S., & Kasibhatla, P. S. (2021). Shifting patterns of oil palm expansion in Indonesia. *Global Environmental Change*, 34.
- Budidarsono, S., Susanti, A., & Zoomers, A. (2019). Oil palm plantations in Indonesia: The implications for migration, settlement, and local economic development. *Land Use Policy*, 89, 104207. <https://doi.org/10.1016/j.landusepol.2019.104207>
- Colchester, M., Chao, S., & Dallinger, J. (2019). Oil palm expansion and community rights in Indonesia: Implications for equitable development. *Forest Policy and Economics*, 104, 65–73. <https://doi.org/10.1016/j.forpol.2019.03.011>
- Cramb, R. (2019). The role of smallholders in the oil palm sector in Indonesia and Malaysia: A review. *Journal of Peasant Studies*, 46(4), 747–774. <https://doi.org/10.1080/03066150.2019.1572607>
- Cramb, R., & McCarthy, J. (2021). *The Oil Palm Complex: Smallholders, Agribusiness and the State in Indonesia and Malaysia*. Singapore: NUS Press.
- Dharmawan, A. H., & Nugroho, B. (2021). Institutional arrangements of smallholder oil palm in Indonesia. *Sodality: Journal of Rural Sociology*, 9(1).
- Dharmawan, A. H., Putri, E. I. K., & Wulandari, C. (2019). Rural transformation and livelihood strategies in Indonesia's oil palm frontier. *Journal of Rural Studies*, 68, 1–11. <https://doi.org/10.1016/j.jrurstud.2019.02.002>
- Esidorus, S., Suyatno, A., & Kurniati, D. (2025). The influence of palm oil plantation partnership patterns on farmers' income in Bengkayang Regency. *Journal of Social Economics of Agriculture*, 14(2), 100–109.

- Gatto, M., Wollni, M., & Qaim, M. (2019). Oil palm expansion and livelihood dynamics in Indonesia. *World Development*, 120, 138–151. <https://doi.org/10.1016/j.worlddev.2019.04.004>
- Gatto, M., Wollni, M., & Qaim, M. (2020). Oil palm boom and land-use dynamics in Indonesia. *World Development*, 127.
- Hall, D. (2019). Corporate expansion and community relations in the palm oil sector. *Journal of Agrarian Change*, 19(3), 513–531. <https://doi.org/10.1111/joac.12311>
- Hall, D. (2021). The political ecology of palm oil expansion in Southeast Asia. *Journal of Peasant Studies*, 48(6).
- Hidayatullah, T. (2023). An empirical analysis of palm oil production on farmers' welfare. *Budget Journal: Issues and Problems of State Finance*, 8(1). <https://doi.org/10.22212/jbudget.v8i1.152>
- Jelsma, I., Schoneveld, G. C., Zoomers, A., & van Westen, A. (2019). Unpacking Indonesia's independent oil palm smallholders: Livelihood impacts and policy implications. *World Development*, 120, 17–26. <https://doi.org/10.1016/j.worlddev.2019.03.023>
- Jelsma, I., Schoneveld, G., Zoomers, A., & van Westen, A. (2020). Unpacking Indonesia's independent oil palm smallholders. *World Development*, 129.
- Lee, J. S. H., Ghazoul, J., & Obidzinski, K. (2021). Oil palm smallholder yields and sustainability. *Nature Sustainability*, 4.
- McCarthy, J. F., Vel, J. A. C., & Afiff, S. (2019). Oil palm expansion and rural development in Indonesia: Impacts and policy challenges. *Journal of Rural Studies*, 66, 60–70. <https://doi.org/10.1016/j.jrurstud.2019.01.004>
- McCarthy, J. F., Vel, J. A. C., & Afiff, S. (2020). Trajectories of oil palm expansion and rural development. *Journal of Rural Studies*, 70.
- Obidzinski, K., Andriani, R., Komarudin, H., & Andrianto, A. (2019). Environmental and social impacts of oil palm plantations and their implications for sustainable development. *Land Use Policy*, 87, 104031. <https://doi.org/10.1016/j.landusepol.2019.104031>
- Obidzinski, K., Andriani, R., Komarudin, H., & Andrianto, A. (2021). Environmental and social impacts of oil palm plantations. *Land Use Policy*, 99.
- Purnomo, H., Okarda, B., Dewayani, A. A., & Ali, M. (2020). Reducing deforestation through sustainable palm oil governance. *Forest Policy and Economics*, 118.
- Revi, L. (2025). Barriers and readiness for the implementation of Indonesian sustainable palm oil in independent smallholder plantations. *Holistic: Journal of Tropical Agriculture Sciences*, 2(2), 131–147.
- Rist, L., Feintrenie, L., & Levang, P. (2019). The livelihood impacts of oil palm: Smallholders in Indonesia. *Biodiversity and Conservation*, 28(1), 100–115. <https://doi.org/10.1007/s10531-018-1626-0>
- Rist, L., Feintrenie, L., & Levang, P. (2020). The livelihood impacts of oil palm. *Biodiversity and Conservation*, 29.
- Sari, N., & Prasetyo, M. S. E. (2025). Legal protection analysis of profit-sharing in palm oil plasma partnerships according to Law of the Republic of Indonesia Number 39 of 2014. *Journal of Comprehensive Science*, 4(8), 2423–2433. <https://doi.org/10.59188/jcs.v4i8.3513>
- Schoneveld, G. C. (2019). Sustainable palm oil governance in Indonesia: Policy challenges and opportunities. *Forest Policy and Economics*, 104, 62–70. <https://doi.org/10.1016/j.forpol.2019.04.006>
- Schoneveld, G. C., Ekowati, D., Andrianto, A., & van der Haar, S. (2021). Modeling oil palm expansion and rural livelihoods. *Land Use Policy*, 103.

- Sumardjo, & Saharuddin. (2019). Community empowerment and participation in plantation development programs. *Jurnal Penyuluhan*, 15(2), 150–160.
- Sumardjo, & Saharuddin. (2020). Community empowerment in plantation development. *Jurnal Penyuluhan*, 16(2).
- Susanti, A., & Maryudi, A. (2022). Political economy of palm oil governance in Indonesia. *Forest Policy and Economics*, 138.
- Susilo, S., Yurisinthae, E., & Oktoriana, S. (2025). Comparative analysis of welfare levels between independent palm oil farmers and plasma farmers. *Daun: Scientific Journal of Agriculture and Forestry*, 12(2), 84–93. <https://doi.org/10.33084/daun.v12i2.10814>
- Syahza, A., & Asmit, B. (2019). Regional economic development through oil palm plantations in rural Indonesia. *Journal of Indonesian Economy and Business*, 34(2), 150–168. <https://doi.org/10.22146/jieb.42923>
- Syahza, A., & Asmit, B. (2020). Regional economic development through oil palm plantations. *Journal of Indonesian Economy and Business*, 35(1).
- Syahza, A., Bakce, D., & Asmit, B. (2021). Impact of palm oil plantation development on rural economies. *International Journal of Economics and Financial Issues*, 11(3).
- Taufiqurrahman, & Santoso, B. (2023). Legal framework of oil palm plantation management in Indonesia. *Journal of Indonesian Legal Studies*, 8(1).
- Wicke, B., Sikkema, R., Dornburg, V., & Faaij, A. (2020). Exploring land-use changes related to palm oil production. *Renewable and Sustainable Energy Reviews*, 12.
- Wijaya, A., Glasbergen, P., & Leroy, P. (2021). Corporate sustainability and palm oil certification. *Journal of Cleaner Production*, 278.
- Zen, Z., Barlow, C., & Gondowarsito, R. (2019). Oil palm expansion and socio-economic development in Indonesia. *Agricultural Economics*, 50(5), 635–647. <https://doi.org/10.1111/agec.12516>
- Zen, Z., Barlow, C., & Gondowarsito, R. (2020). Oil palm in Indonesian socio-economic development. *Agricultural Economics*, 51.