

Regular Research Article

# Why do greater forest tenure rights not enthuse local communities? An early observation on the new community forestry scheme in state forests in Indonesia

# Arsad Ragandhi<sup>1</sup>, Agus Heruanto Hadna<sup>2</sup>, Setiadi Setiadi<sup>3</sup> and Ahmad Maryudi<sup>4,\*</sup>

- <sup>1</sup> Leadership and Policy Innovation Program, The Graduate School, Universitas Gadjah Mada, Yogyakarta, Indonesia
- <sup>2</sup> Center for Population and Policy Studies, Universitas Gadjah Mada, Yogyakarta, Indonesia
- <sup>3</sup> Department of Anthropology, Faculty of Cultural Science, Universitas Gadjah Mada, Yogyakarta, Indonesia
- <sup>4</sup> Sebijak Institute The Research Center for Forest Policy & History, Faculty of Forestry, Universitas Gadjah Mada, Yogyakarta, Indonesia
- \* Correspondence author: ahmad\_maryudi@ugm.ac.id

**Abstract**: The Indonesian Ministry of Environment and Forestry recently issued a 35-year permit-based social forestry, called *Izin Pemanfaatan Hutan Perhutanan Sosial* (IPHPS), which was implemented in forestlands managed by the State Forest Corporation (SFC). IPHPS is a unique scheme because social forestry permits were previously granted on forestland unencumbered with rights. It provides more secure tenure rights (long-term permits), greater decision-making authority, and improved profit-sharing arrangements compared with the SFC's co-management model. However, IPHPS has not attracted widespread interest from local communities. This paper aims to identify and to analyse factors that explain local communities' low interest in the policy. Results show that local communities have not been attracted by the scheme because it requires them to undertake substantial investments in reforestation and make several payments to the government beyond their means. This paper highlights the specific challenges related to access mechanisms and benefits to local communities from the granted rights. Lastly, local communities were prone to manipulative persuasion by the SFC to continue the co-management model.

**Keywords:** social forestry; poverty alleviation; right and access; security of tenure; livelihood, IPHPS; Indonesia

## 1. Introduction

For at least three decades, "community forestry" or "social forestry", have been promoted as policy innovations that shift forest management responsibility from government institutions to local communities and encourage them to actively engage in forest management (FAO, 1978). The program was envisioned as an instrument for overcoming conservation and development challenges, namely deforestation and acute rural poverty, as well as social inequalities (Maryudi et al., 2012; Sikor et al., 2013; Rahayu et al., 2020). This instrument was intended to serve as an effective alternative to state-controlled forest management models (McCarthy, 2005). Intimate synergies between local communities and their environment, along with meaningful participation of the people, were believed to contribute to sustainable forest management and produce socio-economic benefits (Kellert et al., 2000; Blaikie, 2006).

Many countries around the globe, particularly in the global south, have undertaken revisions of legal and institutional frameworks to facilitate research and implementation of community forestry. Nearly one-third of the world's forests are managed based on the models of community forestry such as co-management and local governance models (Sunderlin et al., 2008; Gilmour, 2016). In line with these global trends, the Indonesian government has adopted several models of local community involvement in forest management in order to obtain benefits and improve local

160

community livelihoods (Rahayu et al., 2020; Sahide et al., 2020). In Indonesia, social forestry was formalized as a government policy in 2007 by issuing some permit-based schemes for state forest areas unencumbered by other rights and also provided partnership or co-management schemes for forest areas managed by other entities (Sahide et al., 2020). Although a certification scheme for customary forests was established later, in 2012, social forestry in Indonesia has largely persisted in the form of permit-based schemes (Fisher et al., 2019; Myers et al., 2017).

The current government administration of President Joko Widodo has further made social forestry one of its strategic policies. It has pledged 12.7 million hectares, or about 10% of state forests to be distributed to local communities (Maryudi, 2017). In addition, it has also introduced a 35-year permit scheme, Izin Pemanfaatan Hutan Perhutanan Sosial (IPHPS), for the forests of Java Island managed by the State Forest Corporation (SFC). IPHPS is a unique, permit-based, social forestry scheme which grants forestland without any encumbered rights such as those valid for the SFC's managed forests and conservation forest areas, touted as "immune" from permit-based social forestry (Sahide et al., 2018). The IPHPS values local initiatives (Ota, 2019) and is seen as a breakthrough for resolving forest conflicts and inequitable control of land in Java (Suharjito, 2018). This policy has triggered some societal groups, who allegedly serve as proxies for the SFC's interests, to have lodged fierce opposition to the new scheme. However, these attempts have all failed judicial review by the Supreme Court. Thus, the permitting scheme has been considered "a victory" for Indonesia's social forestry movements (Absori et al., 2017; Suharjito, 2018). Based on the Ministerial regulation P.39/MENLHK/SETJEN/KUM.1/6/2017 issued by the Minister of Environment and Forestry, the IPHPS provides more secure tenure rights (long-term permits) and greater decisionmaking authority compared to the co-management arrangement implemented by the SFC (Ota, 2019; Resosudarmo et al., 2019).

After this policy was formalized, the initial stage of its implementation requires *pre-permit* activities, which include providing information about the government's social forestry programs; facilitating the formal institutional development; assisting the local communities in preparing permit application and general management plans, also assisting the local communities in inventory and identify the potential areas (Rahayu et al., 2020). A few local communities have formally applied for and secured IPHPS permits. By July 2020, only 25,000 hectares out of 2,566,889 hectares of the SFC's forests have been covered by IPHPS permits (KLHK, 2020). This indicates that the IPHPS has not attracted widespread interest from local communities, even though they were initially promised greater and more secure tenure rights.

These interesting phenomena can be found in the Ngawi district. No IPHPS permits have been formally applied in this district despite the early enthusiasm. Ngawi is an appropriate place for social forestry policy since 35% of its land area is gazetted as state forest land administered and managed under the SFC's centralized governance approach, with marginal community access to the forests (see Section 2). Ninety-five out of 217 villages in the district lie within or in close proximity to the forests, and the majority of their populations work as peasant farmers (Sutopo, 2005). Further, with a poverty percentage of 14,39%, Ngawi is classified as one of the province's poorest districts.

### 2. IPHPS: what does it offer?

Community forestry generally involves the participation of local communities in the management of forest resources. During the early promotion of community forestry, participation was only associated with support from local people in the execution of forest management activities, in return for minor forest products such as fuelwood and employment (FAO, 1978). In the current context, community forestry has begun to address the issues of devolution of authority and substantive involvement in decision-making over forests, including access rules and the use of products (Fisher et al., 2018; Gilmour, 2016; McDermott & Schreckenberg, 2009). Currently, community forestry is more broadly seen as a forestry practice that directly involves forest-

access.

dependent people in the decision-making process, which allows them to set goals and control and use the forests (Maryudi et al., 2012). Krogman & Beckley (2002) however, give greater attention to aspects of local control and securing tenure rights. Tenure encompasses a variety of arrangements that allocate rights and obligations in relation to forestland (FAO, 2011). Local control can be interpreted as granting communities a higher degree of forest management tenure rights and

Most production and protection forests in Java have been administered and managed by the SFC, which follows colonial doctrines of exclusion (Peluso, 1992). To protect their precious teak stands, the SFC strictly limits local communities' involvement in forest activities (Peluso & Vandergeest, 2001; Setiahadi et al., 2017). Only in the 1970s, did the SFC begin to grant local people temporary rights to use post-harvest areas for agriculture (*tumpang sari*), which had to be returned after two years, in exchange for their labour for reforestation (Sunderlin, 1997). Due to rampant forest looting (Tacconi et al., 2019), as a form of local resistance, and the changing socio-political conditions, the SFC formalized its social forestry program in 2001, referred to as *Pengelolaan Hutan Bersama Masyarakat* (PHBM), a co-management scheme with legally-registered local community institutions (Maryudi et al., 2015).

PHBM offers partner institutions a profit-sharing mechanism equivalent to as much as 25% of timber harvest from the sale of forest products (Sahide et al., 2020). This strategy rewarded partner institutions for organizing member participation in forest management activities, such as tree planting and forest patrols (Maryudi & Krott, 2012). Whenever interested, individual group members can continue to practice transient agricultural cropping and share internally-regulated profits within the group. Studies have identified how the SFC unilaterally defines the comanagement agreements, rights, and responsibilities and only includes token participation for partners in forest planning and management (Purwanto et al., 2013; Ansori et al., 2011). There have been cases of "elite capture" of the profit-sharing and material incentives in the form of seeds, fertilizer, and agricultural tools that were disbursed to the groups. In most cases, group members primarily receive benefits from the aforementioned transient use of the forest floor for cropping (Maryudi, 2011). Worse, these groups can be displaced from their farming lots anytime due to the requirement of abandoning the transient cropping land after a few years.

Types Of Utilization	IPHPS permit holder	SFC
Main forest product (Timber)	70%	30%
Multipurpose plant	80%	20%
Annual Cropping	90%	10%
Silvoforestry	70%	30%
Environmental services business	90%	10%

Table 1. Profit sharing arrangements in the IPHPS scheme

Source : Ministerial Regulation P.39/MENLHK/SETJEN/KUM.1/6/2017

The IPHPS was designed to provide more secure tenure rights, greater decision-making authority, and larger profit shares to local communities. Lasting for 35 years, these permits can be granted to farmer groups and associations, local financing institutions/ cooperatives and even comanagement (PHBM) groups. Sikor et al. (2013) considered long-term permits a form of secure forest tenure rights close to ownership rights. Although the permit is granted to the group, forest use and profit-sharing arrangements are delegated specifically to the individual farmers who are permitted to practice agricultural cropping over the entire permit duration (35 years). Rights over forest lots can also be inherited. Moreover, the farmers are empowered to determine the management plan, namely determining the duration and the types of staple crops and agroforestry plants according to their preference, as long as they do not change the forest's main function. The new provisions regarding individual farmers' rights clearly serve as one of the main attractions of

IPHPS. More importantly, compared to the PHBM scheme, the new social forestry scheme offers greater control and profit sharing for local communities (see Table 1).

As evident in Table 1, this Ministerial Regulation provides opportunities for local communities to obtain a greater share of the profit from forest utilization. Under the provisions for profit-sharing in PHBM as stipulated in the SFC director's decree No: 436/KPTS/DIR/2011, the maximum profit share of the harvested staple crops for the local community is 25%, which is further reduced by certain correction factors that are burdensome for local communities (Djamhuri, 2012; Widiyanto, 2019). Besides, the determination of profit-sharing is often carried out unilaterally and does not appear to be transparent (Fujiwara et al., 2012; JAVLEC, 2013). The implementation of IPHPS is expected to address these problems by increasing the role, bargaining position, and profit-sharing percentage for the local community welfare.

## 3. Why has early enthusiasm dampened?

IPHPS permits are granted for degraded forests, where forest cover is below 10% or under certain social conditions (P.39/MENLHK/SETJEN/KUM.1/6/2017). Permit holders are required to invest in reforestation (Table 2). They are also required to pay annual land taxes and tax on harvests. The requirement for such investments is one of the major factors reducing the farmers' interest in taking up IPHPS permits. These farmers are typically poor and their interaction with the forest typically only involves their attempts to fulfil basic subsistence needs. Moreover, reforestation costs lie well beyond their means. In the short term, income from agricultural or seasonal crops is inadequate to reimburse their expenses. Though interest in the new arrangement is expected to be high, this expectation is ultimately based on a long-term scenario and ignores the short-term costs and skill requirements of the policy.

Planting Obligations	Production Forest	Protection Forest
Coverage of the area	50% for main tree species 30% for multipurpose tree species (MPTS) 20% for perennial crops	20% for non-fast growing tree species (protection for land and water) 80% for multipurpose tree species (MPTS)
Other Points	Silvofishery, if any, is to be limited to 30% of the area Silvopasture, if any, is to be limited to 20% of the area	Some undergrowth plants are permitted, except tubers plant or crops harmful for land fertility

### Table 2. Planting obligations for IPHPS permit holders

Source : Ministerial regulation P.39/MENLHK/SETJEN/KUM.1/6/2017

We conducted interviews with the chairmen and members of the five local communities, local NGOs, and the SFC staff who assisted the five local communities. Monitoring was also carried out during the *pre-permit* activities from September 2019 to April 2020. The results indicated that they could not undertake such large investments in reforestation without any access to adequate investment capital. These communities are further vulnerable to fluctuations in social, economic and natural conditions. Therefore, they prefer to remain risk averse and play it safe. For example, in the event of crop harvest failure, they prefer not to invest more in the IPHPS scheme. They appeared to prefer the co-management model which did not require large investments, since reforestation costs were fully covered by the SFC. The IPHPS scheme illustrates a curative poverty alleviation policy that only raises people above the poverty line without considering preventive strategies to keep them from falling back into poverty (Angelsen & Wunder, 2003). Given the local community's current capabilities, this policy has the potential to become a "window dressing", designed to look

In the broader political context, the SFC, which risks losing its authority over forestland and faces a potential loss in revenues, has fiercely attempted to persuade potential IPHPS applicants to choose the co-management scheme by framing IPHPS as a potential burden. This was clearly evident during the *pre-permit* activities in the villages. For example, the SFC promises to pay taxes and other government-related fees (payments) if harvest fails when community groups choose the co-management scheme (*Pengakuan dan Perlindungan Kemitraan Kehutanan* (Kulin KK), a continuation of PHBM) over the permit-based IPHPS. A further cause of community disillusion with the IPHPS is the need for external assistance in completing the complex application process and providing the required documentation. Government assistance in the cases we observed was non-existent and the SFC took advantage of this opportunity by providing a *Community Assistance Team*. This team consists of a local NGO that functions as a local community extension agent, whose operational costs are fully covered by SFC, establishing a conflict of interest between the NGO and SFC. In *pre-permit* activities, the NGO primarily represents SFC interests in continuing the comanagement scheme.

## 4. Conclusions

Considering the extensive history of exclusion doctrines in Indonesian forest management, particularly in Java, the IPHPS, with secure tenure rights and greater decision-making authority, represents an important opportunity for local communities. The policy strategy may further serve as a meaningful pathway for achieving inclusive rural development, and indicates a strong political interest in reforming the state forest tenure system. Initially, hopes were high in terms of securing greater tenure and decision making over forestland. However, interest in the permit-based scheme is apparently fading. Local communities are increasingly convinced they cannot benefit adequately from the IPHPS, as the many related responsibilities impede them. Moreover, they lack relevant mechanisms of access, particularly access to capital, knowledge, and the information required to utilize social forestry rights (Ribot & Peluso, 2003).

Based on our observations, some local groups have been increasingly hindered from exercising their rights, as formally promised by the community forestry program, even though they were supposedly provided with secure tenurial rights (Toft et al., 2015; Basnyat, 2020; Sahide et al., 2020). The IPHPS further raises concern about the potential impact of the growing imposition of "responsibilization" mechanisms on communities vis-a-vis local forestry agencies (Erbaugh, 2019). Such strategies appear to impose more burdens on local communities without providing adequate compensatory benefits (Cronkleton et al., 2012). Although a deeper investigation is necessary, we have identified that the IPHPS may well serve as another false dawn for social forestry policy in Indonesia. This example should serve as a cautionary statement to policymakers to create more innovative frameworks for promoting community forestry. Such frameworks should focus not only on bestowing rights, but also on providing mechanisms that enable local communities to obtain real benefits from these rights.

Conflicts of Interest: The authors declare no conflict of interest

## References

Absori, Nugroho, S. S., & Elviandri. (2017). Legalitas Perhutanan Sosial: Sebuah Harapan Menuju Kemakmuran Masyarakat Kawasan Hutan. *Yustisia Merdeka : Jurnal Ilmiah Hukum, 3 (2)* 

Angelsen, A., & Wunder, S. (2003). Exploring the Forest-Poverty Link: Key Concepts, Issues and Research Implications. In CIFOR Occasional Paper No. 40. https://doi.org/10.1016/S0039-6109(16)32102-8

- Ansori, M., Soetarto, E., Darusman, D., & Sundawati, L. (2011). Pengelolaan Hutan Kemitraan untuk Mensejahterakan Masyarakat (Kasus PHBM di Perhutani BKPH Parung Panjang,KPH Bogor). *Jurnal IPB*, 185–194.
- Basnyat, B. (2020). Commodifying the Community Forestry: A Case From Scientific Forestry Practices in Western Hills of Nepal. *Journal of Forest Research*, 25(2), 69–75. https://doi.org/10.1080/13416979.2020.1743406
- Blaikie, P. (2006). Is Small Really Beautiful? Community-based Natural Resource Management in Malawi and Botswana. *World Development*. 34 (11), 1942-1957, https://doi.org/10.1016/j.worlddev.2005.11.023
- Cronkleton, P., Saigal, S., & Pulhin, J. (2012). Co-management in Community Forestry: How the Partial Devolution of Management Rights Creates Challenges for Forest Communities. *Conservation and Society*, *10*(2), 91-102. https://doi.org/10.4103/0972-4923.97481
- Djamhuri, T. L. (2012). The Effect of Incentive Structure to Community Participation in a Social Forestry Program on State Forest Land in Blora District, Indonesia. *Forest Policy and Economics*, 25, 10–18. https://doi.org/10.1016/j.forpol.2012.02.004
- Erbaugh, J. T. (2019). Responsibilization and Social Forestry in Indonesia. *Forest Policy and Economics*, *109*(August) 102019, 1-9. https://doi.org/10.1016/j.forpol.2019.102019
- FAO. (1978). Forestry for Local Community Development. In *Forestry Paper* (Vol. 7). Rome: Food and Agriculture Organization of United Nation.
- FAO. (2011). *Reforming Forest Tenure : Issues, Principles and Process*. Rome: Food and Agriculture Organization of United Nation.
- Fisher, M R, Moeliono, M., Mulyana, A., Yuliani, E. L., Kamaluddin, Adriadi, A., ... Sahide, M. A. . (2018). Assessing the New Social Forestry Project in Indonesia : Recognition, Livelihood and Conservation, International Forestry Review, 20(3), 346–361. Retrieved from http://www.bioone.org/doi/full/10.1505/146554818824063014%0ABioOne
- Fisher, Micah R., Dhiaulhaq, A., & Sahide, M. A. K. (2019). The Politics, Economies, and Ecologies of Indonesia's Third Generation of Social Forestry: An Introduction to the Special Section. *Forest* and Society, 3(1), 152–170. https://doi.org/10.24259/fs.v3i1.6348
- Fujiwara, T., Septiana, R. M., Awang, S. A., Widayanti, W. T., Bariatul, H., Hyakumura, K., & Sato, N. (2012). Changes in Local Social Economy and Forest Management Through the Introduction of Collaborative Forest Management (PHBM), and the Challenges It Poses on Equitable Partnership: A Case Study of KPH Pemalang, Central Java, Indonesia. *Tropics*, 20(4), 115–134. https://doi.org/10.3759/tropics.20.115
- Gilmour, D. (2016). Forty Years of Community-based Forestry : A Review of Its Extent and Effectiveness. Rome: Food and Agriculture Organization of United Nation.
- JAVLEC. (2013). Memotret Konsep dan Realitas PHBM Perhutani. Retrieved from https://javlec.org/memotret-konsep-dan-realitas-phbm-perhutani/
- Kellert, S. R., Mehta, J. N., Ebbin, S. A., & Lichtenfeld, L. L. (2000). Community Natural Resource Management: Promise, Rhetoric, and Reality. *Society and Natural Resources*, 13(8), 705–715. https://doi.org/10.1080/089419200750035575
- KLHK. (2020). Statistik Perhutanan Sosial. Retrieved July 7, 2020, from http://pkps.menlhk.go.id/#statistik
- Krogman, N., & Beckley, T. (2002). Corporate "bail-outs" and Local "buyouts": Pathways to Community Forestry? Society and Natural Resources, 15(2), 109–127. https://doi.org/10.1080/089419202753403300
- Maryudi, A. (2011). The Contesting Aspirations in the Forests: Actors, Interests, and Power in Community Forestry in Java, Indonesia. Retrieved from http://univerlag.uni-goettingen.de
- Maryudi, A. (2017). Creating New Forest Governance Structure for the 12,7 Million- Promise. Jurnal Ilmu Kehutanan, 11(2017), 1–3.

- Maryudi, A., Citraningtyas, E. R., Purwanto, R. H., Sadono, R., Suryanto, P., Riyanto, S., & Siswoko, B. D. (2015). The Emerging Power of Peasant Farmers in the Tenurial Conflicts Over the Uses of State Forestland in Central Java, Indonesia. *Forest Policy and Economics*, *67*, 70–75. https://doi.org/10.1016/j.forpol.2015.09.005
- Maryudi, A., Devkota, R. R., Schusser, C., Yufanyi, C., Salla, M., Aurenhammer, H., ... Krott, M. (2012). Back to Basics: Considerations in Evaluating the Outcomes of Community Forestry. *Forest Policy and Economics*, *14*(1), 1–5. https://doi.org/10.1016/j.forpol.2011.07.017
- Maryudi, A., & Krott, M. (2012). Local Struggle for Accessing State Forest Property in a Montane Forest Village in Java, Indonesia. *Journal of Sustainable Development*, *5*(7), 62–68. https://doi.org/10.5539/jsd.v5n7p62
- McCarthy, J. (2005). Devolution in the Woods: Community Forestry as Hybrid Neoliberalism. *Environment and Planning A*, *37*(6), 995–1014. https://doi.org/10.1068/a36266
- McDermott, M. ., & Schreckenberg, K. (2009). Equity in Community Forestry: Insights from North and South. International Forestry Review, 11(2), 157–170. https://doi.org/10.1505/ifor.11.2.157
- Myers, R., Intarini, D., Sirait, M. T., & Maryudi, A. (2017). Claiming the Forest: Inclusions and Exclusions under Indonesia's 'new' Forest Policies on Customary Forests. *Land Use Policy*, *66*(October 2014), 205–213. https://doi.org/10.1016/j.landusepol.2017.04.039
- Ota, M. (2019). From Joint Forest Management to More Smallholder-based Community Forestry: Prospects and Challenges in Java, Indonesia. *Journal of Forest Research*, 24(6), 371–375. https://doi.org/10.1080/13416979.2019.1685063
- Peluso, N. L. (1992). *Rich Forests, Poor People: Resource Control and Resistance in Java*. California: University of California Press.
- Peluso, N. L., & Vandergeest, P. (2001). Genealogies of the Political Forest and Customary Rights in Indonesia, Malaysia, and Thailand. *The Journal of Asian Studies*, 60(3), 761–812. https://doi.org/10.2307/2700109
- Plante, C. (2019). Policy or Window Dressing? Exploring the Impact of Poverty Reduction Strategies on Poverty among the Canadian Provinces. *Journal of International and Comparative Social Policy*, 35(1), 112–136. https://doi.org/10.1080/21699763.2018.1549090
- Purwanto, A. B., Manalu, D., Suprapto, E., Hanif, H., Ferdaus, R. M., Sulastriyono, & Diantoro, T. D. (2013). *Hutan Jawa: Kontestasi dan Kolaborasi* (E. Suprapto & A. B. Purwanto, Eds.). Sleman: Biro Penerbitan ARuPA.
- Rahayu, S., Laraswati, D., Pratama, A. A., Sahide, M. A. K., Permadi, D. B., Wibowo, W., ... Maryudi, A. (2020). Bureaucratizing Non-government Organizations as Governmental Forest Extension Services in Social Forestry Policy in Indonesia. *Forests Trees and Livelihoods, 29(2)*, 119–129. https://doi.org/10.1080/14728028.2020.1753585
- Resosudarmo, I. A. P., Tacconi, L., Sloan, S., Hamdani, F. A. U., Subarudi, Alviya, I., & Muttaqin, M. Z. (2019). Indonesia's Land Reform: Implications for Local Livelihoods and Climate Change. *Forest Policy and Economics*, *108* (2019) 101903, 1-14. https://doi.org/10.1016/j.forpol.2019.04.007
- Ribot, J. C., & Peluso, N. L. (2003). A Theory of Access. *Rural Sociology*, *68*(2), 153–181. https://doi.org/10.1111/j.1549-0831.2003.tb00133.x
- Sahide, M. A. K., Fisher, M. R., Erbaugh, J. T., Intarini, D., Dharmiasih, W., Makmur, M., ... Maryudi, A. (2020). The Boom of Social Forestry Policy and the Bust of Social Forests in Indonesia: Developing and Applying an Access-Exclusion Framework to Assess Policy Outcomes. *Forest Policy and Economics*, 120(August), 102290. https://doi.org/10.1016/j.forpol.2020.102290
- Sahide, M. A. K., Fisher, M. R., Maryudi, A., Dhiaulhaq, A., Wulandari, C., Kim, Y. S., & Giessen, L. (2018). Deadlock Opportunism in Contesting Conservation Areas in Indonesia. *Land Use Policy*, 77(June 2017), 412–424. https://doi.org/10.1016/j.landusepol.2018.05.020
- Sahide, M. A. K., Fisher, M. R., Supratman, S., Yusran, Y., Pratama, A. A., Maryudi, A., ... Kim, Y.-S. (2020). Prophets and Profits in Indonesia's Social Forestry Partnership Schemes: Introducing a

Sequential Power Analysis. *Forest Policy and Economics*, *115*(March), 102160. https://doi.org/10.1016/j.forpol.2020.102160

- Setiahadi, R., Pratiwi, D., & Ratnaningtyas, D. (2017). Deliberation Process Analysis of Community Based Forest Management Policies Implementation in Indonesia. *International Journal on Advanced Science, Engineering and Information Technology*, 7(3), 1076–1082. https://doi.org/10.18517/ijaseit.7.3.2127
- Schusser, C., Krott, M., Yufanyi Movuh, M. C., Logmani, J., Devkota, R. R., Maryudi, A., ... Bach, N. D. (2015). Powerful Stakeholders as Drivers of Community Forestry Results of an International Study. *Forest Policy and Economics*, 58(November), 92–101. https://doi.org/10.1016/j.forpol.2015.05.011
- Sikor, T., Gritten, D., Atkinson, J., Huy, B., Dahal, G., Duangsathaporn, K., ... Pulhin, J. (2013). *Community forestry in Asia and the Pacific : Pathway to Inclusive Development*. Bangkok: RECOFTC.
- Suharjito, D. (2018). Dramaturgy of Agrarian Reform in Forestry Sector in Java Indonesia. IOP Conference Series: Earth and Environmental Science, 196(1). https://doi.org/10.1088/1755-1315/196/1/012046
- Sunderlin, W. D. (1997). An ex-post Methodology for Measuring Poor People's Participation in Social Forestry: An Example from Java, Indonesia. *Agroforestry Systems*, *37*(3), 297–310. https://doi.org/10.1023/A:1005977907533
- Sunderlin, William D., Dewi, S., Puntodewo, A., Müller, D., Angelsen, A., & Epprecht, M. (2008). Why Forests are Important for Global Poverty Alleviation: A Spatial Explanation. *Ecology and Society*. https://doi.org/10.5751/ES-02590-130224
- Sutopo, A. (2005). Pengaruh Program Pengelolaan Hutan Bersama Masyarakat (PHBM) terhadap Kelestarian Kawasan Hutan dan Kesejahteraan Masyarakat Desa Hutan di Kabupaten Ngawi. Universitas Diponegoro.
- Tacconi, L., Rodrigues, R. J., & Maryudi, A. (2019). Law enforcement and deforestation: Lessons for Indonesia from Brazil. *Forest Policy and Economics*, 108, 101943. https://doi.org/10.1016/j.forpol.2019.05.029
- Toft, M. N. J., Adeyeye, Y., & Lund, J. F. (2015). The Use and Usefulness of Inventory-based Management Planning to Forest Management: Evidence from Community Forestry in Nepal. *Forest Policy and Economics*, 60, 35–49. https://doi.org/10.1016/j.forpol.2015.06.007
- Widiyanto, A. (2019). Analysis of Benefits of Wood Products in Community Based Forest Management Program in Perum Perhutani KPH Ciamis. *Jurnal Agroforestri Indonesia*, 2(2), 103– 113. https://doi.org/10.20886/jai.2019.2.2.103-113