Jurnal Sylva Lestari

Full Length Research Article

Unveiling the Shortcomings of Social Forestry Programs in Indonesia: A Critical Analysis of Farmer Empowerment Initiatives

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ABSTRACT

Since being designated a national strategic program under President Joko Widodo's administration, social forestry has yet to significantly alleviate poverty or improve the welfare of communities around forests. Despite the ambitious goal of allocating 12.7 million ha through various schemes such as community forests, village forests, customary forests, community plantation forests, and forestry partnerships, the welfare indicators for forest farmers remain largely unchanged. An in-depth investigation into the shortcomings associated with this program is necessary to uncover why it has yet to achieve its fundamental objectives. A comprehensive literature review involving critical analysis of various sources-including Google Scholar, Scopus, government websites, books, and other materials totaling 95 references, was conducted to examine the various dimensions influencing this program. The results reveal several impediments, including inadequate financial support and fragmented stakeholder collaboration, insufficient operational supervision in program implementation, weak motivation and capacity in institutional management, access inequality, conflict management, and underdeveloped post-harvest processing and networking capacities. Knowledge, technology, technical management, and policy information inputs are also insufficient. Addressing these issues requires a holistic approach, beginning with enhanced technical assistance, stronger program oversight, better institutional management, and improved capacities for market-oriented management of social forestry products and services.

1. Introduction

The social forestry program stands as one of the Indonesian government's policies aimed at providing access to the management of state forests for communities (Purwanto et al. 2021), particularly those residing in forested areas (Erbaugh 2019; Gunawan et al. 2022; Umar et al. 2021). This initiative is materialized within the medium-term development plan (*Rencana Pembangunan Jangka Menengah Nasional/*RPJMN) from 2015 to 2019, wherein the government, through the Ministry of Environment and Forestry (KLHK), targeted an allocation of forested areas spanning 12.7 million ha for community management through various management schemes (Wong et al. 2020), namely community forests (*hutan kemasyarakatan*), village forests (*hutan desa*), customary forests (*hutan adat*), community plantation forests (*hutan tanaman rakyat*), and forestry partnership (*kemitraan kehutanan*) (Anugrah et al. 2022). As of October 2022, the

realization of the allocated forested areas amounting to 12.7 million ha has reached approximately 5,077,868 ha or 40% of the total allocated area (Utomo et al. 2023). The breakdown of the realization includes village forests at 2,013,017.21 ha, community forests at 916,414.60 ha, community plantation forests at 355,185.08 ha, forest partnership at 606,121.17 ha, and customary forests at 1,196,725.01 ha (Statistik KLHK 2022).

These programs were essentially not merely designed to provide land access but also to organically involve communities in forest resource management, which theoretically is expected to alleviate poverty and preserve forest sustainability (Wiyanto 2022). Existing literature suggests that social forestry is also viewed as a means to address the long-standing agrarian injustice in Indonesia, where local communities are often marginalized in accessing natural resources.

This aligns with several pieces of literature that mention the development of forestry in Indonesia through the social forestry scheme fundamentally aims at empowering forest farmer communities in a participatory manner to enhance their capacity to manage the potential forest resources in their vicinity (Kamaluddin and Tamrin 2019). This endeavor is deemed necessary as forest farmer communities, being part of the marginalized groups, are often overlooked in various forest management access spaces and tend to be positioned as vulnerable groups (Pratama 2019; Sahide et al. 2020). Social forestry is thus introduced as a state program intended to broaden access spaces and improve the livelihoods of forest farmer communities towards greater prosperity (Budi et al. 2021; Fisher et al. 2018; Sahide et al. 2020). The program later became a representation of centralized community-based forest management in Indonesia, covering all forest management schemes conducted by farmers (Suharjito and Wulandari. 2019). However, in its implementation, several field studies have shown indications contrary to the initial goals of this program. This is evident from numerous reports where the social forestry program has yet to contribute to the empowerment and welfare of farmers significantly (Fatem 2019), particularly among small-scale rural farming communities that solely rely on forest area lands as their livelihood source (Budi et al. 2021; Muhdar et al. 2018; Nasution et al. 2024; Purwanto. 2017; Siscawati 2013; Tangngareng and Ridha 2016).

A preliminary systematic review of the literature published between 2014 and 2024 found that many social forestry programs in various regions of Indonesia failed to achieve their main objectives. One of the main challenges identified was the lack of sustainable and consistent policy support (Pambudi 2023; Pratama 2019). Studies show that inconsistent policy changes at the national and regional levels often hamper policy implementation. The literature also reveals minimal community participation in forest management (Kailola 2024). This is due to several factors, including low levels of education, lack of technical knowledge, and limited access to information and technology. Several studies also highlight the problem of land conflicts between communities and forest concession holders, which often lead to land degradation and loss of community trust in the program. In many cases, social forestry programs add to the burden on communities instead of improving welfare because they have to deal with various technical and bureaucratic problems without adequate support.

Several studies have attempted to identify why social forestry programs in Indonesia have not fully succeeded in empowering and improving the welfare of forest-dependent communities. Among these reasons are fragmented policy factors and a lack of coherence among government institutions, which hamper effective program implementation (Maring 2022; Maryudi et al. 2022; Moeliono et al. 2023; Rif'an 2020; Tajuddin et al. 2019). This can be seen, for example, in the lack of synergy between the Ministry of Environment and Forestry (KLHK), the Ministry of

Villages, Development of Disadvantaged Regions, and Transmigration (*Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi*), and the Peat Restoration Agency (BRG) in terms of mentoring and guidance to farmers, resulting in inefficient information dissemination and coordination. The second factor is the lack of a participatory approach in policy formulation, which ignores the needs and aspirations of local communities (Fisher et al. 2018; Kailola 2024; Sahide et al. 2020). In this case, farmer groups are often considered incompetent, low-capacity, and lacking skills, so they tend to be marginalized or ignored in policy discourse and decision-making processes. The next factor is the ambiguity in forest land ownership and management (Tarigan and Karuniasa. 2021), which is still a major problem in the field (Bong et al. 2019; Fisher et al. 2018; Mulyani 2020). Legal uncertainty and inequality in access to forest resources are considered major obstacles to social forestry programs' sustainability.

However, among the various explanations regarding the causal factors, there are still gaps in the analysis that have sparked substantive debate and produced fundamental questions: why and how did a program that was expected to address the problem of inequality in land access fail to gain recognition and provide significant impacts in building justice and social welfare for small-scale farmers as a marginalized group, even though land access has been widely opened? (Ragandhi et al. 2021).

This study aims to answer these questions and seeks to fill the gap in the literature on social forestry, particularly in the context of farmer empowerment, by conducting a systematic review of studies published over five to ten years. This comprehensive literature review emphasizes analyzing the factors that cause social forestry programs to fail in achieving their goals of empowering farmers from policy perspectives, field implementation, and community participation. The sustainability of forest ecosystems and the welfare of surrounding communities are the main focus of this review. This study also highlights the importance of multi-stakeholder involvement, including the government, communities, and the private sector, in ensuring the success of this program.

The main contribution of this research is to provide a systematic analysis of the shortcomings in implementing social forestry programs in Indonesia to improve the welfare of forest farmers and the sustainability of forest ecosystems. This study not only identifies the gaps between policy and practice in the field but also reveals the complexity of the challenges faced by local communities, such as the ambiguity of land ownership, limited community participation in the decision-making process, and inconsistency in policy support. By combining various findings from previous studies, this review is expected to understand better the factors that influence the success or failure of social forestry programs in Indonesia.

2. Materials and Methods

This research constitutes a desk study or desk research (Randolph 2019; Snyder 2019; Travis 2016). The analysis within this study involves a comprehensive review of the literature concerning cases of social forestry in Indonesia, with a specific focus on the causative factors behind the failures of social forestry programs in empowering and enhancing the welfare of forest farmers as a marginalized community. The articles gathered for this study are related to farmer empowerment within the social forestry program and other key themes closely associated with the main topic. The collected articles are sourced from various platforms, including Google Scholar, Scopus, books, government websites, and other relevant sources. There are 95 references reviewed and

analyzed. The 2014–2024 period was selected as the focus of analysis in this article because it represents a critical phase in developing and implementing social forestry policies in Indonesia. In 2014, the Indonesian government introduced an ambitious target through the national medium-term development plan (*Rencana Pembangunan Jangka Menengah Nasional*/RPJMN) 2015–2019 to expand community access to forests through social forestry schemes. This marked the beginning of a systematic effort to integrate local communities' role in forest management to achieve better economic welfare and environmental conservation. By covering the period up to 2024, this article also considers the long-term evaluation of the policy's impact, including the program's implementation under various policy and governance changes over the decade. This analysis also considers the most recent data (2019–2024) and current trends in the implementation of social forestry, providing a strong empirical basis for evaluating the program's effectiveness. The selection of this period allows for an assessment of how policies implemented over the past ten years have impacted the welfare of forest communities and ecosystem sustainability, as well as providing a comprehensive view of the existing dynamics and challenges.

The collected articles were then analyzed descriptively and narratively. Procedurally, the stages of the desk study/desk review conducted followed the guidelines of Samnani et al. 2017 who recommend the following steps:

a. Framing Review Question: in this initial stage, the researcher identifies the problem to be solved and formulates the research objectives in a specific and constructive manner.
b. Searching Relevant Literature: using predefined keywords and vocabulary, the researcher searches for literature and references relevant to the study's objectives. This literature and reference search also applies inclusion and exclusion criteria, ensuring that only data related to the study's problems and objectives are collected.
c. Assessing Quality of Literature: the collected literature and references are evaluated for their validity and relevance to the study's problems and objectives, contributing to the formation of substance and essence.
d. Summarizing Evidence: in this phase, the researcher examines, filters, analyzes, sets boundaries and parameters, maps the substance, and constructs key findings related to the study's problems. Specifically, this activity includes summarizing key information into tabular, textual, or graphical representations.
e. Interpreting Findings: the final step involves formulating the study's findings, rewriting the substance, systematically presenting the findings, and making recommendations for future research.

We adopt a critical analysis and approach towards relevant sources in a literature review. Our analytical focus is on understanding how efforts to empower marginalized groups are reflected in forest management policies and practices under various social forestry schemes. Employing the analytical approach utilized, we vividly depict how empowering marginalized groups may remain unrealized or even undermined by the implementation of social forestry policies. In granular detail, we also seek to delve into aspects intrinsic to farmers, such as structural and economic conditions, reliance on existing systems, awareness of education, socio-cultural pressures, barriers to resource access, and institutional support, all of which potentially contribute to the failure of social forestry programs. **Fig. 1** briefly illustrates the literature review procedure adapted from Samnani et al. (2017).
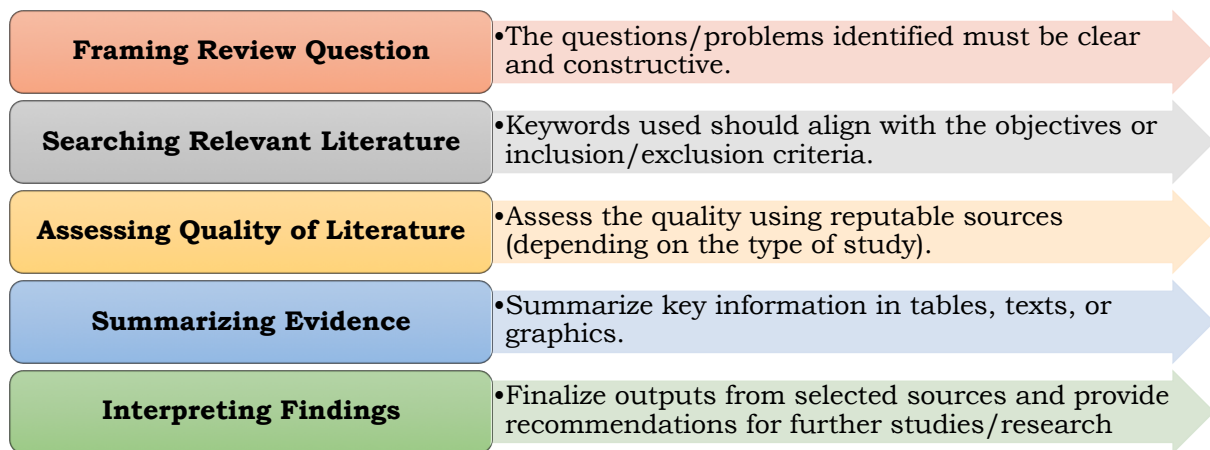
Fig. 1. Steps of conducting a review.

In addition to a literature review analysis, this article also employs historical analysis to gain a holistic insight into the history of social forestry management in Indonesia. In this regard, we endeavor to trace the evolution of policies and forms of social forestry over time to identify historical factors influencing the success or failure of empowering marginalized groups. By applying various analyses, this article aims to contribute significantly to fostering a critical understanding of the empowerment concept within the context of social forestry management in Indonesia.

3. Results and Discussion

After conducting a comprehensive analysis through the desk study method involving the examination of various relevant scientific reports concerning the trajectory of social forestry programs in Indonesia, we subsequently performed thematic classification and organized the discussion starting with a brief history of social forestry in Indonesia (as an introduction to the narrative). This is followed by the main discussion, which encompasses structural challenges in financial and supervisory aspects of program implementation, internal dynamics of farmer groups, and inputs of knowledge, technology, technical management, and policy information. These aspects collectively reflect the overall shortcomings of social forestry initiatives.

3.1. A Brief History of Social Forestry in Indonesia

3.1.1. Initial launch and historical context (1970–1998)

The formal development of social forestry in Indonesia can be traced back to the 1970s, when the government began to recognize the importance of community involvement in forest management (Bratamihardja et al. 2005; Pratama 2019). During this period, forestry policy in Indonesia was still highly centralized, focusing on the exploitation of forest resources by state-owned and private companies (Banjade et al. 2017). Communities living in and around forest areas were often considered encroachers, and their land and forest resources rights were not formally recognized (Wiyanto 2022). However, with increasing awareness of the importance of forest sustainability and the role of local communities in maintaining ecosystems, initiatives began to emerge aimed at integrating communities into forest management. One of the earliest forms of social forestry was the Community Forestry (HKm) program, introduced on a limited scale in the

late 1990s, although its implementation was minimal (Neta et al. 2019; Wiyanto 2022).

3.1.2. Reformation era and policy development (1998–2014)

The political reforms in 1998 brought significant changes in forest governance in Indonesia. One of the main changes was the decentralization of natural resource management, including forests, which gave greater authority to local governments (Wiyanto 2022). During this period, social forestry was increasingly developed as part of formal efforts to involve communities in forest management. In 2000, the government issued various regulations supporting social forestry development, including schemes such as village forests, community plantation forests (HTR), and forestry partnerships (Wiyanto 2022). The main objective of these policies was to provide access and rights to manage forests to local communities, hoping to improve their welfare and ensure forest sustainability.

3.1.3. Acceleration and implementation of social forestry programs (2014–2019)

During the administration of President Joko Widodo, social forestry has become one of the national priority programs (Pambudi 2023). In 2014, the government set an ambitious target to allocate 12.7 million ha of forest land to communities through various social forestry schemes (Neta et al. 2019; Pambudi 2023; Wiyanto 2022). This initiative is part of a broader effort to improve forest governance and empower communities around forests. The government issued various regulations to support the implementation of this program, including a ministerial regulation from the Ministry of Environment and Forestry that regulates the procedures for submitting and issuing social forestry permits. In addition, the government involved various stakeholders, including NGOs, universities, and the private sector, to support the implementation of this program (Wiyanto 2022). During this period, the social forestry program showed some significant progress. For example, the number of social forestry permits issued has increased, and more communities have become involved in forest management (Nugroho 2018; Veriasa et al. 2021). However, land conflicts, lack of technical and financial support, and weak supervision remain major obstacles (PKPS KLHK 2024; PPID KHLK 2018; PPID KLHK. 2023).

3.1.4. Consolidation and emerging challenges (2020–2024)

Although the target of 12.7 million ha has not yet been fully achieved, the social forestry program continues with various evaluations and adjustments (Statistik KLHK 2022). The government remains committed to accelerating the implementation of this program despite increasingly complex challenges. In 2020, the COVID-19 pandemic introduced new challenges to implementing social forestry. Restrictions on mobility and the reallocation of resources to pandemic response efforts caused delays in some programs, including social forestry. However, the government sought to maintain the momentum of this program by focusing on community capacity-building and market support for non-timber forest products through the formation and enhancement of social forestry business groups (*Kelompok Usaha Perhutanan Sosial*/KUPS) (Mutaqin et al. 2022). In 2023–2024, the social forestry program faces ongoing challenges. Land conflicts remain a major issue, particularly in forest areas overlapping with company concessions. Additionally, challenges in community capacity building, field supervision, and sustainable funding for the program persist. Nevertheless, social forestry remains one of the government's

main strategies for sustainable forest management and community empowerment in forest areas.

3.2. Structural Challenges in Financial and Supervisory Aspects of Program Implementation

3.2.1. Inadequate financial support and fragmented stakeholder collaboration

The assistance provided in the implementation of social forestry programs in Indonesia faces significant challenges, particularly concerning financial limitations that affect the motivation of executing organizations, namely the Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan*/KLHK) at the local level. These financial constraints impede the government's and related parties' capacity-building efforts (Andryansah et al. 2019; Susanti et al. 2018). Financial constraints narrow the scope and effectiveness of assistance, resulting in various impacts on implementing social forestry programs. Limited financial resources restrict the department's capacity to provide technical guidance, training, and monitoring required by farmer groups. Consequently, the mentoring process is hindered, and farmer groups encounter difficulties independently optimizing forest management potential (Wulandari et al. 2024).

Concretely, financial constraints engender uncertainty regarding support and incentives for field officers engaged in facilitation. The lack of acknowledgment and adequate remuneration for their tasks in accompanying groups of farmers directly impacts their morale and dedication. The limited funds also restrict the allocation of the number of field officers, thus rendering it suboptimal considering the challenges faced (**Fig. 2** and **3**) (Galudra 2019; Supriyanto et al. 2021). Over time, this may lead to a decline in the quality of support services, fostering an environment where farmer groups are less effectively guided.
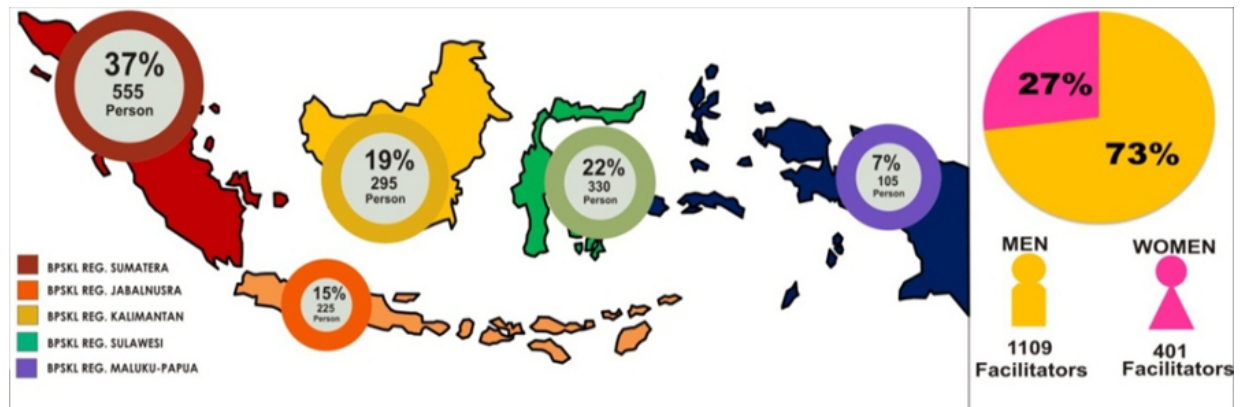

Fig. 2. Distribution of social forestry facilitators in 2022 (Statistik KLHK 2022).

Additionally, financial constraints further compound the uncertainty surrounding the continuity of the social forestry program itself (Kastanya et al. 2019). Communities intended to act as agents in community-based forest management may lose momentum and opportunities for development due to insufficient support from governmental and related entities. Consequently, efforts to empower community groups to manage forests sustainably are impeded, resulting in an inability to achieve the primary objectives of the social forestry program (Alviya et al. 2020). In addition to financial constraints, another aspect requiring particular attention is the lack of synergy in collaboration among stakeholders, both at the central and local levels (Galudra 2019; Heripan et al. 2019; Moeliono et al. 2017; Wartiningsih et al. 2020; Zakaria et al. 2018).
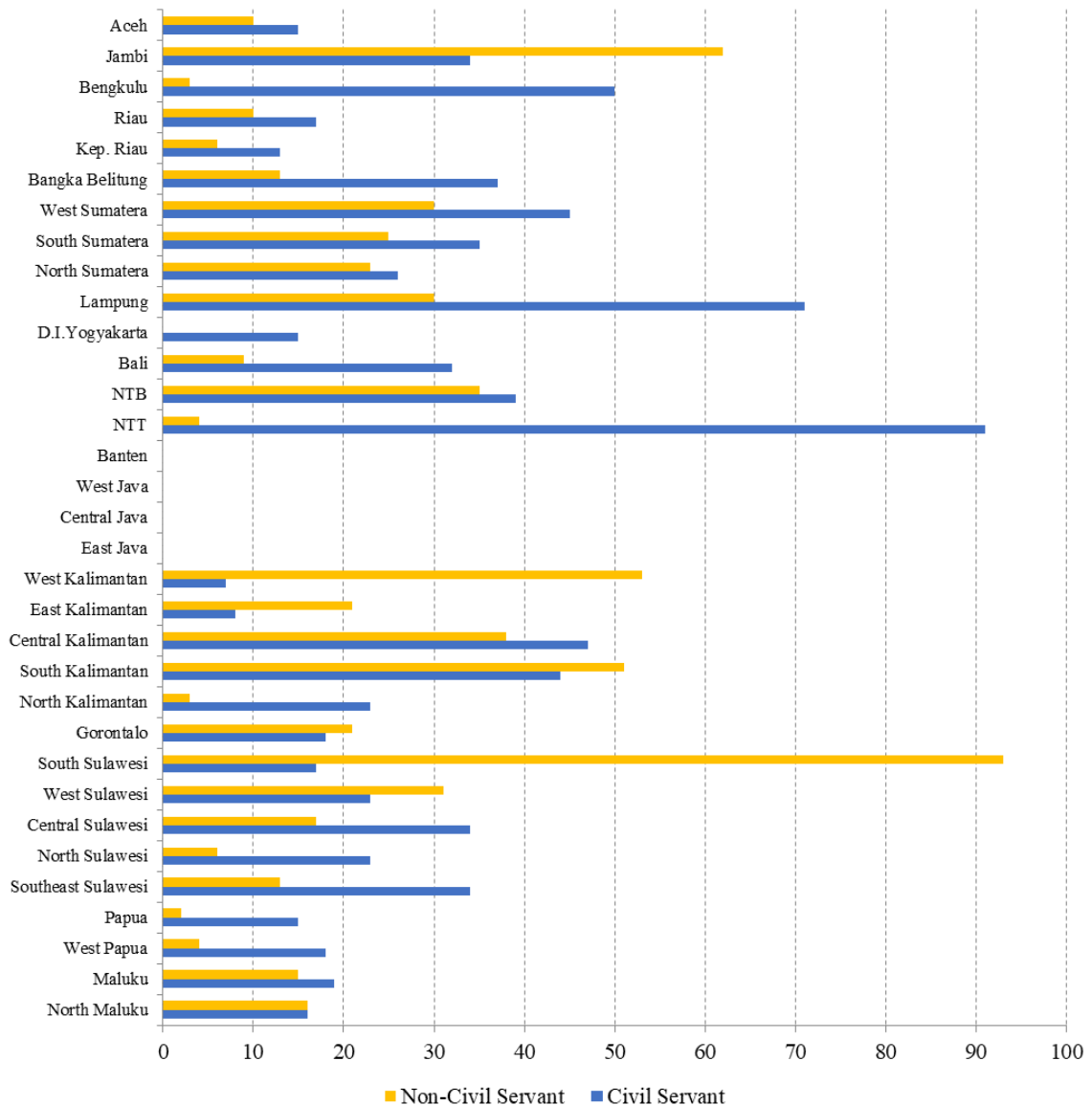
Fig. 3. The number of social forestry facilitators based on employment status per province (Statististik KLHK 2022).

The gap in activities caused by the lack of coordination has become one of the main obstacles to achieving the development goals within the context of social forestry. The process of farmer development by the government, although it has been carried out in some cases, has still not reached an optimal level (Setiajiati et al. 2019). The lack of coordination and integration between government programs and the active role of relevant stakeholders has caused this development process not to proceed synchronously and aligned. One example can be seen in the lack of progress in the development of Social Forestry Business Groups (*Kelompok Usaha Perhutanan Sosial*/KUPS) due to the failure to integrate government programs with local aspirations (Wulandari and Kurniasih 2019). The Social Forestry Business Groups (KUPS), which were expected to serve as a platform for the economic development of farmers, ultimately did not thrive well and were not evenly distributed across all farmer groups (Batalipu et al. 2023). As a result, efforts to empower farmers to manage community forests have not been able to provide maximum impact. The technical guidance is still not optimal (Satriadi et al. 2020). Factors such

as limited human resources, lack of in-depth training, and low infrastructure support restrict the effectiveness of the technical guidance provided to farmers. As a result, the increase in farmers' capacity in forest management, including awareness of caring for the surrounding forests, has not yet reached its peak.

Despite successful capacity building enhancing farmers' awareness to conserve forests in their surroundings, this achievement has not been proportionated to improving their welfare in managing social forestry lands (Erbaugh 2019; Rima 2023; Susanti et al. 2018). The economic and social aspects of this capacity building have yet to yield anticipated outcomes, indicating a need for further attention to fulfilling farmers' basic needs and elevating their standard of living. Limitations in accessing resources and markets (Nugroho et al. 2022) and bureaucratic constraints also influence capacity-building outcomes. Without concrete solutions to address these challenges, capacity-building efforts will only yield limited impacts for farmers and the communities expected to benefit.

In certain instances, to address the imperfections in the empowerment of marginalized community groups residing around forests, the government tends to endorse the role of Non-Governmental Organizations (NGOs), both at local-national levels and those supported by foreign entities, as an alternative institution to accompany farmers (Kurniadi 2020), albeit their scope remains restricted (Rahayu et al. 2023; Setiajiati et al. 2019; Wulandari and Kurniasih 2019). Some experts believe that granting forest farmers assistance access to NGOs with assistance from foreign donors entails a range of rather intricate positive and negative consequences (Galudra 2019).

In one aspect, a potential positive outcome is the improvement of farmers' access to knowledge and skills in managing forests. NGOs, supported by foreign funds, can organize more intensive and in-depth mentoring programs to help farmers optimize sustainable practices (Maring 2022; Rahayu et al. 2023). In addition, this guidance can open the door for farmers to access greater financial resources. Foreign donors often provide funding for training, mentoring, or infrastructure projects, ultimately enhancing farmers' capacity to manage forests sustainably. With this financial support and guidance, farmers may be able to develop better and more sustainable business models. Nevertheless, dependence on aid from foreign donors can also bring some risks. Sometimes, these mentoring programs are not sustainable in the long term after donor funding runs out. This can create a lasting dependency on external aid without a clear strategy to ensure the program's continuity once donor support ends.

Furthermore, the implementation of training by NGOs with funding from abroad may not always align with the local situation and the actual needs of forest farmers. Sometimes, the strategies implemented do not reflect the local social, cultural, or economic realities, which can hinder the long-term success of the mentoring programs. Political factors can also be a serious consideration, especially if there is a perception that the program is controlled by foreign interests and not fully integrated into the local community. This situation can create tension between forest farmers and local elements that feel neglected in decision-making (Fisher et al. 2018).

3.2.2. *Insufficient operational supervision in program implementation*

Operational supervision is crucial in ensuring the success of social forestry programs, serving as the mechanism that translates policy into effective action (Wulandari et al. 2019). However, this process is often hindered by various systemic challenges. Government resource deficiencies and regulatory ambiguities create significant obstacles, while limited community

capacity and external pressures further complicate the supervisory landscape. These factors weaken the ability to effectively oversee and guide social forestry initiatives, leading to gaps between policy intentions and on-the-ground realities. Generally, here are some of the barriers that hinder the supervision process in social forestry programs in Indonesia (**Table 1**).

Table 1. Barriers and recommendations for supervision in the Management of Community Forests (HKm) in Indonesia

No.	Barrier	Description	Recommendation	Source
1	Government Resource Deficiency	Insufficient budget allocation and lack of adequately trained personnel to monitor HKm effectively.	Enhance budget allocation and recruit competent forestry extension officers in sufficient numbers to oversee and guide forest farmer groups.	(Azizah et al. 2024; Pambudi 2023; Suswadi et al. 2023)
2	Regulatory Ambiguity	Inconsistent or unclear regulations governing HKm management lead to uncertainty in implementation.	Streamline and harmonize regulations and enforce stronger legal protections to safeguard community rights and prevent ecological degradation.	(Kailola 2024; Ramadhan et al. 2023)
3	Limited Community Capacity and Knowledge	Local communities often lack the capacity or knowledge to grasp the implications of sustainable forest management.	Provide comprehensive and sustained training and mentorship to community groups managing HKm.	(Herrawan et al. 2022; Ramadhan et al. 2023)
4	Conflict of Interest	Companies' economic interests may conflict with environmental sustainability, hindering effective oversight.	Develop fair and transparent conflict resolution mechanisms and enhance community involvement in monitoring processes.	(Azizah et al. 2024; Kailola. 2024)
5	Market Pressure and National Policies	Market pressures and national policies misaligned with local realities weaken the efficacy of Social Forestry programs.	Align national policies with local needs through a more flexible and adaptive approach.	(Pambudi 2023; Suswadi et al. 2023)
6	Funding Shortfalls and Program Sustainability	Insufficient funding allocations jeopardize the effective implementation of the programs.	Ensure adequate budget allocations through the Regional Budget (APBD) and monitor fund distribution transparently to support program sustainability.	(Herrawan et al. 2022; Ramadhan et al. 2023)

An equally important aspect in the process of fostering Social Forestry management in Indonesia is the need for effective supervision (Azizah et al. 2024; Pambudi 2023). Supervision of violations of Community Forest (HKm) management, which is part of the social forestry scheme in Indonesia, is still considered inadequate. This phenomenon reflects the complexity of the dynamics of guidance by the government and other related parties in the context of the social forestry program. At the government level, the lack of supervision related to violations of HKm management can be seen from the unclear rules, administrative obstacles, and limited resources allocated for monitoring. The absence of firm policies and strong legal protection for communities in managing forests creates loopholes for practices that are detrimental to the sustainability of the

ecosystem. This problem becomes a cycle that requires ongoing intervention. Other parties involved, such as private companies or NGOs, also play an important role in supervision. However, conflicts of interest often arise between them. For example, the company's economic interests may trump concerns for environmental sustainability and the welfare of the local community. Such conflicts can hinder guidance efforts because they tend to give rise to an inability to reveal or be involved in supervising alleged irregularities.

In addition, the lack of active participation from the community in oversight also poses a serious challenge (Kailola 2024). Although social forestry is supposed to empower marginalized groups, they often lack the capacity or adequate knowledge to understand the impacts of sustainable forest management. This situation increasingly worsens the inequality in the development process, where the government and other stakeholders should act as facilitators and supporters rather than as parties that completely control (Ramadhan et al. 2023).

Strengthening collaboration between the government and other stakeholders has become an urgent necessity to address this issue. An approach that is more inclusive, transparent, and community-based is needed in order to strengthen oversight from the bottom up (Suswadi et al. 2023; Wulandari et al. 2019). The government is expected to be more proactive in providing information and guiding the community so that they can understand and actively participate in the management of social forestry (Wulandari et al. 2019). In addition, there is a need for improved regulations regarding the protection of the rights of communities and holders of Community Forest Utilization Permit (*Ijin Usaha Pemanfaatan Hutan Kemasyarakatan*/IUPHKm), including the provision of effective conflict resolution mechanisms and strict sanctions against violations of community rights or obstacles to the implementation of social forestry programs.

Various problems that hinder the development process in social forestry are caused by local factors and external factors, such as market pressures and national policies that may not align with the reality of local communities (Purwanto. 2017; Utomo et al. 2023). Therefore, comprehensive development must also be able to respond to these aspects so that the social forestry program can significantly impact empowering marginalized groups.

Several studies recommend a few specific considerations regarding the various issues concerning guidance in social forestry programs in Indonesia. Among them are: First, there is a need to effectively enhance the role of the local Forestry Service in providing comprehensive training to farmer groups managing Community Forests (*Hutan Kemasyarakatan*/HKm), one of the schemes under social forestry. This process includes preparing work plans and making reports on forest utilization activities. In this context, standardization in reporting and work plan management is a crucial element to ensure the sustainable development of these groups. Second, it is important to adequately streamline the recruitment process for forestry extension workers in terms of quality and quantity. The role of extension workers is not only limited to providing technical guidance but also serves as an essential link between the group and the government. They must also possess deep knowledge of the local people and landscape economic incentives and an understanding of the flexibility of the local state agency in adjusting regulations according to bottom-up demands (Herrawan et al. 2022). The government must ensure that the number of extension workers is sufficient and competent to assist the groups effectively. Third, it is important to maintain program sustainability through budget allocations provided by the government. Special attention must be paid to the distribution of funds, especially through the Regional Budget (*Anggaran Pendapatan dan Belanja Daerah*/APBD), to avoid budget shortfalls that could hamper program implementation. The importance of adequate funds will increase the effectiveness and

efficiency of the policy implementation of all social forestry schemes. Fourth, optimal assistance is required in managing social forestry schemes, especially community forests (*Hutan Kemasyarakatan*/HKm), which have large areas and involve many groups. Therefore, a targeted strategy is needed to ensure that each group receives maximum assistance. Lack of optimal implementation may hamper the potential guidance that should be provided to these groups.

3.3. Internal Dynamics of Farmer Groups

3.3.1. Motivation and capacity in institutional management, access inequality, and conflict management

In the context of implementing social forestry programs in Indonesia, the internal dynamics of farmer groups show several crucial aspects that limit the potential for empowering marginalized groups. First of all, the capacity of farmers to manage social forestry institutions is still low (Ramadhan et al. 2022). Limited knowledge and skills in administrative and technical aspects affect farmer groups' effectiveness in sustainably utilizing forest resources (Astriyani et al. 2023). This creates significant obstacles in realizing the goals of the empowerment program. This is further exacerbated by the ability of farmer groups to resolve conflicts, which has proven to be low. This is not only related to internal conflicts within the group but also conflicts with external parties, such as industrial companies or local governments. Limited ability and space for negotiation and conflict resolution make farmer groups less able to defend their rights to the land and forest resources they should manage (Kusuma et al. 2023; Maring 2022; Maskun et al. 2020; Safitri 2022). Various social forestry conflicts in Indonesia due to farmers' limited conflict resolution abilities can be observed in **Table 2**.

Table 2. Main conflicts associated with social forestry management in Indonesia

Types of Conflict	Trigger	References
Agrarian Conflict	Many village boundaries remain unsettled due to the presence of specific natural resources, scattered individual agricultural or plantation lands, and misconceptions regarding customary land as village boundaries.	(Abimanyu 2023; Fauzan 2023)
Customary Rights Conflict	Violation of customary norms by forest entrepreneurs, the sluggish acknowledgment of customary legal recognition, indigenous territories, and customary forests.	(Latif et al. 2024; Maring 2022; Prihatin and Wicaksono 2020)
Legal Injustice Conflict	The injustice perpetrated by law enforcement authorities in resolving issues.	(Dhiaulhaq and McCarthy 2020)
Socio-Economic Conflict	The management of forests has thus far failed to yield any positive contributions to indigenous communities and the local populace residing in forest proximity.	(Prihatin and Wicaksono 2020)
Conflict of Traditional Forest Utilization versus Corporate-Industrial Interests	The company does not involve indigenous or local forest communities in forest management.	(Dhiaulhaq and McCarthy 2020)

The next problem that arises is internal inequality within farmer groups. This inequality can stem from differences in knowledge, access to resources, or roles in decision-making (Almaghfiroh and Pujo 2023). This unbalanced internal dynamic creates instability and hinders collaborative efforts to manage forests sustainably(Astriyani et al. 2023). Related to this, farmer group members' lack of active participation in decision-making also complicates internal dynamics (Astriyani et al. 2023; Friedman 2020; Kailola 2024). This can be caused by a lack of involvement in forming group policies or an inability to convey the aspirations and needs of each member. Ultimately, this shows an uneven distribution of power within the farmer group.

In addition, it was also found that farming communities showed a lack of motivation to manage forest resources sustainably in the context of social forestry (Lestari et al. 2019; Rakatama and Pandit 2020; Susanti et al. 2018). This is reflected in the lack of awareness of long-term benefits, such as increased welfare and environmental sustainability. Internal factors, such as inequality in decision-making and uncertainty regarding land ownership (Hum 2022), reinforce the powerlessness of the group. The complex regulations and complicated administrative procedures are major obstacles, creating confusion and dissatisfaction. In addition, the lack of access to training and education adds to the challenges, reinforcing apathy towards social forestry.

Meanwhile, from a technical standpoint of planting, it has also been found that in almost the majority of cases of social forestry, farming communities tend to prefer cultivating seasonal and perennial crops that provide immediate economic benefits, despite recommendations from the Ministry of Environment and Forestry suggesting otherwise (Mukhtar and Jannah 2018). This preference among farmers stems from the fact that most of their income is derived from the cultivation of social forestry land, particularly through the simultaneous cultivation of seasonal crops alongside perennial or timber crops. This also reflects the motivation of farmers, who seek more profitable harvests to meet their families' basic needs as their primary motive when deciding to join the social forestry program (Wulandari et al. 2024). In other words, they typically aim to combine various crop types only if they yield financial gains (**Table 3**) (Octavia et al. 2022). The decision to cultivate certain crops reflects a discordance between government policies and the economic preferences of the community. Furthermore, farmers tend to be reluctant to plant timber crops (which only produce wood stems and do not bear fruit), opting to develop Multi-Purpose Tree Species (MPTS) on social forestry land as a more lucrative long-term option. For the community, policies focusing on timber crops face numerous real challenges, as these crops do not provide immediate economic benefits and are susceptible to theft. This creates tension between long-term policy objectives and the daily economic needs of the community.

The phenomenon of resistance to recommendations from the Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan*/KLHK) reflects how the dynamics of internal power among farming groups operate. The decision to disregard the government's advice indicates that the farming group has autonomy and control in managing forest resources (Siscawati et al. 2017). This exposes the disagreement in value perception between the government and local communities regarding forest management. The importance of economic aspects in the decision to plant crops also indicates that efforts to empower community groups through social forestry programs have not yet fully achieved their goals (Siscawati et al. 2017; Wulandari and Kurniasih 2019). The economic challenges farmers face pose a significant obstacle in realizing the concept of empowerment, illustrating that economic factors remain a top priority in all considerations and internal dynamics within farming groups.

Table 3. The variety of farmer-preferred commodities in social forestry areas (KLHK 2022)

Albizia (*Paraserianthes falcataria*)	Agarwood (*Aquilaria* spp.)	Bamboos
Avocado (*Persea Americana*)	Betel nut (*Areca catechu*)	Bananas (*Musa* spp.)
Black Pepper (*Piper nigrum)*	Cassava (*Manihot esculenta*)	Corn (*Zea mays*)
Cajuput tree (*Melaleuca leucadendra*)	Cocoa (*Theobroma cacao*)	Dammar (*Agathis* spp.)
Candlenut (*Aleurites moluccanus*)	Coffee seeds (*Coffea* spp.)	Durian (*Durio* spp.)
Cardamom (*Elettaria cardamomum*)	Frankincense (*Boswellia* spp.)	Essential oil
Chili peppers (*Capsicum* spp.)	Ginger (*Zingiber officinale*)	Honey
Cinnamon (*Cinnamomum verum*)	Guava (*Psidium guajava*)	Limes (*Citrus* spp.)
Clove (*Syzygium aromaticum*)	Jengkol (*Archidendron jiringa*)	Mushroom
Coconut palm (*Cocos nucifera*)	Jernang (*Daemonorops* spp.)	Petai (*Parkia speciosa*)
Dragon fruit (*Hylocereus undatus*)	Nutmeg (*Myristica fragrans*)	Products of Sylvopastura
Eggplant (*Solanum melongena*)	Patchouli (*Pogostemon cablin*)	Rattan (*Calamus* spp.)
Jackfruit (*Artocarpus heterophyllus*)	Peanut (*Arachis hypogaea*)	Red onions (*Allium cepa*)
Lemongrass (*Cymbopogon* spp.)	Pineapple (*Ananas comosus*)	Rice (*Oryza sativa*)
Mangosteen (*Garcinia mangostana*)	Rubber (*Hevea brasiliensis*)	Sago (*Metroxylon sagu*)
Napier grass (*Pennisetum purpureum*)	Silk moth (*Bombyx mori*)	Swallow's nest
Rambutan (*Nephelium lappaceum*)	Sugar Palm (*Arenga pinnata*)	Teak (*Tectona grandis*)
Tongkat Ali (*Eurycoma longifolia*)	Turmeric (*Curcuma longa*)	Walnut (*Canarium* spp.)

3.3.2. Post-harvest processing and networking capacity

The next problem found in social forestry, especially in the technical aspect, is that farming communities generally do not have the ability to process their harvests into products with more competitive selling value (Rachmawan et al. 2022; Sanudin et al. 2023). This phenomenon indicates a substantial challenge in achieving the goal of community empowerment, which is the core of the social forestry program. Farmer groups, although they have access to forest land, often face limitations in mastering technology and skills in processing agricultural products. This problem is not solely due to a lack of training but is also related to the internal social structure of the group. Inequality in the distribution of knowledge and skills among group members creates disparities detrimental to the sustainability of joint efforts.

The inability to process crops effectively creates unhealthy economic dependency and harms the competitiveness of farmer groups in the market. This dynamic shows that empowerment should not only focus on the land aspect but also on increasing the internal capacity of the group, especially on the creativity of processing raw materials into superior commodities. The inability to produce value-added products can have a negative impact on the financial independence of farmer groups. Finally, the economic potential of forest and agricultural products cannot be fully utilized due to the lack of additional expertise in product processing. Meanwhile, farmer groups are also often trapped in a production paradigm alone, without considering the crucial marketing aspect. A lack of knowledge of market and consumer trends prevents farmer groups from developing appropriate marketing strategies (Nugroho et al. 2022). The inability to analyze market needs causes social forestry products to be less than optimal in attracting consumer interest. In addition, the lack of involvement in market research makes farmer groups less sensitive to changes in consumer preferences. As a result, farmer groups have difficulty bridging the gap between production and adequate market access. In addition, various infrastructure constraints and limited distribution networks in rural areas also add to the complexity of this challenge (Utomo et al. 2023).

The next problem that is still related to the internal dynamics of social forestry is the low ability of farmer groups to network with the government or other parties. This phenomenon reflects the inability of farmer groups to optimize external support to increase program effectiveness. The main factor causing this is the lack of understanding and access to participation mechanisms in decision-making (Kailola 2024; Kusuma et al. 2023). Farmer groups tend to be isolated due to minimal political and legal literacy, making it difficult to establish effective partnerships. Several other studies have also revealed that this condition occurs due to limited communication between farmer groups, the government and related parties, resulting in a significant information gap.

In addition, the low organizational capacity of farmer groups is also a serious obstacle (Wiyanto 2022). Limited knowledge of group management, understanding of forestry regulations or policies, lack of resource management training, and minimal financial governance ability make it difficult to manage social forestry programs (Kastanya et al. 2019). This triggers the inability to utilize government support optimally. The internal power imbalance within farmer groups also exacerbates the situation. Hierarchical dynamics hinder active participation, causing some group members to feel unrecognized or unheard. Internal conflicts arise due to differences in views and interests, which are detrimental to common goals.

3.4. Inputs of Knowledge, Technology, Technical Management, and Policy Information

Significant challenges exist in Indonesia's social forestry context regarding knowledge input, technology, management techniques, budget assistance, management infrastructure, and policy information. An in-depth analysis of the complex dynamics involving these factors reveals several unresolved issues. Among them is the lack of access to and distribution of relevant knowledge and technology for farmer groups seeking more productive land management mechanization (Lestari et al. 2019), such as quality fertilizers, insecticides, superior seeds, and agricultural machinery. In addition, the lack of knowledge and technology transfer between researchers and local communities creates a knowledge gap that limits the capacity of these farmer groups to optimize the benefits of social forestry land management.

Although knowledge transfer efforts have sometimes been carried out by extension workers from the local LHK service, the allocation of participants tends to be limited and only targets the heads or figures of farmer groups. This becomes a problem because the heads and figures of farmer groups as participants in extension and training often have difficulty retransmitting information from the training results to other members. This is due to the low level of community education and the different understandings among members. In addition, several small movements initiated by a handful of academics aimed at empowering farmer groups sometimes do not receive support from the government. One is related to the academic initiative movement that tries to provide information and technology input to farmer groups through training in cooperative management and financial literacy based on information technology (Nugraheni et al. 2022; Nugroho et al. 2022). Although it has succeeded in helping many farmers, it is still unable to reach farmer groups on a massive scale. In this case, the government does not seem to see the strategic value of this initiative to be adopted nationally.

Social forestry offers the potential to utilize modern technology in forest management. However, the reality in the field shows that the application of this technology is still limited. Factors such as the availability and accessibility of technology, as well as the lack of technical training for farmer groups, have limited the creativity of farmers in achieving optimal benefits

from social forestry programs (Kastanya et al. 2019; Pambudi. 2023). The lack of integration between technology and the local wisdom of farmers also adds to the problems related to this technological input because it can be detrimental to the sustainability of forest management if it is not carried out by considering the local context (Utomo et al. 2023). Advanced technology is often designed without fully understanding local needs and practices, so its implementation is not in line with the way of life of the local community. This can result in resistance or even rejection by the community. In addition to the problem of minimal input of knowledge and technology, problems related to policy implementation are sometimes a dilemma, where legislative policy products tend to fluctuate, indicating that the ideal policy substance has not been fully realized (Pambudi 2023) (**Fig. 4**).
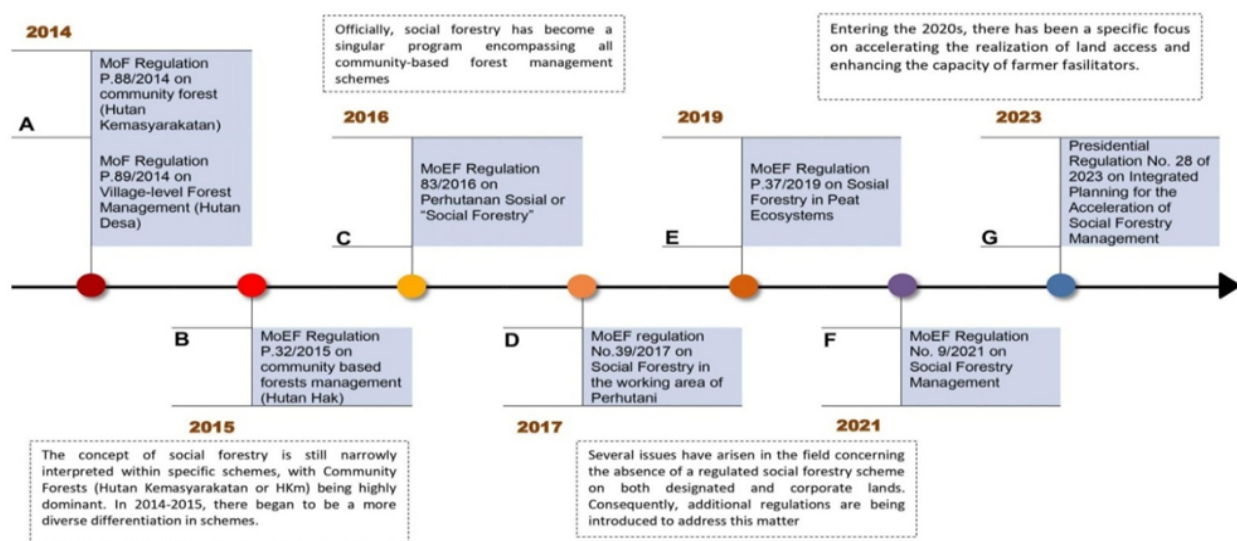
Fig. 4. The evolution of social forestry regulations in Indonesia over the past decade.

In the dynamics of social forestry policies in Indonesia, the latest information on policies is often not clearly and quickly available to the groups involved (Kusuma et al. 2023). This uncertainty creates an imbalance in the implementation of social forestry programs. This factor, together with the lack of dialogue between stakeholders, hinders the adaptation of farmer groups to policy changes and creates a difficult environment for them to optimize the benefits of social forestry programs. Lack of understanding of policy changes due to limited access to information or lack of dialogue makes it difficult for farmer groups to adapt. In this situation, the risk of misinterpretation and implementation of policies becomes higher, causing uncertainty that is detrimental to these groups. Therefore, real efforts are needed to increase the transparency of policy information, encourage open dialogue between all relevant parties, and provide adequate training so that farmer groups can more effectively manage forest resources in accordance with the latest policy directions.

The next problem is related to the existence of agricultural aid allocation management practices that do not match the needs of farmers. This can be seen from the case of the provision of plant seeds that are not on time or do not match the current season conditions (Susanti et al. 2018). This is further exacerbated by the low ability of farmers in plant enrichment or nursery efforts, tending to wait for assistance without any independent initiative. The main factor underlying this passive behavior is the lack of community knowledge about plant enrichment activities' benefits, techniques, and positive impacts. A lack of understanding of the potential

economic and environmental results that can be obtained from plant enrichment makes people reluctant to be actively involved. Limited technology and management techniques are also crucial factors underlying the inability of farmers. Inadequate information and training systems result in low levels of technical skills such as selecting the right seeds, correct planting techniques, and risk management.

As a result, forest rehabilitation efforts through social forestry are hampered by the lack of relevant resources. Farmers who receive assistance often find it difficult to optimize the yield of their crops because they do not obtain appropriate seeds (Ismail and Adhya 2021; Riyadin et al. 2023). The poorly coordinated management practices of agricultural aid allocation create uncertainty and inefficiency in resource utilization and hinder the allocation of benefit sharing (Septiana 2020). Therefore, improvements in aid allocation planning and implementation should be encouraged to match field needs and support the long-term goal of sustainable social forestry. This sustainability is key to the success of the program and the empowerment of marginalized groups in the forest sector.

4. Conclusions

This article highlights various serious challenges in implementing social forestry program goals in Indonesia, classified into three main issues: structural challenges in financial and supervisory aspects, internal dynamics of farmers, and input of information, technology, and policy. Concerning structural challenges in financial and supervisory aspects, it is found that financial constraints within the extension program, particularly within the scope of the Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan*/KLHK), hinder effective mentoring by extension officers, resulting in farmer groups facing difficulties in optimizing forest management independently. This is exacerbated by the lack of synergy among stakeholders, insufficient operational supervision, and the government's inability to facilitate coaching effectively. Regarding the internal dynamics of farmers, the main obstacles to empowering farmer groups lie in their low managerial and organizational capacities, making it difficult for them to network to gain support from stakeholders and manage internal and external conflicts. Moreover, farmers' motivation to manage social forestry land is also low, primarily due to the complexity of regulations and limited access to training. Consequently, this also affects various aspects, such as the low ability to process harvests and the lack of market understanding, which impacts the competitiveness of farmer groups in the market. Significant and interconnected information, technology, and policy input challenges are identified. These challenges include the weakness of systems and mechanisms for knowledge and technology transfer to farmer groups due to the tendency to limit the number of participants in socialization sessions, thereby reducing the effectiveness of information input intended for all members of farmer groups. Additionally, the problem of policy uncertainty, which tends to fluctuate, and the lack of government-farmer dialogue further complicates farmer groups' adaptability to various external challenges.

Acknowledgments

would like to state that this paper is based on independently funded and initiated desk study research conducted by the researcher.

References

Abimanyu, R. 2023. Keterkaitan Kebijakan Perhutanan Sosial dalam Upaya Penyelesaian Konflik Tenurial di Kawasan Hutan. *Wahana Forestra: Jurnal Kehutanan* 18(2): 1–12. DOI: 10.31849/forestra.v18i2.11704

Almaghfiroh, C. F., and Pujo, P. 2023. Analisis Kelembagaan Skema Izin Pemanfaatan Hutan Perhutanan Sosial pada Kawasan Hutan Lindung Gunung Rakutak Jawa Barat. *Wanamukti* 16(2): 76–94. DOI: 10.35138/wanamukti.v26iII.613

Alviya, I., Salaka, F. J., Muttaqin, M. Z., Nurfatriani, F., and Suryandari, E. 2020. Efektivitas Kebijakan Pendanaan Pembangunan Hutan Tanaman Rakyat (HTR). *Jurnal Analisis Kebijakan Kehutanan* 17(1): 53–73. DOI: 10.20886/jakk.2020.17.1

Andryansah, O., Nurrochmat, D. R., and Kosmaryandi, N. 2019. Model Efektivitas Implementasi Program Hutan Kemasyarakatan Berbasis Wisata Alam di Kabupaten Bangka Tengah. *Media Konservasi* 24(2): 124–133.

Anugrah, D., Muin, A. V. F., Irlan, I., Tomasina, M. A., Azila, N., Sirimorok, N., Dungga, N. E., and Alam, S. 2022. Injustice against Women in a Social Forestry Program: Case Studies from Two Indonesian Villages. *Forest and Society* 6(2): 723–741. DOI: 10.24259/fs.v6i2.20006

Astriyani, V., Fazriyas, F., and Nurmansah, R. 2023. *Analisis Kinerja Kelembagaan Kelompok Tani Hutan Penoban Lestari Skema Hutan Kemasyarakatan di Wilayah KPHP Tanjung Jabung Barat Unit XVI.* Universitas Jambi. Jambi, Indonesia.

Azizah, S. N., Priyanta, M., and Astriani, N. 2024. Konsep Kemitraan Kehutanan dalam Pengaturan Program Perhutanan Sosial di Kabupaten Cianjur untuk Mewujudkan Kesejahteraan Masyarakat. *Media Bina Ilmiah* 18(6): 1443–1456.

Banjade, M. R., Herawati, T., Liswanti, N., and Mwangi, E. 2017. *Reformasi Tenurial Hutan di Indonesia: Kapan? Apa? Mengapa?.* Info Brief. CIFOR 173. DOI: 10.17528/cifor/006557

Batalipu, A. H. S. M., Asysyifa, A., and Rezekiah, A. A. 2023. Kontribusi Usaha Perhutanan Sosial terhadap Pendapatan Anggota Kelompok Usaha Perhutanan Sosial (KUPS) di Desa Sungai Bakar Kabupaten Tanah Laut. *Jurnal Sylva Scienteae* 6(4): 567–575. DOI: 10.20527/jss.v6i4.9989

Bong, I. W., Moeliono, M., Wong, G. Y., and Brockhaus, M. 2019. What is Success? Gaps and Trade-Offs in Assessing the Performance of Traditional Social Forestry Systems in Indonesia. *Forest and Society* 3(1): 1–21. DOI: 10.24259/fs.v3i1.5184

Bratamihardja, M., Sunito, S., and Kartasubrata, J. 2005. *Forest Management in Java 1975–1999: Towards Collaborative Management.* ICRAFT Southeast Asia Working Paper No. 2005–1.

Budi, B., Kartodihardjo, H., Nugroho, B., and Mardiana, R. 2021. Implementation of Social Forestry Policy: A Review of Community Access. *Forest and Society* 5(1): 60–74DOI: 10.24259/fs.v5i1.9859

Dhiaulhaq, A., and McCarthy, J. F. 2020. Indigenous Rights and Agrarian Justice Framings in Forest Land Conflicts in Indonesia. *The Asia Pacific Journal of Anthropology* 21(1): 34–54. DOI: 10.1080/14442213.2019.1670243

Erbaugh, J. T. 2019. Responsibilization and Social Forestry in Indonesia. *Forest Policy and Economics* 109: 102019. DOI: 10.1016/j.forpol.2019.102019

Fatem, S. M. 2019. Connecting Social Forestry to Conservation Policies in Tanah Papua. *Forest and Society* 3(1): 141–147. DOI: 10.24259/fs.v3i1.5865

Fauzan, M. N. 2023. *Analisis Penanganan Konflik Tenurial Kawasan Hutan (Studi pada Balai Perhutanan Sosial dan Kemitraan Lingkungan Wilayah Sulawesi)*. Universitas Hasanuddin. Makassar, Indonesia.

Fisher, M. R., Moeliono, M., Mulyana, A., Yuliani, E. L., Adriadi, A., Judda, J., and Sahide, M. A. K. 2018. Assessing the New Social Forestry Project in Indonesia: Recognition, Livelihood and Conservation?. *International Forestry Review* 20(3): 346–361. DOI: 10.1505/146554818824063014

Friedman, R. S. 2020. *Managing Forests for Community, Conservation, and Social Equity: A Case Study of Social Forestry in Indonesia*. <https://espace.library.uq.edu.au/view/UQ:1ac1410>

Galudra, G. 2019. Focusing on Facilitation: Issues and Challenges of Capacity Development in Indonesia's Social Forestry Reforms. *Forest and Society* 3(1): 133–136. DOI: 10.24259/fs.v3i1.5995

Gunawan, H., Yeny, I., Karlina, E., Suharti, S., Murniati, Subarudi, Mulyanto, B., Ekawati, S., Garsetiasih, R., and Pratiwi. 2022. Integrating Social Forestry and Biodiversity Conservation in Indonesia. *Forests* 13(12): 2152. DOI: 10.3390/f13122152

Heripan, H., Taqwa, R., Priadi, D. P., Milantara, N., and Harbi, J. 2019. Implementation of Social Forestry Policy Around the Meranti Sungai Merah Protection Forest Area. *Sriwijaya Journal of Environment* 4(1): 42–51. DOI: 10.22135/sje.2019.4.1.42

Herrawan, H., Sirimorok, N., Nursaputra, M., Mas'ud, E. I., Faturachmat, F., Sadapotto, A., Supratman, S., Yusran, Y., and Sahide, M. A. K. 2022. Commoning the State Forest: Crafting Commons through an Indonesian Social Forestry Program. *Forest and Society* 6(1): 20–39. DOI: 10.24259/fs.v6i1.10680

Hum, W. M. 2022. An Overview to the History of Social Forestry in Overcoming Poverty and Forest Conservation in Java's Colonial Period. *Journal of Forest and Environmental Science* 38(1): 1–11. DOI: 10.7747/jfes.2022.38.1.1

Ismail, A. Y., and Adhya, I. 2021. Perberdayaan Kelompok Masyarakat melalui Ekplorasi Benih Pohon Hutan di Desa Karangsari Kabupaten Kuningan Jawa Barat. *Empowerment: Jurnal Pengabdian Masyarakat* 4(01): 34–41. DOI: 10.25134/empowerment.v4i01.4015

Kailola, J. 2024. Partisipasi Masyarakat Pasca Penetapan Program Perhutanan Sosial dalam Pengelolaan Hutan Lindung Gunung Hamiding di Kabupaten Halmahera Utara, Provinsi Maluku Utara. In: *Prosiding Seminar Nasional Pertanian* 2(1): 289–299.

Kamaluddin, A. K., and Tamrin, M. 2019. Pemberdayaan Masyarakat Berbasis Potensi Lokal melalui Skema Perhutanan Sosial di Area KPH Ternate–Tidore. *Techno: Jurnal Penelitian* 8(2): 308–317. DOI: 10.33387/tk.v8i2.1350

Kastanya, A., Tjoa, M., Mardiatmoko, G., Latumahina, F., Bone, I., Hendrik and Aponno. 2019. *Kajian Dampak Perhutanan Sosial Wilayah Maluku-Papua*. BPSKL Wilayah Maluku-Papua.

Kurniadi, R. 2020. Social Forestry for Improving Environmental Quality and Community Welfare: A Case Study of Pantar Island, Alor, East Nusa Tenggara Province. *IOP Conference Series: Earth and Environmental Science* 487(1): 012013. DOI: 10.1088/1755-1315/487/1/012013

Kusuma, A. F., Sahide, M. A. K., Purwanto, R. H., Ismariana, E., Santoso, W. B., Wulandari, E., and Maryudi, A. 2023. Emergent Institutional Issues from New Tenure Reforms and Social-Forestry Initiatives in Indonesia: Notes from the Field. *Forest and Society* 7(2): 450–466. DOI: 10.24259/fs.v7i2.28319

Latif, I. R., Hajad, V., Handayani, S. W., Sudarman, S., and Aziz, C. I. 2024. Sustainable Forests, Divided Power: Navigating the Complexities of Customary Forest Resource of Management in Aceh Jaya. *Journal of Governance and Social Policy* 5(1): 46–62. DOI: 10.24815/gaspol.v5i1.36219

Lestari, S., Premono, B. T., and Winarno, B. 2019. Local People Awareness Towards Social Forestry Program: A Case Study of Ogan Komering Ulu District, South Sumatra Province, Indonesia. *IOP Conference Series: Earth and Environmental Science* 308(1): 012075. DOI: 10.1088/1755-1315/308/1/012075

Maring, P. 2022. Conflict Transformation and Collaboration in Developing Social Forestry in Flores, Indonesia. *Forest and Society* 6(1 SE-): 40–66. DOI: 10.24259/fs.v6i1.13199

Maryudi, A., Sahide, M. A. K., Daulay, M. H., Yuniati, D., Syafitri, W., Sadiyo, S., and Fisher, M. R. 2022. Holding Social Forestry Hostage in Indonesia: Contested Bureaucracy Mandates and Potential Escape Pathways. *Environmental Science and Policy* 128 142–153. DOI: 10.1016/j.envsci.2021.11.013

Maskun, M., Achmad, A., Naswar, N., Assidiq, H., and Nurhaliza Bachril, S. 2020. Oil Palm and Social Forestry Policies in Indonesia: Legal Literature Review. *Psychology and Education* 57(9): 510–516

Moeliono, M., Sahide, M. A. K., Bong, I. W., and Dwisatrio, B. 2023. *Social Forestry in Indonesia: Fragmented Values, Progress, Contradictions, and Opportunities*. In: Nikolakis, W., and Moura da Veiga, R. (eds) Social Value, Climate Change and Environmental Stewardship: Insights from Theory and Practice. Springer International Publishing. DOI: 10.1007/978-3-031-23145-2_8

Moeliono, M., Thuy, P. T., Waty Bong, I., Wong, G. Y., and Brockhaus, M. 2017. Social Forestry - Why and for Whom? A Comparison of Policies in Vietnam and Indonesia. *Forest and Society* 1(2 SE-): 78–97. DOI: 10.24259/fs.v1i2.2484

Muhdar, M., Dirawan, G. D., and Wiharto, M. 2018. Gambaran Pengelolaan (Hutan Kemasyarakatan) HKm di Indonesia. *UNM Environmental Journals* 2(1): 18–23. DOI: 10.26858/uej.v2i1.9160

Mukhtar, M., and Jannah, W. 2018. Program Hutan Kemasyarakatan Berbasis Kearifan Lokal; Studi Kasus di Kawasan Hutan Lindung Sesaot Lombok Barat. *JISIP (Jurnal Ilmu Sosial dan Pendidikan)* 2(1): 343–357. DOI: 10.58258/jisip.v2i1.612

Mulyani, L. 2020. *Reforming Group Legal Personhood in Indonesian Land Law: Towards Equitable Land Rights for Traditional Customary Communities*. The University of Melbourne. Melbourne, Australia.

Mutaqin, D., Wahyuni, I., and Rahayu, N. 2022. Analisis Kegiatan Perhutanan Sosial dalam Peningkatan Kualitas Lingkungan dan Peningkatan Ekonomi Masyarakat Pasca Pandemi Covid-19. *Bappenas Working Papers* 5(2): 159–175. DOI: 10.47266/bwp.v5i2.135

Nasution, M. S., Tua, H., and Zulkamaini, Z. 2024. Implementation of Social Forestry Policy–Can it Reduce Economic Inequality in Sustainable Management of Forest Areas?. *E3S Web of Conferences* 506: 5005. DOI: 10.1051/e3sconf/202450605005

Neta, Y., Kaskoyo, H., and Kagungan, D. 2019. *Buku Ajar Hutan Kemasyarakatan "Hutan Lestari Masyarakat Sejahtera Mandiri".* Pusaka Media, Surabaya.

Nugraheni, B. L. Y., Chrismastuti, A. A., Nugroho, R. S. A., Prawoto, H., and Teresia, A. 2022. Implementasi Sistem Tata Kelola dan E-Supply Chain untuk Peningkatan Kapasitas Perhutanan Sosial. *Warta LPM* 25(3): 334–345. DOI: 10.23917/warta.v25i3.1029

Nugroho, R. S. A., Nugraheni, B. L. Y., and Chrismastuti, A. A. 2022. *Pengembangan Teknologi Tata Kelola Keuangan dan E-Koperasi untuk Peningkatan Kapasitas Petani Perhutanan Sosial.* <http://repository.unika.ac.id/id/eprint/30796>

Nugroho, S. S. 2018. Legalitas Perhutanan Sosial: Sebuah Harapan Menuju Kemakmuran Masyarakat Kawasan Hutan. *Jurnal Yustisia Merdeka* 3(2).

Octavia, D., Suharti, S., Murniati, Dharmawan, I. W. S., Nugroho, H. Y. S. H., Supriyanto, B., Rohadi, D., Njurumana, G. N., Yeny, I., and Hani, A. 2022. Mainstreaming Smart Agroforestry for Social Forestry Implementation to Support Sustainable Development Goals in Indonesia: A Review. *Sustainability* 14(15): 9313. DOI: 10.3390/su14159313

Pambudi, A. 2023. Capaian, Tantangan, Implementasi, dan Rekomendasi Kebijakan Perhutanan Sosial di Indonesia. *Jurnal Kebijakan Pemerintahan* 6(2). DOI: 10.33701/jkp.v6i2.3551

PKPS KLHK. 2024. *Perhutanan Sosial: Menyelesaikan Konflik Tenurial untuk Kesejahteraan Bersama.* Direktorat Jenderal Perhutanan Sosial dan Kemitraan Lingkungan, Kementerian Lingkungan Hidup dan Kehutanan. <https://pkps.menlhk.go.id/> (May. 6, 2024)

PPID KHLK. 2018. *Atasi Konflik Lahan, Presiden Joko Widodo Serahkan SK Perhutanan Sosial.* Biro Hubungan Masyarakat Kementerian Lingkungan Hidup dan Kehutanan. <https://ppid.menlhk.go.id/> (March. 9, 2024)

PPID KLHK. 2023. *Dari Perhutanan Sosial, untuk Hutan Lestari dan Masyarakat Sejahtera.* Biro Hubungan Masyarakat Kementerian Lingkungan Hidup dan Kehutanan. <https://ppid.menlhk.go.id/> (December. 28, 2024)

Pratama, A. A. 2019. Lessons Learned from Social Forestry Policy in Java Forest: Shaping the Way Forward for New Forest Status in Ex-Perhutani Forest Area. *Jurnal Ilmu Kehutanan* 13(2): 127–136. DOI: 10.22146/jik.52092

Prihatin, P., and Wicaksono, A. 2020. The Conflict in Indonesia's Forestry Sector: A Case Study of a Community Conflict with Company Industrial Plantation Forest (HTI) in Pelalawan Riau Province. *Proceedings of the 1st International Conference on Environmental Governance* ICONEG.

Purwanto, E. 2017. *Challenges of the Social Forestry Program in Indonesia.* Tropenbos Indonesia. Bogor, Indonesia.

Purwanto, Yuliana, C. I., Hidayat, S., Yaumidin, U. K., Nadjib, M., Sambodo, M. T., Hidayatina, A., Handoyo, F. W., and Suryanto, J. 2021. Social Innovation in Social Forestry: Seeking Better Management for Sustainable Forest in Indonesia. *IOP Conference Series: Earth and Environmental Science* 917(1): 012010. DOI: 10.1088/1755-1315/917/1/012010

Rachmawan, D., Seda, F. S. S. E., and Siburian, R. 2022. The Social Forestry in Forest Farmer Group Gunung Gajah Lestari, Pemalang, Indonesia: Encouragement Hope beyond the Limited Choice. *Proceedings of the 2nd International Conference on Rural Socio-Economic Transformation: Agrarian, Ecology, Communication and Community Development Perspectives* RUSET. DOI: 10.4108/eai.14-9-2021.2317169

Ragandhi, A., Hadna, A. H., Setiadi, S., and Maryudi, A. 2021. Why do Greater Forest Tenure Rights Not Enthuse Local Communities? An Early Observation on the New Community

Forestry Scheme in State Forests in Indonesia. *Forest and Society* 5(1): 159–166. DOI: 10.24259/fs.v5i1.11723

Rahayu, S., Laraswati, D., Permadi, D. B., Sahide, M. A. K., and Maryudi, A. 2023. Only a Noise? The Role of Non-Governmental Organizations in the Policy Processes of a New Social Forestry Model in Indonesia. *Small-Scale Forestry* 22(2): 253–270. DOI: 10.1007/s11842-022-09525-9

Rakatama, A., and Pandit, R. 2020. Reviewing Social Forestry Schemes in Indonesia: Opportunities and Challenges. *Forest Policy and Economics* 111: 102052. DOI: 10.1016/j.forpol.2019.102052

Ramadhan, R., Dhavio, M., Hanafi, R., Daulay, M. H., and Prakosa, G. G. 2023. Transformation of Forest Governance: Policy Concepts and Actor Changes in Social Forestry Program Implementation in Indonesia. *International Forestry Review* 25(1): 92–104. DOI: 10.1505/146554823836838673

Ramadhan, R., Syah, D. F., and Waskhito, N. T. 2022. Effectiveness and Institutional Conditions in Social Forestry Program: Case Study of Forest Village Community Institution (LMDH) Sumber Makmur, Forest Management Unit (KPH) Malang. *Jurnal Sylva Lestari* 10(1): 141–154. DOI: 10.23960/jsl.v10i1.525

Randolph, J. 2019. A Guide to Writing the Dissertation Literature Review. *Practical Assessment, Research, and Evaluation* 14(1): 13. DOI: 10.7275/b0az-8t74

Rif'an, M. 2020. Dilema Kebijakan Pengelolaan Hutan di Indonesia. *Jurnal Hukum Lex Generalis* 1(8): 40–47. DOI: 10.56370/jhlg.v1i8.216

Rima, S. 2023. *Analisis Efektivitas Program Kerja di Hutan Kemasyarakatan Ranah Sako Desa Tamiai Kecamatan Batang Merangin Wilayah Binaan UPTD KPHP Unit I Kerinci*. Universitas Jambi. Jambi, Indonesia.

Riyadin, A., Tamrin, M., Baguna, F. L., Tamnge, F., and Ashari, R. 2023. Pembibitan Pohon Kelompok Petani Hutan di Desa Tobololo. *Jurnal Pengabdian Masyarakat Hutan* 1(2): 62–66. DOI: 10.33387/kehutanan.v1i2.129

Safitri, M. 2022. *Social Forestry and Land Tenure Conflicts in Indonesia*. In: Bulkan, J., Palmer, J., Larson, A.M., and Hobley, M. (eds) Routledge Handbook of Community Forestry. London. DOI: 10.4324/9780367488710

Sahide, M. A. K., Fisher, M. R., Erbaugh, J. T., Intarini, D., Dharmiasih, W., Makmur, M., Faturachmat, F., Verheijen, B., and 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: 102290. DOI: 10.1016/j.forpol.2020.102290

Samnani, S. S., Vaska, M., Ahmed, S., and Turin, T. C. 2017. Review Typology: The Basic Types of Reviews for Synthesizing Evidence for the Purpose of Knowledge Translation. *Journal of the College of Physicians and Surgeons-Pakistan: JCPSP* 27(10): 635–641.

Sanudin, Widiyanto, A., Fauziyah, E., and Sundawati, L. 2023. Agroforestry Farmers' Resilience in Social Forestry and Private Forest Programs during the COVID-19 Pandemic in Indonesia. *Forest Science and Technology* 19(3): 197–209. DOI: 10.1080/21580103.2023.2222156

Satriadi, T., Aryadi, M., and Fauzi, H. 2020. Persepsi dan Sikap Kelompok Tani Hutan Kemasyarakatan Tebing Siring terhadap Program Kelompok Usaha Perhutanan Sosial Lebah Madu. *Jurnal Hutan Tropis* 8(2): 9. DOI: 10.20527/jht.v8i2.9050

Septiana, R. M. 2020. Benefit Sharing Allocation on Community Collaborative Forest Management (PHBM) in Java, Indonesia. *Jurnal Silva Tropika* 4(1): 206–221. DOI: 10.22437/jsilvtrop.v4i1.8384

Setiajiati, F., Karyaatmadja, B., Sutedja, I., Kuswondho, H., Satria, P., Sejati, and Maharani, R. S. 2019. Lesson Learned from Social Forestry Practice in a Forest and Climate Change Project in Kalimantan, Indonesia. *IOP Conference Series: Earth and Environmental Science* 363(1): 012001. DOI: 10.1088/1755-1315/363/1/012001

Siscawati, M. 2013. *Social Movements and Scientific Forestry: Examining the Community Forestry Movement in Indonesia*. University of Washington. Seattle, US.

Siscawati, M., Banjade, M. R., Liswanti, N., Herawati, T., Mwangi, E., Wulandari, C., Tjoa, M., and Silaya, T. 2017. *Overview of Forest Tenure Reforms in Indonesia*. Center for International Forestry Research (CIFOR). Jawa Barat, Indonesia.

Snyder, H. 2019. Literature Review as a Research Methodology: An Overview and Guidelines. *Journal of Business Research* 104 333–339. DOI: 10.1016/j.jbusres.2019.07.039

Statistik KLHK. 2022. *Statistik 2022 Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia*. Kementerian Lingkungan Hidup dan Kehutanan, Indonesia.

Suharjito, D., and Wulandari, C. 2019. A Reflection of Social Forestry in 2019: Towards Inclusive and Collaborative Government Approaches. *Forest and Society* 3(1): 137–140. DOI: 10.24259/fs.v3i1.6099

Supriyanto, H., Sudarmo, S., and Setyowati, K. 2021. Implementation of Social Forestry in Perum Perhutani KPH Telawa. *Jurnal Analisis Kebijakan Kehutanan* 18(1): 31–43. DOI: 10.20886/jakk.2021.18.1.31-43

Susanti, M., Purnaweni, H., and Kismartini, K. 2018. Analisis Program Hutan Kemasyarakatan (HKm) di Desa Dara Kunci Kabupaten Lombok Timur Provinsi NTB. *Jurnal Ilmiah Tata Sejuta STIA Mataram* 4(1): 1–11. DOI: 10.32666/tatasejuta.v4i1.48

Suswadi, Irawan, N. C., and Esthi, R. B. 2023. Fostering Community Participation: The Role of Forestry Extension Officers in Maximizing Social Capital for National Park Conservation. *Jurnal Sylva Lestari* 12(1): 54–75. DOI: 10.23960/jsl.v12i1.752

Tajuddin, T., Supratman, S., Salman, D., and Yusran, Y. 2019. Bridging Social Forestry and Forest Management Units: Juxtaposing Policy Imaginaries with Implementation Practices in a Case from Sulawesi. *Forest and Society* 3(1 SE-): 97–113. DOI: 10.24259/fs.v3i1.6049

Tangngareng, T., and Ridha, M. 2016. Pelaksanaan Pengelolaan Hutan Kemasyarakatan (HKM) di Desa Bukit Indah, Bulukumba: Batasan dan Kemungkinan. *BHUMI: Jurnal Agraria dan Pertanahan* 2(2): 194–208. DOI: 10.31292/jb.v2i2.71

Tarigan, A. P. P., and Karuniasa, M. 2021. Analysis of Agrarian Conflict Resolution through Social Forestry Scheme. *IOP Conference Series: Earth and Environmental Science* 716(1): 012082. DOI: 10.1088/1755-1315/716/1/012082

Travis, D. 2016. *Desk Research: The What, Why and How*. <https://www.userfocus.co.uk/articles/>

Umar, S., Yodo, S., Narawi, M., Pribadi, H., Samudin, S., and Prianto, W. 2021. Community Readiness Model for Social Forestry in Central Sulawesi, Indonesia. *IOP Conference Series: Earth and Environmental Science* 713(1): 012010. DOI: 10.1088/1755-1315/713/1/012010

Utomo, M. M. B., Widiyanto, A., Sudomo, A., Palmolina, M., and Pieter, L. A. G. 2023. Challenges to Achieving the Social Forestry Goal of Alleviating Poverty in Eastern

Indonesia. *IOP Conference Series: Earth and Environmental Science* 1266(1): 12026. DOI: 10.1088/1755-1315/1266/1/012026

Veriasa, T., Maulana, S., and Hariyadi, C. 2021. *Perhutanan Sosial, Asa Menjaga Sumber Daya Bersama: Kumpulan Studi dan Pembelajaran di Indonesia*. IPB Press, Bogor.

Wartiningsih, Nuswardani, N., Febrian, and Pustaka. 2020. *Model Optimalisasi Penggunaan Dana Desa melalui Pemenuhan Hak Kultural Masyarakat Desa Hutan*. Scopindo Media Pustaka, Jawa Timur.

Wiyanto, A. 2022. *Hutan Manusia dan Dinamika Pengelolaannya*. Kementerian Lingkungan Hidup dan Kehutanan, Indonesia.

Wong, G. Y., Moeliono, M., Bong, I. W., Pham, T. T., Sahide, M. A. K., Naito, D., and Brockhaus, M. 2020. Social Forestry in Southeast Asia: Evolving Interests, Discourses and the Many Notions of Equity. *Geoforum* 117 246–258. DOI: 10.1016/j.geoforum.2020.10.010

Wulandari, C., Budiono, P., and Ekayani, M. 2019. Impacts of the New Decentralization Law 23/2014 to the Implementation of Community Based Forest Management in Lampung Province, Indonesia. *IOP Conference Series: Earth and Environmental Science* 285(1): 012006. DOI: 10.1088/1755-1315/285/1/012006

Wulandari, C., Kurniasari, N., Bakri, S., Sari Dewi, B., Safe'i, R., and Riyanto. 2024. Perception of Forest Farmer Groups as a Mediating Variable in Achieving Goals as Members of the Forestry Partnership. *Jurnal Sylva Lestari* 12(2): 401–417. DOI: 10.23960/jsl.v12i2.867

Wulandari, C., and Kurniasih, H. 2019. Community Preferences for Social Forestry Facilitation Programming in Lampung, Indonesia. *Journal of Forestry and Society* 3(1): 114–132. DOI: 10.24259/fs.v3i1.6026

Zakaria, Y., Wiyono, E., Firdaus, A. Y., Suharjito, D., Salam, R., Muhsi, M. A., Suwito, A., and Uliyah, L. 2018. *Perhutanan Sosial: Dari Slogan Menjadi Program*. Naskah Akademik Reformulasi Kebijakan Perhutanan Sosial. Sekretariat Reforma Agraria dan Perhutanan Sosial. Jakarta.