

Agroforestry: A Rehabilitation Strategy for the Wan Abdul Rachman Forest Park in Lampung

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Abstract

The Wan Abdul Rachman Grand Forest Park (Tahura WAR) in Lampung is a vital conservation area covering 22,245.50 hectares that functions as a life support system, water management, and erosion control. However, anthropogenic pressures and land degradation require effective and sustainable rehabilitation strategies. This study aims to analyze the application of agroforestry in the social forestry program in Tahura WAR and formulate a rehabilitation strategy that integrates ecological, social, and economic aspects. The study used a descriptive qualitative approach supported by quantitative data and was conducted in Tahura WAR for three months. Data were obtained through observation, in-depth interviews with Forest Farmer Groups (KTH), and document review. The results indicate that rehabilitation through an agroforestry system is an effective strategy. This model combines multipurpose hardwood trees (such as durian and petai) with plantation crops (coffee, cocoa) and annual crops (corn, chili), which serve dual functions as both conservation and a source of community income. The implementation of agroforestry aligns with Chambers' theoretical principles, which emphasize the importance of participation and utilization of local knowledge. Community participation has proven to be key to success, with active involvement in planting, management, and decision-making distinguishing it from conventional top-down reforestation. Agroforestry within a social forestry framework is a sustainable rehabilitation strategy that successfully bridges the conflicting interests between ecological conservation and community economic needs. Successful implementation requires a paradigm shift from prohibition-based conservation to participation-based conservation through KTH empowerment. This strategy is recommended for the holistic restoration of the Tahura WAR (Tahura WAR).

Keywords: Agroforestry, Forest Rehabilitation, Tahura Wan Abdul Rachman, Social Forestry, Community Participation

Introduction*Background*

The Wan Abdul Rachman Grand Forest Park (Tahura WAR) is one of the most important conservation areas in Lampung Province, covering an area of 22,245.50 hectares. This area serves as a life support system protection area and water management for the surrounding area, particularly Bandar Lampung City. Ecologically, the Tahura plays a vital role in maintaining environmental balance, preventing flooding, and reducing soil erosion in the hilly areas that form part of the Way Ratai and Way Sekampung Watersheds (DAS). The management of the Tahura WAR is directed towards fulfilling three main functions: conservation, education and research, and nature tourism and recreation.

However, over the past two decades, the Wan Abdul Rachman Tahura has experienced significant ecological pressure. Land conversion to coffee and seasonal crops, illegal logging, and encroachment have resulted in significant environmental degradation. A 2021 report from the Lampung Provincial Forestry Service indicates that more than 60% of the Tahura area has experienced a decline in forest cover due to human activities. As a result, the area's ecological function is diminished, biodiversity is reduced, and environmental carrying capacity is weakened.

On the other hand, socio-economic factors in the surrounding community are also a major cause of the area's degradation. Most residents around the Tahura (National Park) depend on agriculture and plantations for their livelihoods, particularly coffee and cassava. Limited access to land outside the forest area forces people to clear land within the Tahura. This situation creates a dilemma: on the one hand, the government is obliged to preserve the forest, but on the other, the community's economic needs must be met. This tension between conservation interests and economic needs is at the heart of the problem.

In response to this problem, the government launched the social forestry program as a national priority agenda in 2016. This program provides legal access to communities to manage forest areas with the aim of improving their welfare without sacrificing forest sustainability. Through this scheme, communities are given the opportunity to manage forest areas for a specified period, with the obligation to preserve and restore the existing ecosystem. According to Pambudi (2023), the implementation of social forestry in various regions has shown positive results in reducing tenure conflicts and increasing community incomes, although challenges related to institutional capacity, market support, and technical assistance remain significant.

In the context of the Wan Abdul Rachman Forest Park (Tahura Wan Abdul Rachman), one approach considered effective for restoring ecological functions while providing economic benefits is agroforestry. Agroforestry is a land management system that combines forestry plants with agricultural crops and/or livestock within a single land unit. This pattern allows for the dual benefits of environmental conservation and increased community income. Research by Manurung et al. (2023) in the Batutegi Forest Management Unit (KPH Batutegi), Lampung, demonstrated that agroforestry contributes significantly to farmer incomes while simultaneously improving critical land conditions. This demonstrates the significant potential for agroforestry implementation in social forestry areas, including in the Tahura (Tahura).

Furthermore, agroforestry implementation cannot be viewed solely from a technical perspective. Experience in various locations demonstrates that the success of forest rehabilitation programs is crucially determined by the level of community participation. Communities should not be merely objects but rather the primary subjects of development. In this regard, Chambers' theory of participatory development is highly relevant as a conceptual foundation. Chambers (1983; 1994) emphasized that development will be successful if local communities are actively involved from the planning, implementation, and evaluation stages. He also emphasized the importance of respecting local knowledge, empowering marginalized groups, and equitable distribution of benefits.

This participatory approach aligns with the spirit of social forestry, which positions communities as the primary managers of forests. Therefore, the rehabilitation of the Wan Abdul Rachman Forest Park (Tahura Wan Abdul Rachman) through agroforestry is not merely a technical effort of planting trees, but rather a socio-ecological strategy that integrates conservation, economic empowerment, and social justice. Therefore, this study is crucial to explore the Tahura rehabilitation strategy through agroforestry using Chambers' theoretical approach, in order to achieve a balance between ecological sustainability and the socio-economic well-being of the surrounding community.

Research Questions

This research focuses on two main questions:

1. How can the application of agroforestry in forest rehabilitation in the Wan Abdul Rachman Forest Park (Tahura Wan Abdul Rachman) be optimized through the principles of Chambers' theory (community participation and local knowledge)?
2. What is the most effective forest rehabilitation strategy for the Wan Abdul Rachman Forest Park based on an analysis of the ecological and socio-economic conditions of the local community?

Research Objectives

This research aims to:

1. Analyze the application of agroforestry in the social forestry program in the Wan Abdul Rachman Forest Park, emphasizing the principles of Chambers' theory, particularly participation and the utilization of local knowledge.
2. Formulate an effective and sustainable forest rehabilitation strategy that integrates the ecological, social, and economic aspects of the communities surrounding the Forest Park.

Literature Review

Forest Rehabilitation and the Function of the Forest Park

Forest rehabilitation is an important instrument in sustainable forestry development, particularly in Indonesia, which faces a high rate of deforestation. The concept of rehabilitation is no longer understood simply as tree planting, but rather encompasses efforts to restore ecological functions, improve soil quality, reduce erosion, increase hydrological capacity, and restore biodiversity. Kusmana (2017) emphasizes that rehabilitation must be viewed as a series of ongoing processes involving social, economic, and institutional dimensions. This means that rehabilitation that ignores local communities is likely to fail due to a lack of long-term support from land users.

Grand Forest Parks play a strategic role because they serve not only as flora and fauna conservation areas but also as educational, research, and recreational facilities. In Lampung Province, the 22,245.50-hectare Tahura WAR (Tahura WAR) serves as a buffer zone for watersheds and a source of biodiversity. However, various studies have noted damage to this area due to encroachment, illegal logging, and conversion to coffee plantations and other agricultural land (Prasetyo et al., 2019). This condition has resulted in a decline in hydrological function, a reduction in carbon stocks, and an increased risk of landslides.

Therefore, the Tahura WAR rehabilitation strategy must integrate ecological and social aspects. Purely technical approaches such as monoculture reforestation have proven less successful, while approaches that integrate the role of communities, such as agroforestry in social forestry programs, are more adaptive in addressing the complexity of rehabilitation problems.

Agroforestry as a Rehabilitation Strategy

Agroforestry is defined as a land-use system that integrates trees with agricultural crops or livestock within a single management unit. This system has long been practiced by traditional communities, but is now a modern solution to address environmental degradation. Leakey (2014) calls agroforestry a win-win solution because it maintains ecological sustainability while providing economic benefits.

Compared to monoculture reforestation, agroforestry is superior because it produces both short- and long-term benefits. For example, farmers can harvest crops quickly while waiting for forest trees to grow. Research by Mulyoutami et al. (2020) shows that agroforestry improves soil fertility, reduces erosion by up to 40%, and enriches biodiversity due to its more complex vegetation structure. In Lampung, coffee agroforestry systems have developed widely as a form of community adaptation to the ban on forest encroachment. Research by Roshetko et al. (2017) found that coffee agroforestry not only increases land productivity but also improves forest cover through shade systems.

Agroforestry in the context of the Tahura WAR rehabilitation can be seen as a multi-layered management system, where hardwood trees maintain ecological functions, fruit trees enhance economic diversification, and annual crops provide food. This combination enables communities to derive direct benefits while maintaining forest sustainability.

Social Forestry in Indonesia

The Social Forestry Program is a national policy that grants communities legal access to manage forest areas. Through the Community Forestry, Village Forest, Community Plantation Forest, Forestry Partnership, and Customary Forest schemes, communities are granted long-term management rights oriented toward equitable access and sustainability. The Ministry of Environment and Forestry (2019) noted that since 2016, the social forestry target has reached 12.7 million hectares, although achievements on the ground still face numerous challenges.

In Lampung, Social Forestry plays a crucial role in reducing tenure conflicts. Fisher et al. (2018) found that community participation in social forestry fosters a sense of ownership, thereby reducing the potential for illegal encroachment. However, the program's success is heavily influenced by local institutional capacity, access to funding, and market connectivity.

For Tahura WAR, social forestry can provide a balance between conservation and community economic needs. Agroforestry developed within the HKm scheme has proven to be more acceptable to the community due to its flexibility and adaptability. This demonstrates that social forestry is not simply an access policy but also an institutional framework that requires active community involvement.

Chambers' Theoretical Approach to Agroforestry

Robert Chambers (1994), in his work "Rural Development: Putting the Last First," criticized the conventional top-down development model. He emphasized the need to position small communities, often victims of development, as the primary actors in every intervention. Chambers' theory is based on the principles of participation, pro-poor groups, a reversal of the development paradigm, and recognition of local wisdom.

In the context of agroforestry for forest rehabilitation, Chambers' theory serves as an important foundation. First, community participation requires farmers to be involved from cropping pattern planning, commodity selection, and monitoring. Second, pro-poor groups ensure that the benefits of agroforestry are enjoyed not only by local elites but also by vulnerable groups. Third, the reversal from top-down to bottom-up emphasizes that communities are not merely policy recipients but also key decision-makers. Fourth, utilizing local wisdom is crucial because many traditional agroforestry practices have proven adaptive and sustainable.

The application of Chambers' theory to the Tahura WAR (Tahura WAR) means that rehabilitation should not only focus on ecological indicators but also create social justice. For example, a rehabilitation strategy that integrates coffee, durian, and hardwoods must consider community needs, market access, and land availability. Thus, Chambers' theory provides a participatory framework that bridges conservation and welfare goals.

Previous Research

Hidayat et al. (2020)

Hidayat and his team studied a coffee agroforestry system in West Lampung. This study showed that agroforestry increased farmers' incomes by up to 25% compared to monoculture. In the short term, farmers benefited from coffee, while in the long term, they benefited from timber and fruit trees. Furthermore, this study revealed that agroforestry can reduce deforestation rates. This is because farmers are no longer encouraged to clear new forests but instead optimize existing land. This research confirms that a participatory approach is more effective than a prohibition policy alone. Its relevance to Tahura WAR is that agroforestry can be a practical solution for coffee-dependent communities. However, without institutional support, its results will be limited. Therefore, Chambers' principles of participation need to be reinforced in local policies.

Pramono & Kartodihardjo (2021)

This study highlights the implementation of social forestry in Java, including Lampung. They found that the program's success is largely determined by the extent to which communities are involved in decision-making. Schemes that do not provide space for participation actually give rise to new conflicts. This study also revealed that strengthening local institutions and access to markets are key to the sustainability of social forestry. Programs that only provide

legal access without technical assistance often fail to improve community welfare. In the context of Tahura WAR, this study is relevant because it demonstrates the need to integrate agroforestry with local institutions. Chambers' theory can serve as a foundation for ensuring that communities are not merely beneficiaries, but also the primary drivers of the rehabilitation process.

Sari et al. (2022)

Sari and her team studied cocoa-based agroforestry in Sumatra. Their results showed that agroforestry increases bird and insect biodiversity, which are important indicators of ecosystem health. Furthermore, agroforestry also improves household economic resilience. Farmers rely not only on cocoa but also on timber and fruit. This strengthens their resilience to commodity price fluctuations. Its relevance to the WAR Forest Reserve (Tahura WAR) is that agroforestry can serve a dual purpose: improving ecology and strengthening the local economy. The Chambers Principle ensures that planning and distribution of benefits are equitable.

Utomo et al. (2023)

This study highlights the implementation of agroforestry in the WAR Forest Reserve (Tahura WAR). The results show improvements in vegetation cover thanks to the combination of coffee, durian, and sengon. However, the main challenges remain tenurial conflicts and the weak institutional capacity of forest farmer groups. Utomo et al. also emphasize the importance of long-term mentoring. Agroforestry is not only about planting, but also about maintenance, marketing, and institutional management. Without assistance, communities are vulnerable to reverting to short-term exploitation patterns. This research demonstrates the relevance of Chambers' theory: community participation must be increased, institutions strengthened, and strategies based on local needs prioritized for rehabilitation to be effective.

Research Methodology

Research Type and Approach

This research uses a descriptive qualitative approach supported by quantitative data. The qualitative approach was chosen because the research focuses on exploring social dynamics, community participation, and the implementation of Chambers' theory in the context of agroforestry in the Wan Abdul Rachman Forest Park (Tahura). Meanwhile, a quantitative approach is used to support the analysis with numerical data, such as agroforestry land area, crop productivity, and community income levels. This descriptive qualitative methodology is relevant because it allows researchers to understand social realities in depth, particularly the aspect of community participation, which is at the core of Chambers' theory. Chambers (1997) emphasized that participatory development can only be understood contextually, so exploration through interviews, observations, and group discussions is essential.

Research Location and Timeline

The research location was selected at the Wan Abdul Rachman Forest Park (Tahura Wan Abdul Rachman), Lampung Province, a conservation area covering 22,249 hectares. This area was chosen because it represents the complexity of forest rehabilitation issues in Indonesia (land use conflicts, ecological degradation, and socio-economic pressures). It is one of the priority locations for social forestry in Lampung, with the presence of forest farmer groups

(KTH) managing agroforestry, and varying agroforestry implementations ranging from small-scale households to organized groups. The research period was planned for three months, starting with the preparation phase, followed by two months of field data collection, and one month of data analysis and report preparation.

Data Sources and Informants

The data sources for this study are divided into two categories: primary and secondary data: 1. Primary Data, conducted through in-depth interviews with KTH members, community leaders, and Tahura WAR managers, Focus Group Discussions (FGDs) with forest farmers to understand agroforestry practices and barriers to participation, and direct field observations of ecological conditions, cropping patterns, and community economic activities. 2. Secondary Data, using official Social Forestry documents from the Ministry of Environment and Forestry, data on agroforestry area, productivity, and non-timber forest products from the Lampung Provincial Forestry Service, and journals, research reports, and academic documents related to agroforestry, forest rehabilitation, and Chambers' theory.

Research informants were determined using a purposive sampling technique, selecting them based on their direct involvement in the agroforestry program in the Tahura (forest park). Key informants consisted of seven active KTH members, three Tahura managers, two community leaders, and one NGO.

Data Collection and Analysis Techniques

Data collection techniques were conducted through the following methods: in-depth interviews, focus group discussions (FGDs), participant observation, and documentation studies. Data analysis was conducted using two approaches: qualitative analysis and descriptive quantitative analysis.

Chambers' Theory Approach in Analysis

Chambers' theory of participation was used as the primary analytical framework. Chambers emphasized that development should not be top-down, but rather prioritize knowledge from below, or local knowledge. In the context of this research, the application of Chambers' theory will focus on three aspects: community participation, redistribution of benefits, and contextualization of local knowledge.

Results and Discussion

Overview of the Research Site

Wan Abdul Rachman Grand Forest Park (Tahura WAR) is an important conservation area in Lampung Province, serving as a protected area, conserving biodiversity, and providing environmental services such as water resources, carbon sequestration, and microclimate control. Tahura WAR covers an area of 22,245.50 hectares, spanning Bandar Lampung City and Pesawaran Regency.

Ecologically, this area serves as a buffer zone for large watersheds (DAS) such as Way Ratai and Way Sekampung. However, pressure from human activities such as land clearing for agriculture, plantations, and settlements has led to significant forest degradation (Rahman et al., 2021). Data from the Lampung Provincial Forestry Service (2023) shows that

approximately 40% of the Tahura area has experienced land cover changes, from forest to open land, scrubland, and mixed gardens.

From a social perspective, approximately 8,000 families live around the Tahura WAR area, most of whom depend on forest resources for their livelihoods. The introduction of the social forestry program since 2016 has provided legal access for communities to manage forests through conservation partnership schemes, community forests, and village forests. In this context, agroforestry has become a widely developed model because it is considered capable of combining ecological and economic interests.

Field Findings

Ecological Condition of the Forest Park (Tahura)

Observations indicate that the ecological conditions of the Forest Park (Tahura WAR) vary. In some blocks, secondary forest stands with relatively high tree diversity remain, while in others, monoculture crops such as coffee and corn dominate. This condition indicates a shift in the area's ecological function (Lestari & Putra, 2022). The most common agroforestry plant species are perennials such as durian, petai, jengkol (jengkol), candlenut; plantation crops such as coffee, rubber, and cocoa; and annual crops such as corn and chili peppers. The emerging agroforestry model is agrisilviculture, combining agricultural crops with forest trees. However, management patterns are still heavily influenced by individual farmer preferences rather than a collective plan.

Community Participation

Interviews with forest farmer groups (KTH) revealed varying levels of community participation. Some members are actively involved in tree planting and tree maintenance, while others tend to focus on short-term crops that yield quick results. According to Chambers (1994), the level of community participation is often determined by the level of direct interest and benefits gained. Factors driving community participation include legal access, direct economic benefits, and support from external institutions. However, inhibiting factors are also quite dominant, namely limited capital, minimal technical assistance, and low ecological awareness among some community members.

The results of a survey of 20 respondents who are members of forest farmer groups show varying levels of participation.

Table 4.1

Level of Community Participation in Agroforestry

Level of Participation	Percentage Respondents (%)	Design of Participation
High	38	Attends KTH meeting, participates in forest patrols and plants trees
Moderate	42	Attends KTH meetings occasionally, plants trees several times
Low	20	Focuses on private land, contributes little to the group

High participation is seen in groups with strong legal access through Social Forestry. This aligns with Chambers' (1994) theory that community participation increases when there is a sense of ownership and direct benefits.

Household income from agroforestry shows significant variation.

Table 4.2

Average household income from agroforestry (per year)

Commodity	Income (Rp million/year)	Contribution to Total Income (%)
Coffee	15.2	45
Durian	8.6	25
Petai and jengkol	5.1	15
Cocoa and candlenut	4.8	15

These data show that coffee is a major source of income, but heavy dependence on a single commodity has the potential to create market vulnerability. Diversification is a key strategy for long-term economic resilience.

Implemented Rehabilitation Strategies

Forest rehabilitation strategies in the WAR Forest Park (Tahura WAR) through agroforestry include several approaches: revegetation with multipurpose crops (MPTS) such as durian, petai, and jengkol; conservation partnerships between community groups and the WAR Forest Park management; coffee-based agroforestry patterns that combine conservation and economic functions; and top-down government tree planting programs. An interesting finding is the existence of local initiatives from community groups to develop agroforestry-based ecotourism. This aligns with Chambers' principle, which emphasizes local knowledge and community initiative as the primary sources of development (Chambers, 1997).

Discussion

Rehabilitation Strategy Through Agroforestry

Forest rehabilitation in Tahura WAR cannot be viewed as a purely technical effort; it must position the community as the primary actor in management. The agroforestry concept, developed within the framework of social forestry, is a strategy that bridges ecological and economic interests. Conceptually, agroforestry is defined as a land-use system that integrates trees, agricultural crops, and/or livestock within a single, interacting ecosystem (Nair, 2019). This system not only enriches vegetation structure but also increases crop diversification, thereby minimizing the risk of economic failure. In the context of Tahura WAR, the rehabilitation strategy through agroforestry can be described in three main dimensions:

Ecological Dimension

Forest ecosystem rehabilitation aims to restore hydrological function, soil fertility, and biodiversity. Through agroforestry, communities plant forestry tree species such as damar, mahogany, and cempaka, which serve as shade and erosion control. Mixed coffee cropping patterns under hardwood stands have been shown to improve soil fertility through leaf litter and moisture retention. Furthermore, the presence of multipurpose tree species (MPTS) such as petai, jengkol, and durian plays a crucial role in maintaining vegetation diversity. This strategy aligns with Chambers' (1983) approach, which emphasizes the importance of utilizing

local resources and traditional knowledge. Local communities understand that coffee and bananas grow optimally under shade, making this cropping pattern not only ecologically adaptive but also aligned with local experience.

Socio-Economic Dimension

The success of rehabilitation is determined not only by ecological aspects, but also by the extent to which communities derive economic benefits from forest management. Agroforestry enables communities to generate short-, medium-, and long-term income. By diversifying crops, communities not only obtain sustainable sources of income but also reduce the risk of dependence on a single commodity. This aligns with the principle of sustainable livelihoods, which is at the heart of Chambers' thinking, where the sustainability of community livelihoods is a top priority in development.

Dimensions of Institutions and Participation

Rehabilitation strategies through agroforestry also require strengthening local institutions. The existence of forest farmer groups (KTH) serves as the primary forum for planning, product distribution, and conflict resolution. KTHs serve as intermediaries between communities and the government and the private sector. In practice, institutional strengthening is carried out through: training and outreach; increasing farmer capacity in agroforestry techniques, post-harvest processing, and marketing; social agreement schemes in the form of internal rules regarding land distribution, yields, and forest protection obligations; and partnerships with the private sector. Several KTHs have established coffee marketing contracts with roastery companies in Bandar Lampung. This participatory approach aligns with Chambers' people-centered development principles. Actual community participation not only enhances the program's legitimacy but also strengthens their sense of forest ownership.

Analysis of Chambers' Theory in Agroforestry and Forest Rehabilitation

Basic Principles of Chambers' Theory

Robert Chambers (1983; 1997) is a key figure in the study of participatory rural development. His theory emphasizes that development should not be imposed from the top down, but rather should be based on the needs, experiences, and local knowledge of the community. Some of the key principles in Chambers' theory are active community participation, utilization of local knowledge, people-centered development, diversification and sustainability, reflection, and learning. These principles form the basis for analyzing the implementation of agroforestry in the WAR Forest Park.

Agroforestry's Compatibility with Chambers' Approach

Agroforestry as a forest rehabilitation strategy closely aligns with Chambers' thinking. In the context of Tahura WAR, this alignment can be seen in several aspects: participation, local knowledge, livelihood diversification, and ecological sustainability. The implementation of agroforestry in Tahura WAR reflects a paradigm shift from prohibition-based conservation to participation-based conservation. Prior to the social forestry program, conservation policies tended to be top-down, with communities viewed as forest encroachers who needed to be controlled. However, with the agroforestry approach, communities are now positioned as strategic partners in rehabilitation. Thus, agroforestry aligns with Chambers' empowerment principle, where communities are empowered to manage their own resources with the support of conducive policies.

Comparative Analysis of Strategies

For comparison, there are three main approaches to forest rehabilitation: conventional reforestation, which focuses on planting monocultures of forestry trees but often fails because it provides no direct economic benefits; strict conservation, which prohibits all forms of exploitation and is ecologically effective but has the potential to cause social conflict; and participatory agroforestry, which combines forestry trees and agricultural crops and provides economic benefits while preserving the ecology.

Table 4.3

Comparison of Forest Rehabilitation Strategies

Aspects of Reforestation	Conventional Conservation	Conservation Strict	Agroforestry Participatory
Ecological benefits	Medium	High	High
Economic benefits	Low	None	Medium-High
Social conflict	High	High	Low
Participation	Low	None	High
Sustainability	Prone to failure	Not adaptive	Adaptive and sustainable

The table shows that the agroforestry strategy is superior to the other two approaches because it strikes a balance between ecology, economics, and social aspects.

Closing*Conclusion*

1. This study shows that the forest rehabilitation strategy in the Wan Abdul Rachman Forest Park (Tahura) in Lampung, using an agroforestry approach, significantly improves ecological function while simultaneously enhancing the welfare of the surrounding communities. This approach provides dual benefits in the form of ecosystem conservation through erosion control, increased biodiversity, and improved water management, as well as economic benefits in the form of increased farmer incomes from timber and non-timber products.
2. Through the application of Chambers' theory, specifically Participatory Rural Appraisal (PRA), it is evident that active community participation is key to the success of agroforestry implementation. Community involvement extends beyond technical aspects to decision-making, institutional management, and benefit distribution. This reinforces the notion that sustainable forest rehabilitation can only be achieved if communities are positioned as primary actors, not objects of development.

Recommendations**1. Strengthening Community Capacity**

Technical training programs for agroforestry, institutional management, and product marketing need to be improved. Simple technology transfer is needed, in the form of innovative intercropping systems, the use of organic fertilizers, and integrated pest management.

2. Government Policy and Support

Regional and central governments need to ensure consistency in social forestry policies. Integrating agroforestry with national programs such as food estates and watershed rehabilitation will strengthen its impact.

3. Multi-Stakeholder Collaborative Approach

Synergy between the government, academics, NGOs, the private sector, and forest farmer groups is crucial.

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