

# The Strategy for Developing Community Forests in the Social Forestry Program: A Case Study of the Sedyo Makmur Farmer Group in Gunung Kidul, D.I. Yogyakarta

Pradito Mushandono<sup>1\*</sup>, Soni Trison<sup>2</sup>, Leti Sundawati<sup>2</sup>

<sup>1</sup> Postgraduate Program on Department of Forest Management Science, Faculty of Forestry and Environment, IPB University, Indonesia.

<sup>2</sup> Lecturer Department of Forest Management Science, Faculty of Forestry and Environment, IPB University, Indonesia.

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Corresponding Author:

Pradito Mushandono

[praditom@apps.ipb.ac.id](mailto:praditom@apps.ipb.ac.id)

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**Abstract:** Community forests play a crucial role in improving rural livelihoods, yet their management often faces challenges related to low income contribution, ecological sustainability, and limited social empowerment. This study aims to analyze the economic, ecological, and social benefits of community forest management and to assess their contribution to the welfare of members of the Sedyo Makmur Farmer Group in Gunung Kidul, Special Region of Yogyakarta. The research employs a descriptive case study approach by combining qualitative and quantitative methods, including interviews, direct observations, and analysis of household income. Data were examined using income contribution analysis and SWOT analysis to identify strengths, weaknesses, opportunities, and threats in forest management. The results show that community forest management provides benefits in three dimensions. Economically, community forests contribute 29.32% to household income, complemented by secondary crops and livestock. Ecologically, applying variable planting spacing improves tree growth and ecosystem conservation. Socially, forest management fosters collective action and diversifies livelihood strategies. The study concludes that optimal management strategies should focus on product diversification, member capacity building, and ecotourism development. These strategies are expected to enhance welfare, ensure sustainability, and strengthen the role of community forests within social forestry programs.

**Keywords:** Capacity building; Community forest management; Ecological; Economic; Ecotourism; Farmers group; Social

## Introduction

Community-based forest management (CBFM) is an approach that actively involves local communities in the management and conservation of forests. This approach emphasizes the active participation of communities in forest preservation and the sustainable utilization of natural resources. In Indonesia, forest management is governed by various laws and regulations aimed at ensuring sustainable practices,

protecting biodiversity, and improving the welfare of local communities (Suhartati et al., 2021). Social forestry, as a key component of Community-Based Forest Management (CBFM), actively engages local and indigenous communities in forest conservation and resource utilization, with the goal of enhancing the well-being of surrounding communities while maintaining ecosystem sustainability. In Indonesia, social forestry is facilitated through various schemes that grant

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management rights to local communities (Minister of Environment and Forestry Regulation No. 9, 2021).

Agroforestry, combining forestry and non-forestry crops, is one of the main strategies for developing social forestry businesses, as it can increase both economic and ecological benefits for farmers. Previous studies Hani et al. (2018) and Khasanah et al. (2012) have shown that agroforestry improves soil fertility, enhances land productivity, and provides additional income opportunities. However, most existing research has focused on technical aspects of agroforestry or general social forestry performance, with limited attention to the integration of economic contribution analysis and strategic management approaches at the farmer-group level.

Gunung Kidul, a district in the Special Region of Yogyakarta, has diverse landscapes and substantial potential for sustainable forest management. The Sedyo Makmur Farmer Group has received Social Forestry certification under the Hutan Kemasyarakatan (HKm) scheme and recognition from the Forest Stewardship Council (FSC) for responsible and sustainable forest management. This case provides a unique opportunity to examine how social forestry is practiced at the grassroots level.

The novelty of this research lies in its integration of descriptive analysis, income contribution analysis, and SWOT analysis to formulate practical strategies for optimizing community forest management at the farmer group scale. Unlike previous studies that generally focus on ecological or economic dimensions separately, this study combines multiple dimensions to provide a holistic assessment of benefits and strategic directions.

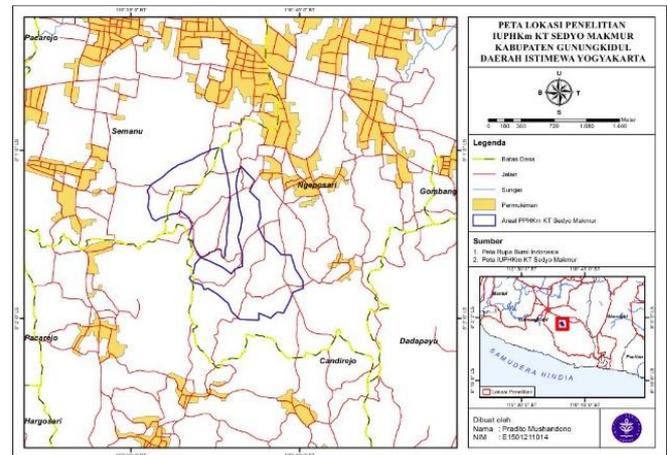
This research is important because social forestry has been prioritized in Indonesia's rural development agenda, yet many farmer groups still face challenges in selecting appropriate commodities, maximizing income contribution, and ensuring ecological sustainability. The findings from the Sedyo Makmur Farmer Group can serve as a reference model for similar communities in Indonesia, offering insights for policymakers, practitioners, and local stakeholders on how to strengthen household resilience while ensuring long-term forest sustainability.

## Method

### *Time and Location of The Study*

This study will be conducted on the Sedyo Makmur Farmer Group, which has obtained Social Forestry authorization under the Community Forest (HKm) scheme in Gunung Kidul Regency (D.I. Yogyakarta). The research location was chosen based on the following criteria: (1) the group has received HKm management authorization, and (2) the group's primary

activity involves teak plantation farming. Data collection will be conducted from March 2025 to April 2025. Subsequently, data processing and analysis will be carried out in Jakarta in April 2025.



**Figure 1.** Research location

### *Materials and Tools*

The tools used in this study include a laptop, Avenza Maps, questionnaires, a camera, a voice recorder, and stationery. The materials used in this study include interview data and other supporting data obtained from scientific articles, books, and news sources.

### *Qualitative Descriptive Analysis*

This study employs a qualitative descriptive approach to analyze the Community Forest Management (HKm) strategy implemented by the Sedyo Makmur Farmer Group in Gunung Kidul, D.I. Yogyakarta. The analysis covers three main aspects: economic, ecological/environmental, and social. In the economic aspect, the research focuses on crop selection, farmer income, financial management, and the size of managed land. The ecological/environmental aspect includes plant species composition, forest cover improvement, and forest protection. The social aspect examines the institutional structure of the group, member participation, gender roles, and relationships with other institutions.

Data were collected through observation, in-depth interviews, and document studies to understand both internal characteristics (such as education level, land area, and income level) and external factors (such as government support, market access, and social institutions) affecting HKm management. Qualitative descriptive analysis was used to identify patterns, challenges, and opportunities in the management of HKm by the farmer groups. The results of this analysis will serve as a basis for providing recommendations for sustainable HKm management strategies that prioritize

community welfare. Regarding the economic aspect, the study investigates how crop selection and financial management by the Sedyo Makmur Farmer Group influence their income, with key factors being market conditions and land capacity. The ecological aspect explores the group's efforts to maintain forest sustainability through environmentally friendly planting and forest protection activities, while the social aspect looks at institutional strength and gender equity in decision-making and productive activities.

#### *Secondary Data Collection*

This study utilizes secondary data collection techniques to complement the primary data obtained directly from respondents. Secondary data serves to enrich insights and provide additional context relevant to the research topic. According to Mungin (2007), secondary data collection is conducted through two main instruments: documentation studies and literature review, each playing an important role in deepening the analysis of this research. Documentation study involves collecting data from records or documents available at the research site or other sources related to the research object. This can include annual reports, government policies on Community Forest Management (HKm), regional regulations on forest management, and relevant statistical data. This technique allows the researcher to obtain well-documented information, offering an understanding of the current conditions and developments in forest management in the Gunung Kidul area.

Literature review, on the other hand, involves gathering data from various sources such as books, scholarly articles, and expert opinions relevant to the research issue. The literature review is crucial in this study to understand the theoretical foundations and concepts underlying community forest management and to review previous studies related to the topic. Previous studies have emphasized that social forestry plays a significant role in enhancing community welfare and supporting sustainable natural resource management (Kaskoyo et al., 2017; Mardiana & Fauzi, 2018). In addition, agroforestry practices are highlighted as an important strategy for improving ecological and economic outcomes (Hani et al., 2018; Khasanah et al., 2012). This literature provides deeper insights into research methodology, relevant theories, and discussions on natural resource management policies, which are essential for formulating findings and conclusions. By combining secondary data with primary data, this study offers a more holistic understanding of the factors influencing community forest management and provides stronger contributions to forest management policies and practices in Gunung Kidul. Overall, secondary data collection plays a vital role in

complementing primary data and ensuring the validity and reliability of the research findings by incorporating perspectives from various relevant sources (Adams & Hutton, 2007; Angelsen & Wunder, 2003).

## **Result and Discussion**

#### *Overview of the Research Location*

This research is conducted at the Sedyo Makmur Farmer Group (KTH) located in Semanu Village, Semanu District, Gunungkidul Regency, Yogyakarta Special Region. Geographically, Semanu District is situated at coordinates around 8°01'00" S and 110°38'00" E. The district is bordered by Karangmojo to the north, Ponjong to the east, Girisubo and Saptosari to the south, and Wonosari to the west. Semanu Village is known for its distinctive karst topography and significant potential for community forest resources. The village's physiography is dominated by karst hills with elevations ranging from 150 to 300 meters above sea level. This geological condition leads to porous soil that absorbs water quickly, requiring the community's agricultural and forestry systems to adapt conservation techniques for soil and water management. The climate is tropical with distinct wet (October–March) and dry (April–September) seasons, and annual rainfall averages between 1,500 and 2,000 mm, making it suitable for agroforestry development.

The Sedyo Makmur Farmer Group manages a community forest area of approximately 120–150 hectares in Semanu Village. The group's main activities include planting hardwood trees like teak (*Tectona grandis*) and mahogany (*Swietenia macrophylla*), fruit cultivation, and intercropping to support food security and increase members' income. Additionally, soil conservation programs, rehabilitation of critical lands, and the strengthening of socio-economic capacity are integral parts of their management strategy. The local economy in Semanu is primarily based on agriculture, community forestry, and small-scale businesses that rely on agricultural and forest products. Approximately 65% of the population is involved in dryland farming, community forestry, and small livestock farming. The average income level in Semanu is low to moderate, with a high dependency on natural resources. This emphasizes the importance of developing a community forest management system that balances economic and ecological aspects to improve community welfare while maintaining environmental sustainability. Socially, the involvement of the community in farmer groups like Sedyo Makmur demonstrates a collective awareness for managing forest resources together, with cooperative, deliberative, and cross-member cooperation serving as key components of the group's success.

*Gender*

Based on the data from the Sedyo Makmur Farmer Group in Semanu Village, Gunungkidul Regency, there are 54 respondents, with 36 males (66.67%) and 18 females (33.33%). The majority of members are male, reflecting that activities involving physical tasks such as planting and land conservation are primarily carried out by men. However, the participation of women in social, administrative, and intercropping management indicates their significant role in the group. This mixed-gender involvement enriches the social dynamics of community forest management. Understanding the distinct roles of men and women in HKm management helps provide a comprehensive view of the success factors in managing community-based natural resources in Semanu Village.

*Age of Respondent*

Based table 1, the majority of respondents fall within the productive age range. The largest group consists of 20 respondents (37.04%) in the 51-60 age range, followed by 12 respondents (22.22%) in the 41-50 range, and 11 respondents (20.37%) in the 61-70 range. Smaller groups include 3 respondents (5.56%) in the 31-40 age range, and only 1 respondent (1.85%) in the 21-30 range. The elderly groups, ages 71-80 and 81-90, account for 6 (11.11%) and 1 respondent (1.85%) respectively. This distribution shows that the majority of members are still in an age group that is physically productive, though approaching older age.

**Table 1.** Distribution of Respondents by Age

Age Range (Years)	Number of Respondents	Percentage (%)
21-30	1	1.85
31-40	3	5.56
41-50	12	22.22
51-60	20	37.04
61-70	11	20.37
71-80	6	11.11
81-90	1	1.85
Total	54	100.00

This age composition has a positive impact on their capacity for managing community forests, as these members bring extensive experience in agriculture and forestry. However, the dominance of older age groups may present challenges for the long-term sustainability of the HKm program, particularly concerning the regeneration of younger members. Younger members tend to be more adaptable to technological innovations and sustainable management practices. Addressing this gap is crucial to ensure the continued success and adaptability of the program. It is recommended to focus on engaging younger generations for leadership roles and skill development to support future sustainability.

*Education Level*

Based on Table 2, the majority of members have a low level of education, with 61.11% having completed only elementary school or equivalent, and 16.67% not finishing elementary school. Only 14.81% reached junior high school, while 5.56% attained higher education, including diplomas or bachelor's degrees. This educational distribution affects their ability to access new information, technologies, and understand technical and administrative aspects of Community Forest Management (HKm). Despite this limitation, practical experience and informal learning through group activities and extension services serve as important social assets. To enhance forest management strategies, a hands-on, easily understandable approach is necessary, particularly for members with basic education backgrounds.

**Table 2.** Distribution of Respondents Based on Education Level

Education Level	Number of Respondents	Percentage (%)
Diploma/Bachelor's	3	5.56
Elementary School or Equivalent	33	61.11
Junior High School or Equivalent	8	14.81
High School or Equivalent	1	1.85
Did Not Complete Elementary School	9	16.67
Total	54	100.00

*Area of Teak Farming in HKm*

**Table 3.** Distribution of Respondents Based on Area of Teak Farming in HKm

Area of Teak Farming in HKm (Ha)	Number of Respondents	Percentage (%)
1 to 2	4	7.41
3 to 4	1	1.85
Less than 1	49	90.74
Total	54	100.00

Based on the land area distribution table for teak farming in the Community Forest Management (HKm) by the Sedyo Makmur Farmer Group in Semanu Village, it is observed that the majority of respondents, 49 individuals (90.74%), manage land areas of less than 1 hectare. Additionally, 4 respondents (7.41%) manage land between 1 and 2 hectares, and only 1 respondent (1.85%) manages land between 3 and 4 hectares. This dominance of small landholdings indicates that most members are small-scale land managers with limited production capacity. This condition directly impacts the economy of teak farming, where income largely depends on optimizing small land areas and intensive management. In the context of HKm management, the relatively small land area requires strategies based on

land efficiency, agricultural diversification, and group collaboration to increase the added value of forest products collectively, which is essential for sustainable management strategies from economic, ecological, and social perspectives in Semanu Village HKm.

*Planting Distance Between Crops in HKm*

Respondents in the Sedyo Makmur Farmer Group (KT) typically plant teak and sengon trees at a spacing of 3 meters, aiming to maximize land use. Some respondents choose a 4-meter spacing to allow for optimal tree growth, while a few opt for wider distances, such as 4.3 and 4.6 meters, to enhance long-term timber quality and support biodiversity. Closer spacing accelerates land rehabilitation and increases carbon absorption but may cause competition for resources among trees. On the other hand, wider spacing promotes better tree growth, timber quality, and biodiversity. Overall, the varying planting distances help achieve ecological goals like soil and water conservation while ensuring the sustainability of forest management practices for both the community and the environment.

*Farming Experience*

Based on table 4, the majority of members of the Sedyo Makmur Farmer Group have extensive farming experience. A total of 23 respondents (42.59%) have 21–30 years of experience, followed by 10 respondents (18.52%) with 11–20 years, and 9 respondents (16.67%) with 31–40 years of experience. Six respondents (11.11%) have 41–50 years of experience, while 4 respondents (7.41%) have 0–10 years, and only 2 respondents (3.70%) have 51–60 years of experience. This distribution indicates that most group members have medium to high levels of experience, reflecting solid skills in managing agricultural activities, especially in Community Forest Management (HKm). While the higher experience levels are essential for applying effective strategies, the presence of less experienced respondents highlights the importance of regeneration and capacity building to ensure sustainable forest management in the future.

**Table 4.** Distribution of Respondents Based on Farming Experience

Farming Experience (Years)	Respondents	Percentage (%)
0-10	4	7.41
11-20	10	18.52
21-30	23	42.59
31-40	9	16.67
41-50	6	11.11
51-60	2	3.70
Total	54	100.00

*Role in KT (Farmers Group)*

Based on the distribution of roles within the Sedyo Makmur Farmers Group (KT), it is found that out of 54 respondents, the majority are active members, with 50 individuals in this role. Strategic positions in the management are filled by one person each for the roles of Chairman, Vice Chairman, Secretary, and Treasurer. This composition shows that the organizational structure in KT Sedyo Makmur is well-established, with key functions handled by core management, while most members actively participate in group activities. The role distribution reflects strong member involvement in supporting Community Forest Management (HKm), with active members playing vital roles in field operations such as cultivation, conservation, and marketing of forest products. The institutional dynamics are crucial for the sustainability of HKm management, where active member involvement, coupled with a functional management structure, enhances the effectiveness of group programs and strengthens the community's independence in managing forest resources sustainably.

*Length of Membership in KT*

Based on the data of membership duration in the Sedyo Makmur Farmers Group (KT), the majority of respondents, 33 individuals (61.11%), have been members for 21–30 years. Additionally, 14 individuals (25.93%) have been members for 11–20 years, and 6 individuals (11.11%) have been members for 0–10 years. Only 1 individual (1.85%) has been a member for more than 30 years, within the 31–40 year range. This distribution shows that most members of KT Sedyo Makmur have long-standing membership, reflecting high loyalty and involvement in Community Forest Management (HKm) activities.

*Income in HKm*

In the management of Community Forest Management (HKm) at the Sedyo Makmur Forest Farmers Group (KT), the income from teak farming is regulated through a profit-sharing mechanism between the managing farmers and landowners. According to the research data, the average gross income from teak farming is Rp 3,214,815 per respondent. This gross income represents the total revenue from teak wood sales before profit-sharing according to the agreement. The profit-sharing system applied is 60% for the managing farmers and 40% for the landowners, as compensation for the use of HKm land. This arrangement serves as the foundation of the cooperation between farmers and landowners in the HKm program.

From the total gross income, the average production cost borne by the farmers is Rp 421,378, covering expenses for cultivation, plant maintenance,

and field operations. After deducting production costs, the average net income amounts to Rp 2,793,437 per respondent, which represents 86.89% of the gross income. The high percentage of net income indicates that teak farming in KTH Sedyo Makmur operates with good efficiency. This also shows that despite the profit-sharing arrangement with the landowners, farmers still earn a fair economic return from their farming activities.

**Table 5.** Income from Teak in HKm

Gross Income (Rp)	Production Costs (Rp)	Net Income (Rp)	Net Income Percentage (%)
3,214.815	421,378	2,793,437	86.89

The profit-sharing mechanism creates a unique institutional dynamic in the management of HKm. Farmers, as managers, are fully responsible for production activities in the field, from planting to maintenance and harvesting, while landowners receive a share of the profits as appreciation for the use of their land. In the context of this research, the fair and transparent profit-sharing system has been shown to enhance farmers' motivation to manage HKm land optimally, conserve the land, and improve their welfare through teak farming income. Thus, the profit-sharing model in KTH Sedyo Makmur not only provides direct economic benefits to group members but also strengthens the social bond between farmers and landowners, contributing to the sustainability of Community Forest Management in Semanu Village.

*Respondents' Income Outside of HKm*

Based on the analysis of income sources outside of the Community Forest Management (HKm) in the Sedyo Makmur Farmer Group (KTH), the average total annual income is IDR 12,456,944, or approximately IDR 1,038,898 per month. This income is derived from various side businesses undertaken by the respondents to support their household economy. The largest income source comes from cattle farming, with an average annual income of IDR 5,314,815 or IDR 442,901 per month, indicating that livestock farming plays a key role in the local economy, aside from HKm management. Goat farming also contributes significantly, with an average annual income of IDR 3,002,778 or IDR 250,232 per month. Income from selling groceries is recorded at IDR 1,555,556 per year, or IDR 129,630 per month, showing that some members are engaged in small-scale retail businesses. Secondary crops such as peanuts, corn, and cassava provide relatively smaller incomes, reflecting the challenges of dryland farming under seasonal conditions. Meanwhile, income from farm labor and construction work remains the lowest, confirming that manual labor functions more as

supplementary income rather than the primary livelihood.

**Table 6.** Income in HKm Respondents' Income Outside of HKm

Income Sources	Average Income (Rp)/Month	Average Income (Rp)/Year
Peanuts	59,298	711,574
Corn	67,639	811,667
Cassava	44,261	531,132
Goats	250,232	3,002,778
Cattle	442,901	5,314,815
Chicken	2,932	35,185
Selling Groceries	129,630	1,555,556
Farm Labor	4,969	59,630
Construction Labor	37,037	444,444
Total	1,038,898	12,456,944

These findings are consistent with previous studies emphasizing the importance of non-HKm income sources in sustaining rural livelihoods. Kaskoyo et al. (2017) found that livestock farming substantially supported household income among community forestry participants in Lampung Province, similar to the role of cattle and goats in Sedyo Makmur. Likewise, Mardiana et al. (2018) noted that in Tasikmalaya, income diversification beyond community forests was crucial for improving welfare. However, compared to Kurniasari et al. (2021) in Gunung Kidul, where crop-based income still contributed more substantially, the Sedyo Makmur case highlights the relatively stronger dominance of livestock over agriculture. This difference indicates that while social forestry contributes to ecological and social benefits, household resilience in different regions often depends on varied economic strategies shaped by local environmental and market conditions.

*Household Expenditures of Respondents*

Based on the interview data, it is found that the average total household expenditure of respondents per month is Rp 1,269,204, or equivalent to Rp15,230,444 per year. The largest component of expenditure comes from food needs, which amounts to about Rp922,222 per month or Rp11,066,664 per year. The high proportion of spending on food indicates that food consumption is the primary priority in the household spending structure of the KTH Sedyo Makmur farmer group. Meanwhile, spending on clothing is relatively low, at only Rp6,759 per month or Rp 81,108 per year, reflecting respondents' habit of buying new clothes infrequently, typically once a year or during specific occasions like holidays.

Expenditure for housing (repairs or construction) is also relatively small, averaging Rp 45,944 per month or Rp 551,328 per year. This data indicates that most respondents rarely renovate their homes annually,

except in cases of severe damage or urgent needs. Regarding education, the average expenditure is Rp 47,778 per month or Rp573,336 per year. The relatively low education costs are due to many respondents' children having completed formal education and found employment, significantly reducing the household's education expenses.

In terms of transportation, the average expenditure is Rp 175,593 per month or Rp 2,107,116 per year. Most of this expenditure is used for purchasing fuel for motor vehicles, which are the main means of transportation for respondents' daily activities. Communication expenses average Rp 38,870 per month or Rp 466,440 per year, primarily for mobile phone credits and internet data packages. As for car expenses (such as annual taxes and maintenance), the average is only Rp 3,704 per month or Rp 44,448 per year, as only one of the 54 respondents owns a car. Overall, this spending pattern reflects the characteristics of rural communities who prioritize basic needs and are frugal with non-essential expenditures.

**Table 7.** The Contribution Farming Income in HKm to Total Income

HKm Income (Rp/Year)	Non-Hkm Income (Rp/Year)	Total Income (Rp/Year)	Contribution (%)
4,316,678	10,402,572	14,719,250	29.32

Based on the data provided in the table, the income from Community Forest Management (HKm) for the Sedyo Makmur Farmer Group is Rp 4,316,678 per year, which accounts for 29.32% of the total household income. In contrast, the income from non-HKm activities, such as intercropping, livestock, and informal work, amounts to Rp 10,402,572 per year. As a result, the total household income is Rp 14,719,250 per year. This indicates that, while HKm provides a valuable contribution to household income, the primary source of income for the members still comes from non-forestry sectors. The relatively higher income from non-HKm activities highlights the need for further diversification and optimization of forest-based products to increase the economic contribution of HKm in the future.

This finding reveals that the HKm program provides a positive economic contribution, but it has not fully reduced farmers' dependency on other sectors outside HKm. The low contribution could be attributed to several factors, such as limited land area under HKm management, the relatively long teak harvesting cycle, and fluctuating timber prices.

*SWOT Analysis*

The analysis was conducted by identifying and evaluating strategic internal factors (internal factor evaluation), which include strengths and weaknesses, as well as strategic external factors (external factor evaluation), which encompass opportunities and threats.

*Contribution Analysis*

In evaluating the success of Community Forest Management (HKm), income contribution analysis is a crucial aspect to consider. This analysis measures how much the income from teak farming within the HKm scheme contributes to fulfilling the economic needs of farmers' households and improving their welfare. In this study, the contribution of income from HKm is compared with other sources of income outside of HKm, such as intercropping, livestock farming, small trade, and informal work. The goal is to understand the relative role of HKm in the overall income structure of the Sedyo Makmur Farmer Group (KTH). This analysis will reveal whether HKm serves as a primary livelihood source or just a supplementary income for the community, as well as the degree of economic dependence on the sustainability of forest management. The results of this analysis are essential in formulating more effective HKm management strategies from economic, ecological, and social perspectives.

The results of the identification of strengths, weaknesses, opportunities, and threats is the strengths of the Sedyo Makmur Farmer Group lie in the active participation of its members, access to natural resources, strong support from the government and related institutions, diversity in forest product outputs, and considerable experience in forest management. However, the group also faces several weaknesses, including dependence on external resources, limited market access, lack of managerial capacity, income fluctuations, and generally low human resource capacity. On the other hand, there are significant opportunities that can be leveraged, such as government programs supporting social forestry, the development of ecotourism, training and capacity-building initiatives, and the potential for diversification of forest products. Nevertheless, these opportunities must be considered alongside potential threats, including competition with other groups, limited capital availability, changes in policies and regulations, as well as emerging social issues and conflicts that may affect the sustainability of community forest management

*Scoring of Weights and Ratings in IFAS and EFAS*

Table 8 and Table 9 show the total scores for internal factors with a strength indicator of 1.55 and a weakness indicator of 1.15. Meanwhile, the total scores for external factors are 1.63 for opportunities and 1.25 for threats.

**Table 8.** IFE Data Processing

No	Internal Factor	Weight	Rating	Score
<b>Strengths</b>				
1	Active member participation	0.12	3.14	0.37
2	Access to natural resources	0.13	3.14	0.41
3	Support from government and related institutions	0.06	2.86	0.17
4	Diversity of forest products	0.12	3	0.36
5	Experience in forest management	0.08	3	0.24
	Sub Total			1.55
<b>Weaknesses</b>				
1	Dependence on external resources	0.07	2	0.14
2	Limited market access	0.1	3.43	0.34
3	Lack of managerial capacity	0.06	1	0.06
4	Income fluctuations	0.2	2	0.4
5	Low human resource capacity	0.07	3	0.21
	Sub Total			1.15
	<b>Total</b>	<b>1</b>		<b>(Difference = 0.40)</b>

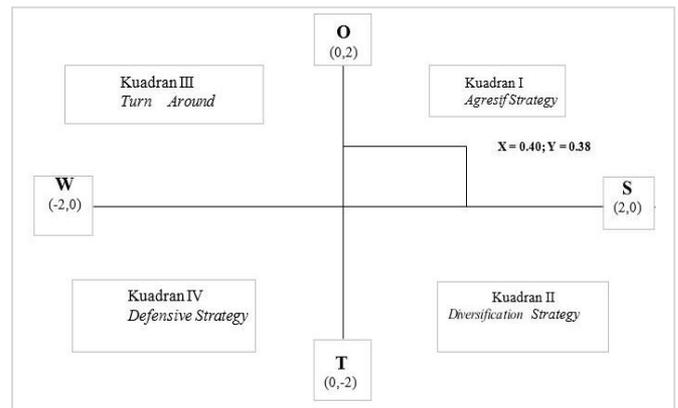
**Table 9.** EFE Data Processing

No	External Strategic Factor	Weight	Rating	Score
<b>Opportunities</b>				
1	Government programs supporting social forestry	0.1	2.69	0.26
2	Development of ecotourism	0.16	3	0.48
3	Training and capacity building	0.16	3.57	0.57
4	Diversification of forest products	0.09	3.57	0.32
	Sub Total			1.63
<b>Threats</b>				
1	Competition with other groups	0.05	1	0.05
2	Limited capital	0.19	3	0.57
3	Changes in policies and regulations	0.06	2	0.12
4	Social issues and conflicts	0.2	2.57	0.51
	Sub Total			1.25
	<b>Total</b>	<b>1</b>		<b>(Difference = 0.38)</b>

*Grand Strategy*

Figure 2 illustrates that the Sedyo Makmur Farmer Group's strategy position in the SWOT Matrix falls within Quadrant I, indicating a supportive or aggressive policy strategy. This position is due to the group's significant internal strengths combined with substantial external opportunities (Rangkuti 2006). With this advantageous combination, the group can maximize its potential to expand and develop its forest management activities, particularly in timber and non-timber products.

The aggressive strategy suggests that the Sedyo Makmur Farmer Group can take bold and innovative steps to enhance production capacity and market access while leveraging government programs supporting social forestry. Additionally, focusing on developing other forest products, such as ecotourism or product diversification, can become key elements of this strategy to foster economic growth. Thus, the group is well-positioned to optimize its resources and capitalize on opportunities to achieve more sustainable forest management.



**Figure 2.** Grand strategy quadrant community forest development

*Internal and External Factor Strategy SWOT*

Internal and external factor strategies can be formulated into several alternative strategies for the development of community forests within the social forestry program, consisting of SO strategies, WO strategies, ST strategies, and WT strategies, namely:

The SO (Strengths–Opportunities) strategy emphasizes the development of diverse forest products

while simultaneously enhancing member capacity through training and capacity-building programs. By leveraging government support for social forestry, the group can optimize ecotourism potential based on its diverse forest products. In addition, members are encouraged to engage in the development of processed forest products and utilize existing natural resources to strengthen economic resilience.

The WO (Weaknesses–Opportunities) strategy focuses on reducing dependence on external resources by maximizing government programs that support social forestry. Improving market access can be achieved through the development of forest-based ecotourism, coupled with training to enhance member capacity. Furthermore, managerial and human resource skills can be strengthened by actively participating in capacity development initiatives offered by various institutions.

The ST (Strengths–Threats) strategy relies on strengthening active member participation to face competition from other groups by improving product quality and adopting more efficient marketing practices. Access to natural resources should also be optimized to mitigate the challenges of limited capital by tapping into funding opportunities from government and related institutions. In addition, the group's extensive experience in forest management can be utilized to adapt more effectively to policy and regulatory changes.

Finally, the WT (Weaknesses–Threats) strategy seeks to reduce dependence on external resources through alternative financing mechanisms and stronger internal institutional structures to address capital limitations. Managerial and human resource capacities can be improved through intensive training, which will help the group adapt to income fluctuations and unforeseen policy changes. Moreover, diversifying forest products and expanding market networks is crucial to reduce the risks associated with competition from other groups and dependence on limited market opportunities.

#### *Determination of Development Strategy*

Based on the results of the SWOT analysis conducted, the planned management program for Community Forest Management (HKm) at the Sedyo Makmur Farmer Group (KTH) is the diversification of forest products is an important strategy to strengthen the economic resilience of the Sedyo Makmur Farmer Group. Beyond relying on teak wood, the group seeks to develop non-timber forest products such as resin, leaves, and fruits. Introducing processed and eco-friendly products, including handicrafts and organic goods, not only adds value but also opens new market opportunities while reducing dependence on a single product type. This diversification enhances

competitiveness and ensures the optimal utilization of natural resources, thereby creating new opportunities in forest management and strengthening the economic foundation of members.

Capacity building for members plays a central role in ensuring the sustainability of community forest management. Training and development programs are directed toward sustainable forest management, financial management, and product marketing. These activities aim to enhance members' skills in managing forests efficiently and professionally, while also deepening their knowledge of business management to improve productivity and product quality. Managerial training, particularly in decision-making and business planning, contributes to strengthening the institutional foundation of the group and increasing its independence in the long run.

The development of forest-based ecotourism also emerges as a promising avenue for sustainable community income. By leveraging the natural beauty and biodiversity surrounding the forest, the group can establish ecotourism destinations such as trekking paths, nature-based lodges, and visitor information centers. Strengthening infrastructure and utilizing government support are key to advancing ecotourism development. Beyond economic benefits and job creation, ecotourism plays a role in raising environmental awareness and provides a strong basis for integrating conservation with livelihood strategies. Ultimately, ecotourism is expected to become a key pillar in supporting the sustainable management of community forests in the future.

## **Conclusion**

Community Forest Management (HKm) in the Sedyo Makmur Farmer Group generates economic, ecological, and social benefits, although the economic contribution from farming remains limited at 29.32% of household income, with the majority of livelihoods supported by non-HKm activities such as livestock, intercropping, and informal work. Ecologically, the use of variable planting distances has improved tree quality and supported ecosystem conservation, while socially, HKm has strengthened community cooperation and promoted income diversification. Based on these findings, three main strategies are recommended to improve the effectiveness of HKm management: diversification of forest products, capacity building for members, and the development of forest-based ecotourism. Diversifying both timber and non-timber products can expand markets and reduce dependence on a single commodity. Capacity-building programs in forest management, financial literacy, and product marketing are essential to strengthen institutional

capacity and ensure sustainable governance. Meanwhile, forest-based ecotourism offers an additional source of income, raises environmental awareness, and aligns conservation with economic opportunities. More generally, this study shows that social forestry can only achieve its full potential if economic, ecological, and social dimensions are integrated into a comprehensive strategy. The case of Sedyo Makmur illustrates how community-based forest management contributes to local welfare while maintaining sustainability, and it provides lessons that may be adapted to other regions with similar characteristics. In practical terms, the findings highlight the need for stronger policy support, targeted training for farmer groups, and investments in infrastructure to promote ecotourism and market access. For practitioners, the strategies recommended in this study can serve as guidelines to improve household resilience and enhance the long-term sustainability of community forest programs in Indonesia.

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#### Author Contributions

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#### Conflict of Interest

The authors declare no conflict of interest in this research.

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