

Implementation of Agroforestry Program Learning in the Framework of Sustainable Environmental Management

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ABSTRACT

Governmental Studies is a branch of social science that studies the implementation of state power in regulating, managing, and serving the public. This study aims to analyze the effectiveness of the agroforestry program implemented by the Kuningan Regency Forestry Service Branch VIII in supporting sustainable environmental management and to identify obstacles and potential tenurial conflicts during the transition period of the Special Management Forest Area (KHDPK) policy. The method used is descriptive qualitative with a case study approach. The results indicate that the agroforestry program is relatively effective in balancing ecological and economic functions through the integration of forestry and agricultural crops. However, its implementation still faces obstacles such as limited extension workers, low capacity of Forest Farmer Groups (KTH), and legal uncertainty following the transfer of management from Perum Perhutani. The program's sustainability depends on strengthening local institutions and optimizing Non-Timber Forest Products (NTFPs).

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1. INTRODUCTION

Climate change and human activities such as land conversion, deforestation, and watershed degradation have increased the risk of environmental disasters such as floods and landslides in various regions of Indonesia (Zairin et al., 2022). The impacts are not only ecological but also cause socio-economic losses, including infrastructure damage, reduced agricultural productivity, impaired public health, and increased vulnerability of vulnerable groups.

Forest destruction in upstream areas also reduces hydrological function, exacerbates flooding, and increases economic costs. Therefore, sustainable forest management is a strategic necessity. In this context, agroforestry presents a solution that integrates ecological and economic aspects through a combination of forestry and agricultural crops (Cahyani, 2025).

The Indonesian government encourages the implementation of agroforestry through the Social Forestry policy and the Special Management Forest Area (KHDPK) scheme, which aims to provide legal access to communities while accelerating forest rehabilitation. However, the implementation of

this policy still faces various challenges, such as limited assistance, low community institutional capacity, and the potential for tenure conflicts (Cahyani, 2025).

In West Java, particularly in Kuningan Regency, which holds the status of a "Conservation Regency," agroforestry is a crucial strategy for maintaining a balance between community economic needs and environmental sustainability. The role of the Forestry Service Branch (CDK) Region VIII is crucial in implementing this policy through community development and strengthening Forest Farmer Groups (KTH) (CIFOR, 2025).

Despite its significant potential, agroforestry implementation in Kuningan still faces obstacles such as limited human resources, weak local institutions, economic pressures on farmers, and uncertainty during the transition to the Special Management Area (KHDPK) policy. Therefore, research is needed to evaluate the effectiveness of agroforestry program implementation and formulate strategies that can optimally support sustainable environmental management (CIFOR, 2025).

The purpose of this study was to analyze the effectiveness of the Forestry Service Branch's implementation of the agroforestry program in supporting the achievement of Kuningan Regency's vision as a Conservation Regency and to identify challenges, technical obstacles, and potential tenurial conflicts that emerged during the transition to the forest management policy through the Special Management Area (KHDPK) scheme in Kuningan.

2. METHODS

This research uses a qualitative descriptive approach with a single case study method to deeply understand the agroforestry policy implementation process in Kuningan Regency, specifically at the Forestry Service Branch Region VIII (Mulyani, 2021). This approach was chosen because it allows for a holistic and contextual exploration of how and why a policy is implemented, including the dynamics and obstacles encountered in the field (Dr. H. Zuchri Abdussamad & Dr. Patta Rapanna, 2021). The research subjects consisted of key actors directly involved: service officials as policy implementers and Forest Farmer Groups (KTH) as beneficiaries. Informants were selected using purposive sampling based on their involvement and competence, including service officials, forestry extension workers, and farmer group leaders and members (Riduwan & Sunarto, 2003).

Data collection was conducted using three main techniques: interviews, observation, and documentation. Interviews were used to gather in-depth information regarding perceptions, experiences, and supporting and inhibiting factors in policy implementation. Observations were conducted to obtain direct empirical data regarding field conditions, program implementation activities, and interactions between actors. Meanwhile, documentation was used as a supporting data source through various official documents such as policies, reports, program archives, and visual data. Data analysis was conducted through data reduction stages, namely the process of simplifying and grouping data to make it more focused, and data verification to ensure the validity, consistency, and accuracy of the information. Data validity was maintained through credibility testing and triangulation techniques, both source triangulation and technical triangulation, so that the research results could be scientifically accounted for.

3. FINDINGS AND DISCUSSION

Kuningan Regency is a region with a demographic dominated by people of productive age and livelihoods in the agriculture and forestry sectors. Its geographical location, consisting of highlands around Mount Ciremai, makes it a crucial conservation area (Kuningan Regency Central Statistics Agency, 2025). Forestry management is carried out collaboratively by various actors, including the Forestry Service Branch VIII, Perhutani, the local government, and the community. The Forestry Service Branch VIII acts as the technical implementer responsible for forest management, land rehabilitation, and community empowerment, thus playing a strategic role in the success of the agroforestry program.

The agroforestry program is a land management system that integrates forestry and agricultural crops to achieve ecological and economic balance. This program aims to improve environmental quality, reduce land degradation, and enhance community welfare. The program's primary targets are

forest farmer groups and communities surrounding forest areas, with implementation locations in areas with high levels of land degradation or conservation functions. The program's implementation mechanism includes planning, outreach, field implementation, mentoring, and participatory monitoring and evaluation.

The implementation of the agroforestry program was analyzed through four main aspects. From a communication perspective, the program was deemed quite effective through outreach, coordination, and mentoring, although there was still limited understanding regarding legal aspects. From a resource perspective, the program was supported by competent human resources, but still faced constraints in the number of extension workers, budget, and infrastructure. From a disposition perspective, implementers and the community demonstrated high commitment and participation. Meanwhile, from a bureaucratic structure perspective, program implementation was supported by a clear division of tasks and systematic procedures, although challenges persisted in cross-institutional coordination.

Based on George C. Edward III's theory, the implementation of the agroforestry program in Kuningan Regency was quite effective. Communication was effective and participatory, human resources were competent despite being limited in quantity, implementers' dispositions were very supportive, and the bureaucratic structure was relatively clear and systematic (Pambudi, 2023). However, several obstacles, such as limited extension workers, technical obstacles in the field, and uneven policy understanding, exist, which need to be addressed to increase program effectiveness.

The policy implementation model according to Van Meter and Van Horn emphasizes that the success of a policy is determined by six interrelated variables. First, policy standards and targets must be realistic and appropriate to local socio-cultural conditions to avoid becoming merely utopian plans. This success is supported by the availability of adequate resources, including human resources, budget, and time. Furthermore, the characteristics of implementing organizations, both formal and informal, must be appropriate to the type of tasks being carried out (Wiji Astuti, 2024).

This process also relies heavily on effective inter-organizational communication, which must be clear, consistent, and accurate to ensure proper delivery of instructions. At the field level, the disposition or attitude of implementers plays a crucial role; agents' acceptance or rejection of a policy is often influenced by the extent to which they are involved in the formulation process. Finally, implementation does not occur in a vacuum but is influenced by the social, political, and economic conditions that shape the policy's external environment.

The agroforestry program makes a significant contribution to sustainable environmental management, particularly in reducing erosion and land degradation, improving water conservation, and expanding green land cover. Furthermore, the program provides economic benefits through intercropping and raises community awareness of the importance of environmental protection. Thus, the program successfully integrates ecological, social, and economic aspects in a balanced manner.

The agroforestry program has positive implications for the community, including increased security in land management, strengthening farmer group institutions, and improving economic well-being. In terms of governance, the program encourages more participatory relationships between the government and the community and strengthens cross-sectoral coordination. Furthermore, the program supports collaborative and participatory governance practices, although challenges remain in institutional coordination during the policy transition period.

4. CONCLUSION

Based on the results of this research on the implementation of the agroforestry program for sustainable environmental management at the Forestry Service Branch Office Region VIII, Kuningan Regency, the following conclusions can be drawn. 1) The implementation of the agroforestry program run by the Forestry Service Branch VIII can generally be considered effective in supporting sustainable environmental management in Kuningan Regency. 2) This study also found that in the forest management policy transition process, particularly the implementation of the Special Management Forest Area (KHDPK) scheme, several major obstacles and potential tenurial conflicts remain.

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