

Community Forestry in an Islamic Economic Perspective: A Strategy for Environmental and Local Economic Sustainability

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Community forestry plays an important role in supporting rural livelihoods and maintaining environmental sustainability. However, economic pressures may encourage farmers to convert forest land into agricultural fields or gardens, potentially affecting forest functions. This study examines community forest management practices, the economic considerations underlying land-use decisions, and their implications from an Islamic economic perspective. A qualitative descriptive approach was employed, with field research conducted in 2025 at the Enggal Mulyo Lestari Forest Farmers Group (KTH) in Mrayan Village, Ponorogo, East Java, Indonesia. Thirty participants were purposively selected from 56 group members based on their experience in community forest management. Data were collected through field observations, in-depth interviews, and examination of relevant documents. The data were analyzed through data reduction, data presentation, and conclusion drawing. The findings indicate that economic considerations, particularly income expectations and the time required to obtain financial returns, are important in understanding farmers' land-use decisions. Descriptive data showed that an average of 0.5 hectares, equivalent to 43.4% of the reported community forest area managed per household, had been converted to other uses. These findings highlight the need to strengthen the economic viability of community forestry while preserving its ecological functions. From an Islamic economic perspective, sustainable community forest management should promote equitable distribution of benefits, prevent harm, and balance economic welfare with environmental stewardship. The study contributes to discussions on integrating Islamic economic principles into community-based forest management.

Keywords: Community forests, islamic economics, sustainability, land conversion, farmers' welfare

1. Introduction

Indonesia is a democracy and the fourth most populous country in the world. Approximately 9.03% of its population still lives below the poverty line in 2024 (BPS- Percentage of Poor Population March 2024). The Indonesian government is trying to address this problem by encouraging economic development, which is expected to grow at an average of at least 5% per year, with the goal of reducing the poverty rate to below 4% by 2025. In addition, it also faces challenges due to the projected population growth of 0.74 percent

between 2015 and 2045. Given population growth, which increases every year, there is a constitutional mandate that must be implemented. This constitution also affirms the right of every individual to enjoy a healthy and good environment. Amid increasingly real climate change, Indonesia continues to strive to balance development interests and poverty reduction efforts, both in the current and future contexts.

Indonesia's efforts at the COP-21 Climate Change Conference in Paris, referred to as Indonesia's Intended Nationally Determined Contribution (INDC) submitted previously, involve various programs and activities, including improving peat ecosystem management, rehabilitating critical land, and controlling deforestation rates (Putri et al., 2025). Indonesia's INDC efforts not only focus on reducing emissions but also on ecosystem conservation and empowering local communities (Fujimori et al., 2017). Through international cooperation and these concrete steps, Indonesia seeks to contribute to global efforts to address climate change and maintain environmental sustainability (Furness et al., 2015).

In Presidential Regulation Number 61 of 2011, which regulates the implementation of the National Action Plan for Reducing Greenhouse Gas Emissions (RAN GRK) and the Regional Action Plan for Reducing Greenhouse Gas Emissions (RAD GRK). Due to its vulnerability to the impacts of climate change, including rising sea levels, prolonged droughts, and extreme weather that can cause floods and landslides. This vulnerable state of climate change ultimately has the potential to directly disrupt and negatively impact domestic economic, food, and energy security (Change, 2018). In response, Indonesia has set a voluntary goal to reduce Greenhouse Gas emissions by 26% by 2020; the commitment was later updated to a target of 29% by 2030.

The Climate Village Program (Prokim) also has Sustainable Development Goals (SDGs), a set of targets formulated by the United Nations (UN) as part of the 2030 Agenda. This program is a continuation of the Millennium Development Goals (MDGs). The SDGs are a global action plan comprising 17 goals with 169 targets that are interconnected, inclusive, and integrated, and are guided by the principle of "Leave No One Behind," which means no individual is left behind (Jakab, 2016). This plan has a timeframe of achievement until 2030. The main principles of the SDGs include several aspects: People (alleviating poverty, hunger, and inequality), Planet (preventing environmental degradation of the earth), Prosperity (creating prosperity and meeting the needs of life), Peace (creating peace and social participation without fear), and Partnership (collaboration to achieve sustainable development goals).

Indonesia has regulated the SDGs, including Article 6, paragraph 2, of the Regulation of the Minister of State for the Environment of the Republic of Indonesia Number 19 of 2012, which discusses mitigation efforts within the Climate Village Program, which focuses on increasing vegetation cover. In this case, increasing vegetation cover involves two main approaches: reforestation, which refers to a series of actions aimed at restoring, maintaining, and improving land conditions to achieve optimal production capacity and to play a role in

regulating water management and protecting the environment as a whole (MCGUIRE, 2014). Second, Agroforestry is a land-use concept that combines trees with agricultural crops in a single agricultural area. This approach aims to increase profits in both economic and environmental aspects (Garritty, 2004). In this system, the diversity of plants in a land area reduces the risk of crop failure and also protects the soil from erosion. The use of this system can also reduce dependence on fertilizers and other nutrients by efficiently recycling crop residues. Forests play a major role in various aspects of life, including the economic, social, developmental, and environmental. Forest ecosystems, with their diverse flora and fauna, are the foundation for national development and provide significant benefits to humanity. However, natural forest areas are declining.

In the Al-Quran, how to preserve nature in order to protect the earth has been explained. As in Surah Al An'am: 99 "It is He who sends down water from the sky, and with it We produce vegetation of every kind. Then we bring forth green growth from it. From it, we bring forth grains heaped together. From the sheaths of date palms, (unfolding) stalks hanging down. (We grow) gardens of grapes. (We also grow) olives and pomegranates, similar and dissimilar. Look at their fruit when it bears fruit and ripens. Indeed, there are signs for a people who believe".

In the 902nd Sahih Muslim History Hadith: "We have told us Muhammad bin Hatim and Ibn Abu Khalaf both said; have told us Rauh has told us Ibn Juraij has told me Abu Zubair that he heard Jabir bin Abdullah he said, "I heard Rasulullah sallallahu 'alaihi wasallam say: 'It is not a Muslim who plants a tree or plant, then the plant is eaten by wild animals, birds or something else. otherwise, unless it is worth charity to him (Abd Rahman et al., 2020)."

The Islamic scholar Ibn Khaldun also emphasized the importance of preserving forests. The following is quoted from his book *Al Mukhadimah*, which states: "Also consider some of the territories they have successfully seized and controlled since the time of the Prophet Adam. How their civilization declined, weakening the economy of its inhabitants and turning the earth into something other than the earth, turning fertile land into arid, barren land. Yemen, the center of Arab settlement and activity, was destroyed except for a few cities. Likewise, the primitive people in Iraq, the civilization once built by the Persians, was also destroyed" (Rohmah, 2017).

The presence of community forests plays a significant role in supporting the agricultural sector in rural areas, supporting ecosystems, maintaining ecological balance, and regulating water distribution within specific areas. The diversity of plant species found in community forests is closely related to diverse economic needs and varying quality. The pattern of planting various crop types on a single plot (mixed plantations) provides additional benefits to farmers. This arises from the instability of agricultural product prices. If one product experiences a price decline, it is hoped that other products with stable or even rising prices can offset the losses. The variety of plant species with different harvest cycles also reflects the principle of yield security. Throughout the year, there are always crops that can be harvested

at specific times.

Tree planting in Community Forests is a forest development practice carried out and managed by the community. Most of these forests are located on privately owned or customary land, although some are located on state-owned land or in state-managed forest areas. The functions of Community Forest Tree Planting include: First-Strata Rain Interception Media, Deep and Spreading Root Systems, Soil Surface Protection, and Provision of Water Sources (Bruijnzeel, 2004). Community Forest Tree Planting not only has environmental benefits but also helps maintain soil fertility, water quality, and prevent environmental damage (Calder, 2012).

The calculations revealed that economic factors influence the conversion of community forests to shifting cultivation. Over the past 10 years, the average area of community forests converted per farmer household was approximately 0.5 hectares, or approximately 43.4% of the total area of community forests they managed. Regression analysis showed that the lower the farmer's income from community forestry, the higher the percentage of community forest conversion to shifting cultivation and gardens. This change relates to income generated by farmers from community forestry land and from converted community forest land. The year-to-year decline in income from community forestry has encouraged farmers to convert forest land to fields and gardens, especially in the last decade.

However, macro-level analyses of global and national commitments to sustainability need to be focused on the local context. In this regard, the community forest in Mrayan Village, particularly the one managed by the Enggal Mulyo Lestari Forest Farmers Group (KTH), serves as a concrete example of the challenges and opportunities of community-based natural resource management. Community forests in this area not only serve as ecosystem buffers and water regulators, but also serve as the community's primary source of livelihood through the production of timber, pine resin, honey, and other commodities. Unfortunately, economic pressures and fluctuating commodity prices have driven some farmers to convert forest land into shifting cultivation or gardens, potentially reducing vegetation cover and ecosystem function.

Previous studies have examined community forestry in Indonesia from economic, social, and environmental perspectives. Rakatama and Pandit reviewed social forestry schemes in Indonesia and identified economic opportunities alongside persistent social and environmental challenges. Similarly, Astuti et al. examined the livelihood implications of community forest schemes, while Nakayama et al. demonstrated that the economic outcomes of social forestry vary according to local conditions. These studies highlight the importance of understanding the relationship between forest management and community welfare. However, the economic pressures that encourage farmers to convert community forest land into agricultural fields or gardens require further examination in relation to long-term forest sustainability (Astuti, 2020; Nakayama et al., 2024; Rakatama & Pandit, 2020).

From an Islamic economic perspective, Ali proposed integrating zakat and waqf into

social forestry programs to support poverty alleviation and forest conservation. This approach demonstrates the potential contribution of Islamic social finance to improving community welfare while maintaining environmental resources. Nevertheless, further empirical investigation is needed to understand how Islamic economic principles, particularly equitable benefit distribution and the avoidance of harm, can inform community forest management when declining forest income creates pressure for land conversion. The relationship between farmers' economic resilience, environmental conservation, and Islamic economic principles therefore represents an important area for further investigation (Ali et al., 2021) .

Building on these previous studies, the present research examines community forestry managed by the Enggal Mulyo Lestari Forest Farmers Group in Mrayan Village. Unlike studies that primarily focus on social forestry policies, livelihood outcomes, or Islamic social finance mechanisms, this study integrates tree planting practices, economic pressures associated with land conversion, and environmental benefits within an Islamic economic perspective. It further explores income guarantees and sharia-based microfinancing as potential strategies to strengthen farmers' economic resilience while supporting the sustainability of community forests.

Based on these conditions, this study formulated three main questions: How is tree planting practice in the community forest in KTH Enggal Mulyo Lestari carried out, in terms of type, scale, and method? How do economic factors influence the sustainability of the community forest in this location? How can Islamic economic principles be applied to support the sustainability of community forests and the welfare of farmers?

This study aims to describe the conditions and practices of tree planting in the Enggal Mulyo Lestari Community Forest Management Unit (KTH), analyze the relationship between economic factors and the sustainability of community forests, and propose management strategies consistent with Islamic economic principles. The theoretical contribution of this study lies in integrating the concepts of fair distribution of benefits and loss avoidance in community forest management, two core principles of Islamic economics that are rarely applied empirically in forestry studies (Kalsum, 2018).

The urgency of community forest management from an Islamic economic perspective lies in its view that natural resources are a trust that must be managed for the common good, by avoiding damage (*mafsadah*) and maximizing benefits (*maslahah*) (Sucipto, 2020). This principle aligns with the Sustainable Development Goals but places a stronger moral and spiritual emphasis on encouraging community participation. Thus, this study not only contributes to academic discourse but also provides practical recommendations for aligning forestry policies.

2. Methods

This study employed a qualitative descriptive approach to examine tree-planting practices in community forests, the economic factors influencing their sustainability, and the

application of Islamic economic principles to community forest management. This approach was selected to obtain an in-depth understanding of forest management practices, farmers' economic experiences, and the environmental implications of land-use decisions through field observations and in-depth interviews (Creswell & Poth, 2016).

The study was conducted in the Enggal Mulyo Lestari Forest Farmers Group (Kelompok Tani Hutan/KTH), located in Mrayan Village, Ngrayun District, Ponorogo Regency, East Java, Indonesia. The location was selected purposively because community members engage in various forest management activities, including tree planting, pine resin tapping, and honeybee cultivation. These activities provided a relevant context for examining the relationship between forest-based livelihoods, local economic conditions, and environmental sustainability. Field research and data collection were conducted in 2025.

The study population comprised all 56 members of the Enggal Mulyo Lestari Forest Farmers Group. Purposive sampling was employed to select participants with relevant experience in community forest management. Participants were required to have at least five years of experience managing community forests. Based on these criteria, 30 respondents were selected from the total population. Their active involvement in tree planting and forest product management provided relevant information for understanding the research problem.

The research instruments consisted of semi-structured interview guidelines and observation sheets. The interview guidelines covered tree species selection, planting scale and methods, forest management practices, farmers' economic conditions, production costs, profits, and factors influencing land conversion. The observation sheets were used to document planting locations, tree species, planting methods, and forest maintenance practices.

Content validity was assessed through consultations with two forestry experts and one Islamic economist. The study also reported an inter-rater reliability coefficient of 0.87, classified as high reliability (Ghozali, 2018). The instrument assessed, the number of raters involved, and the reliability calculation procedure should be specified to ensure methodological transparency.

Data collection was conducted in 2025 through field observations, in-depth interviews, and the examination of relevant economic records. Field observations documented tree-planting practices, including planting locations, tree species, planting methods, and maintenance activities. In-depth interviews explored farmers' reasons for selecting particular tree species, the challenges they encountered, and their experiences concerning the economic and environmental implications of community forest management.

Qualitative data were analyzed through data reduction, data presentation, and conclusion drawing. Interview findings, observation records, and relevant documents were organized and examined to identify recurring patterns concerning forest management practices, farmers' economic constraints, land-use decisions, and environmental sustainability. Economic information, including farmers' income and the extent of community

forest land converted into agricultural fields or gardens, was examined descriptively to contextualize the qualitative findings.

The findings were interpreted through the perspective of Islamic economics, particularly the principles of equitable benefit distribution, avoidance of harm, and balanced resource utilization. These principles provided an analytical framework for examining how community forest management could support farmers' welfare while maintaining the ecological functions of forest resources.

3. Results and Discussion

3.1 Results

A total of 30 members of the Enggal Mulyo Lestari Forest Farmers Group (KTH) participated in this study. The majority were aged 35-55 years and had a high school education (53.3%). The average area of their privately owned land was 1.15 hectares, of which 0.65 hectares were community forests, and the remainder were gardens or fields. Crops managed included pine (40%), mahogany (25%), sengon (20%), and multipurpose crops (15%) such as coffee and avocado. The majority of respondents practiced agroforestry, while the remainder practiced monoculture. Agroforestry is a land-use system that integrates trees with agricultural crops or livestock within a single land unit, thereby forming mutually beneficial ecological and economic relationships (Dagar & Tewari, 2017). This system utilizes the principle of crop diversification to increase land productivity, maintain soil fertility, protect water resources, reduce the risk of erosion, and provide long-term economic benefits for farmers (Garritty, 2004). The diversity of plant species in agroforestry also helps create a stable microclimate and increases biodiversity (Jose, 2009).

In contrast, monoculture is an agricultural or forestry cultivation system that grows only one type of crop over a large area in a single growing season (Pretty et al., 2018). This practice is often chosen because it is considered more efficient in management, maintenance, and harvesting (Food and Agriculture Organization of the United Nations, 2017). However, monoculture has disadvantages, including increased risk of pest and disease attacks, decreased soil fertility, and ecosystem degradation due to low biodiversity. In the long term, dependence on monoculture systems can increase a region's economic and ecological vulnerability (Tilman et al., 2002).

Table 1. Composition of Community Forest Plants in KTH Enggal Mulyo Lestari

Types of Plants	Percentage (%)	Main Planting System
Pine	40.0	Agroforestry & Monoculture
Mahogany	25.0	Agroforestry
Sengon	20.0	Agroforestry
Multipurpose Plants	15.0	Agroforestry

From the diverse plants in the Enggal Mulya Lestaru Community Forest Management Unit (KTH), the average wood production is 4.8 m³/ha/year, with a market price of Rp

850,000/m³. The annual net income from community forests is Rp7.2 million, lower than chili or corn plantations, which can generate Rp12-15 million/year. Management costs range from Rp1.5 million to Rp2 million per hectare per year, covering maintenance, plant protection, and repair of production road access.

Over the past 10 years, 43.4% of community forest land has been converted into gardens or fields. The main reasons are the need for quick funding (46.7%), business capital (33.3%), and fluctuating timber prices (20%). Consequently, there has been a shift in the functions of the members of the Enggal Mulya Lestari Community Forestry Group (KTH). The shift from timber or large trees to fast-growing crops such as porang (porang), ginger, and seasonal crops. Timber or large tree crops are considered less economically promising, especially given that this is the community's main economic problem.

This crop replacement process involves logging, just as when someone first clears land for agriculture. On the one hand, this logging eliminates some of the wood's functions, both for nature and for humans. However, this logging is carried out to meet daily economic needs, enabling faster yields and less waiting.

3.2 Economics and Land Conversion

The findings suggest that economic considerations play an important role in farmers' decisions to convert portions of their community forest land into agricultural fields or gardens. Descriptive data indicated that an average of 0.5 hectares, equivalent to 43.4% of the community forest area managed per household, had been converted to other uses. These figures illustrate the extent of land conversion in the study area. Field interviews and observations were used to explore the economic considerations underlying these decisions, particularly farmers' assessments of income, production costs, and the time required to obtain returns from different land-use options.

From the perspective of opportunity cost theory, farmers may consider alternative land uses when the expected returns from community forestry are insufficient to meet their economic needs. If the reported annual income from community forestry is approximately IDR 7.2 million, compared with IDR 12-15 million from chili cultivation over a shorter production cycle, this difference may help explain why some farmers consider allocating land to horticultural crops. These income figures should be interpreted in relation to their respective production costs, cultivated areas, and reporting periods to ensure a valid comparison. This interpretation is consistent with the broader argument that the short-term economic returns of forest-based livelihoods can influence land-use decisions, although the specific claims attributed to Ickowitz and Fikry and Sarjan should be checked against the original publications. From an Islamic economic perspective, these findings highlight the importance of improving farmers' livelihoods while preserving the ecological functions of community forests (Fikry & Sarjan, 2024; Ickowitz et al., 2017).

This phenomenon aligns with Kurniawan's findings, which explain that farmers in Central Java prefer converting community forests into horticultural gardens due to urgent

liquidity needs, such as for education, health care, or business capital (Aprianto et al., 2018). This indicates that land conversion decisions are not only technical-economic but also influenced by social and psychological factors in households. While the short-term benefits of horticulture are attractive, agronomically intensive cropping patterns without vegetative breaks can degrade soil quality through structural degradation, erosion, and reduced organic matter content (Stirzaker et al., 1988). Consequently, short-term gains can be followed by future productivity losses.

From a sustainability perspective, large-scale land conversion reduces the ability of ecosystems to sequester carbon, regulate water systems, and maintain biodiversity (Shukla et al., 2022). A study by the Indonesian Institute of Sciences (IPB) (2022) showed that a 10% reduction in tree cover in a watershed can increase the risk of seasonal flooding by up to 18% while significantly reducing soil water retention capacity. This decline in ecological function not only impacts the global environment by releasing carbon but also directly harms farmers by reducing water availability, increasing erosion, and degrading ecosystem services essential to agriculture. Therefore, pricing policies that support community forest products, coupled with conservation incentives (e.g., payments for ecosystem services), are important strategies to reduce the rate of land conversion.

Islamic economics-based solutions emphasize that decision-making is not solely oriented toward profit maximization but also considers *maslahah* (benefit to the wider community) and *istidāmah* (resource sustainability) (Wartoyo & Haida, 2023). Within the framework of *maqāṣid al-syarī'ah*, community forest management falls under safeguarding property (*ḥifẓ al-māl*) and protecting the environment (*ḥifẓ al-bī'ah*), both of which contribute to the public good (Saputra et al., 2021). This principle directs farmers to view the ecological and social benefits of community forests, such as clean water provision, flood control, and climate change mitigation, as part of the economic value that must be maintained, even though the direct financial benefits are not as significant as those from seasonal commodities. Therefore, policy interventions grounded in Islamic values can strengthen farmers' motivation to sustain community forests for long-term sustainability.

Within the framework of Islamic economics, nature is viewed as a trust entrusted by God to humans (*khalifah*) to be managed wisely, rather than merely exploited as a factor of production. Islamic environmental ethics emphasizes the principles of *tawḥīd* (unity), *mīzān* (balance), and *amānah* (accountability), which together limit economic actions to avoid damaging the ecological order that supports social life (Willya et al., 2020). Massive conversion of community forests without considering the ecosystem's carrying capacity contradicts the principle of *lā ḍarar wa lā ḍirār* (not causing and not retaliating harm), a normative principle that binds people to prevent harm to themselves and others, including future generations. Thus, land use decisions should not be weighed solely by short-term private profit, but also by the social and ecological costs borne by the community. These principles are not merely moral ideals; Contemporary studies show that they can be translated into community policies

and governance (modern hisbah) to ensure economic activities align with sustainability goals. This confirms that the conversion of community forests without regard for sustainability violates Sharia ethics, not only harming the environment.

The losses from community forest conversion extend beyond long-term income losses to the loss of ecosystem services: carbon sequestration/storage, water regulation, soil protection from erosion, microclimate protection, and biodiversity buffers that support surrounding agricultural productivity. The IPCC AR6 synthesis of evidence shows that tropical deforestation consistently reduces ecosystems' capacity to withstand climate shocks and exacerbates flood and drought risks (high confidence). Reductions in tree cover in watersheds weaken infiltration and soil moisture storage, increasing runoff and erosion; these impacts are cumulative (sediment accumulation, fertility degradation) and intergenerational, requiring long recovery times. Because markets fail to value these ecosystem services (externalities), performance-based incentives such as Payment for Ecosystem Services (PES) and high-integrity ecosystem service credits become relevant to offset the economic opportunities driving conversion. Recent studies and practices, including in Indonesia, demonstrate that PES can increase community incomes while curbing forest cover loss when the design is clear, measurable, and equitable (Le et al., 2024).

The implementation of *maqāṣid al-syarī'ah* demands the protection of five main objectives (*al-ḍarūriyyāt*): religion, life, mind, property, and descendants. In the context of community forests, ecosystem degradation threatens property (*ḥifẓ al-māl*) through decreased land productivity, loss of tree assets as savings, and increased agricultural production costs due to erosion/flooding; while also threatening lives (*ḥifẓ al-naḥs*) through increased risks of hydrometeorological disasters, water quality-related diseases, and food insecurity. Contemporary environmental fiqh studies add *ḥifẓ al-bī'ah* (environmental stewardship) as an elaboration of *maqāṣid* in the era of climate crisis, emphasizing intergenerational justice as a moral obligation: maintaining carrying capacity so that future generations do not suffer harm from our decisions today. Thus, uncontrolled conversion is not only a technical forestry issue but also a violation of *maqāṣid*, as it damages public welfare instruments (water, land, biodiversity) that support the lives of rural communities. The principle of *lā ḍarar* again serves as a normative fence to prevent policies or practices that pose a high risk of causing socio-environmental harm (Taha et al., 2025).

Based on the ethical foundations outlined above, community forest management should integrate ecological sustainability with equitable distribution of benefits. Institutionally, this can be achieved through Sharia-compliant partnerships, such as *musharakah/mudharabah*, to share capital and risk among value chain actors, and *salam/istiṣnā'* contracts for advance purchase contracts that address cash flow gaps in timber rotation. Recent literature demonstrates that Sharia-compliant financial instruments can align economic objectives with the SDGs when contract design explicitly emphasizes risk-sharing and outcome-based financing (e.g., standards of quality, traceability, and no-deforestation). Policy-wise, PES

schemes and high-integrity ecosystem service credits can be linked to Sharia-compliant contracts to ensure that environmental returns generated by communities are truly distributed equitably to upstream managers. International experiences, including green/thematic sukuk and water financing initiatives, demonstrate the potential of Islamic channels for financing small infrastructure (farm roads, nurseries, harvesting equipment) that lower costs and improve the financial viability of sustainable management at the KTH level (Toumbourou & others, 2025).

Agroforestry is effective because it combines economic and ecological benefits within a single landscape. Economically, commodity diversity (e.g., annual crops, fruit, and timber) creates a cascade of cash flows: immediate income from food/annual crops, intermediate income from fruit, and long-term capital gains from timber. This diversification reduces income risk (income smoothing) when commodity prices or weather are volatile. Biophysically, recent research shows that agroforestry improves soil fertility and structure (increased organic carbon/topsoil), improves water cycles, and suppresses erosion, all of which contribute to long-term yield stability (Octavia et al., 2023). Evidence from Indonesia and tropical regions also confirms agroforestry's capacity to increase above- and belowground carbon stocks, as well as increase the resilience of land and farming households to climate shocks and natural disasters.

Empirically, several recent studies in Indonesia and Asia confirm that households adopting agroforestry tend to earn higher incomes than those adopting monoculture systems. Household-based reviews indicate that agroforestry's contribution to food and income exceeds that of conventional systems; quantitative propensity score-matching studies also found increases in annual income per hectare with agroforestry adoption, although the magnitude of the increase varied by context, stand age, and species composition (Sudomo et al., 2023).

From an Islamic economic perspective, agroforestry aligns with the objectives of sharia (maqāṣid al-syarī'ah). This practice safeguards wealth (ḥifẓ al-māl) by protecting productive assets (land, trees, and yields) while simultaneously preserving the environment (ḥifẓ al-bī'ah), which contemporary literature positions as an integral part of the maqāṣid (Khuluq & Asmuni, 2025). The principle of benefit (maṣlaḥah) encourages farming choices that maximize collective benefits (ecological, social, and economic) and minimize intergenerational harm. Because agroforestry reduces the risk of land degradation, strengthens ecosystem services, and supports income security, it aligns with sharia's objectives to achieve falāḥ (sustainable well-being) at the household and community levels.

To optimize the benefits of agroforestry, targeted technical support for pruning and canopy management to reduce excessive shade, integrated pest management compatible with shade biodiversity, and market-tailored species mixes (e.g., fast-growing timber + high-value fruit) are required. In terms of financing, Islamic micro-schemes are relevant to address initial costs (seedlings, initial maintenance, and timber revenue lag). Instruments such as murābaḥah

for input, mudārabah/musyārah for yield partnerships, and salām for pre-financing intercrop harvests can be integrated into Islamic cooperatives (BMT) at the village level (Majid, 2021). Evidence in Indonesia shows that BMTs increase farmer financial inclusion; studies of Islamic financing participation in agricultural centers also identify determinants of adoption (financial literacy, accessibility, and equitable profit-sharing schemes). This integration of technical assistance and Islamic financing is accelerating the scale of agroforestry adoption in groups like the Enggal Mulyo Lestari KTH.

4. Conclusions

This study shows that lower income from community forests than from horticultural commodities significantly contributes to increased land conversion in the Enggal Mulyo Lestari KTH. This phenomenon aligns with the opportunity cost theory, which suggests that farmers tend to choose land uses that offer higher short-term profits. However, land conversion negatively impacts ecosystem sustainability, reducing carbon sequestration, maintaining water systems, and preserving biodiversity. The implementation of agroforestry has proven to be an effective strategy for optimizing economic and ecological benefits while supporting the principles of maqāṣid al-sharī'ah (the protection of property) and hifz al-bi'ah (environmental protection). This model provides dual income and maintains land productivity, thereby reducing incentives for land conversion. Efficiency from an Islamic economic perspective should be measured not only by the output-input ratio, but also by its contribution to collective well-being and long-term sustainability. Therefore, non-financial indicators such as soil conservation, biodiversity, and ecosystem stability need to be included in assessing the success of community forest management. In terms of policy implications, policymakers must consider the following: setting a price for community timber. This is done to guarantee farmers' incomes and prevent land conversion. Second, the development of Islamic microfinance. The goal is to prevent financing that charges high interest rates to community forest farmers. This is done to strengthen the economy. The researchers acknowledge that this study still has many shortcomings and requires further development to be more beneficial, particularly for community forestry practitioners and academics in general. Further research recommendations include the following: a multi-location quantitative analysis to test the consistency of the relationship between income, agroforestry practices, and land conversion across various community forest ecosystem types.

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