

Philosophical View on Fulfilling Community Economic Needs Through Non-Timber Forest Products in the Context of Community Forest Management

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Abstract. Non-timber forest products (NTFPs) play a crucial role in supporting rural livelihoods while contributing to the sustainable management of community forests. However, the utilization of NTFPs is often predominantly viewed from an economic perspective, with limited consideration of environmental ethics and ecological sustainability. Integrating anthropocentric, ecocentric, and biocentric perspectives provides a more comprehensive framework for understanding the balance between community welfare and forest conservation. This study aims to analyze the practices of utilizing NTFPs to meet community economic needs, examine the relationship between NTFP utilization, forest ecosystem sustainability, and community participation, and explore these practices through the perspectives of environmental philosophy. The research employed a qualitative descriptive approach using a case study design in community forest areas. Data were collected through field observations, semi-structured interviews with community members, community forest managers, and local stakeholders, as well as documentation studies. The collected data were analyzed using an interactive qualitative analysis model involving data reduction, data display, and conclusion drawing. The findings indicate that NTFPs significantly contribute to household income diversification while encouraging active community participation in sustainable forest management. Traditional ecological knowledge and local institutions strengthen conservation practices and promote responsible resource utilization. From an environmental philosophy perspective, NTFP management reflects a dynamic interaction among anthropocentric, ecocentric, and biocentric values, demonstrating that economic benefits can be harmonized with ecological integrity and ethical responsibility. These findings highlight the importance of integrating environmental ethics into community forest management policies to achieve socially equitable, economically viable, and ecologically sustainable development.

Keywords: Non-timber forest products; Community forest; Environmental philosophy; Sustainable forest management; Community participation

INTRODUCTION

Forests are strategic ecosystems that have ecological, social, cultural, and economic functions for people in various parts of the world (Sheppard et al., 2020). In recent decades, the forest management paradigm has shifted from a timber exploitation orientation to a more sustainable approach through the use of non-timber forest products (NTFPs). The Food and Agriculture Organization (FAO) reports that NTFPs contribute significantly to the livelihoods of millions of rural and indigenous peoples, while supporting the conservation of forest resources when managed sustainably (FAO, 2022). In Indonesia, the ever-evolving social forestry policy provides legal space for communities to manage forest areas through various schemes, including community forests. This condition makes NTFPs not only an economic commodity, but also an instrument for community empowerment and strengthening socio-ecological resilience in the area around the forest.

Empirically, various studies show that NTFPs have a real contribution to meeting the economic needs of households around forests (Derebe & Alemu, 2023). Makkarennu et al., (2025) found that commodities such as forest honey and palm trees make an important contribution to community income while strengthening family economic resilience. Similar findings were conveyed by Desyanti (2023) which shows that the use of palm sugar, bamboo, rattan, petai, and various derivative products is an additional source of income for rural

communities. In addition to the economic aspect, research by Sari et al., (2025) revealed that the use of NTFPs is also closely related to local knowledge, social practices, and public perceptions of environmental sustainability. This phenomenon shows that NTFP utilization activities cannot be understood solely as economic activities, but as social practices that involve human relations with nature, cultural values, and responsibility for the sustainability of forest resources.

Although the study of NTFPs has grown quite rapidly, most previous research has focused on quantitative aspects, such as contribution to income, commodity economic potential, productivity, and market development. Pasaribu et al., (2021) emphasized that the challenges of NTFP management in Indonesia are not only related to economic aspects, but also related to policies, institutions, technological innovation, and resource sustainability. Meanwhile, Rachmina et al., (2024) show that the success of social forestry programs is greatly influenced by social factors and community participation in forest area management. However, there are still limitations in research that examines NTFPs from the perspective of environmental philosophy that integrates economic, ecological, and ethical dimensions simultaneously (de Mello et al., 2020). Studies that explain how people interpret forests, negotiate economic needs with ecological responsibility, and reflect on human moral relationships with non-human living beings are still relatively limited. This condition shows that there are research gaps that need to be filled through a qualitative approach that is able to reveal meaning, experience, and philosophical reflection in NTFP management practices.

Based on this description, this study aims to examine the practice of meeting the economic needs of the community through the use of NTFPs in the context of community forest management by integrating anthropocentric, ecocentric, and biocentric perspectives as an analytical framework. The focus of the study is directed at the relationship between the economic well-being of the community, the sustainability of forest ecosystems, and human ethical responsibility for the environment. Theoretically, this research is expected to enrich the treasures of social forestry studies and environmental philosophy through a more holistic approach in understanding natural resource management. Practically, the results of the research are expected to be a basis for consideration for communities, community forest managers, and policymakers in formulating NTFP management strategies that are not only economically productive, but also socially just and ecologically sustainable.

RESEARCH METHODS

This research uses a qualitative approach with a narrative study type that aims to deeply understand the practice of managing non-timber forest products (NTFPs) in the socio-ecological context of the community and how these practices are understood and interpreted through various philosophical perspectives. The narrative approach was chosen because it allowed researchers to explore the stories and meanings of the experiences of social actors in the real-life contexts of their lives, resulting in a rich understanding of the relationship between NTFP management practices, local knowledge, and the values behind the actions. In narrative qualitative research, data is collected from various sources of texts and documents as a form of *field texts* that are analyzed comprehensively, in accordance with the understanding of narrative in the social sciences (*narrative inquiry*) which emphasizes the construction of meaning through stories and experiences of research participants.

The data collection technique was carried out through a comprehensive literature study of relevant academic and policy sources. Primary data were generated from a review of scientific journals (2020–2025) that discussed the use of NTFPs in various community and conservation contexts, as well as previous research related to the economic, social, and ecological value of NTFPs in community forest areas and conservation areas. In addition, data is also collected from academic books, conservation agency reports, and national/regional policy documents that

formulate rules and governance of forestless forest resources, thus providing a strong theoretical, normative, and contextual foundation. All sources were systematically analyzed to interpret the practices, strategies, and consequences of NTFP utilization within a philosophical framework. Data analysis was carried out using synthesis and philosophical reflection techniques, which combine empirical findings from the literature with anthropocentric, ecocentric, and biocentric theories to map the thinking patterns and values that underlie NTFP management practices. This process includes the identification of key themes, the comparison of perspectives in the document, as well as the interpretation of relevant philosophical values to explain the linkages between community experience and environmental ethical principles in the context of sustainability.

RESULTS AND DISCUSSION

The results of this study show that the use of non-timber forest products (NTFPs) in the context of community forests cannot be understood only as economic activities. Based on a synthesis of the scientific literature analyzed through a narrative qualitative approach, NTFPs emerge as socio-ecological practices that link the fulfillment of household needs, local knowledge, community participation, and ethical responsibility for forests. In line with the character of narrative studies, findings are not presented in the form of statistical relationships, but as patterns of meaning formed from various academic texts and study documents. Literature is treated as a source of narrative that shows how communities around forests build relationships with natural resources through economic experiences, cultural practices, and ecological awareness. Furthermore, these patterns of meaning ultimately lead to three complementary philosophical perspectives, namely anthropocentric, ecocentric, and biocentric views, which are the main framework in interpreting the results of this study.

Before entering into the discussion of each philosophical perspective, it should be emphasized that the use of NTFPs first appears to be a support for the household economy of the communities around the forest. In various studies, NTFPs are present as a source of additional income, a source of family consumption, and a livelihood diversification strategy (Peerzada et al., 2022; Asamoah et al., 2024). Desyanti (2023) shows that the community around the Nagari Pondok Parian Village Forest utilizes palm sugar, bamboo, rattan, petai, and their derivative products as a local economic resource that is easily accessible and managed through skills that have been owned for generations. Makkarennu et al., (2025) also showed that forest honey and palm trees make a real contribution to the income of communities around forest areas. These findings are in line with the study of Rahman et al., (2021) which emphasized that NTFPs play a role as a livelihood safety net for people living around forest areas, especially when agricultural products are insufficient or there is sudden economic pressure. Thus, the economic contribution of NTFPs needs to be understood not as a stand-alone phenomenon, but as an entry point to understand the broader relationship between humans and forests, which in turn can be dissected through three philosophical perspectives.

An Anthropocentric View: Forests as a Source of Livelihood

The first view that emerges from the synthesis of literature is an anthropocentric perspective, which is a perspective that places human interests and needs as the center of consideration in forest use. In this framework, NTFPs are understood primarily as resources that are directly useful for humans, both as foodstuffs, handicrafts, and commodities that can be traded. A variety of literature shows that this view grew naturally out of the real needs of communities around forests, most of whom had limited access to formal employment and non-agricultural sources of income. Shackleton and de Vos (2022) even noted that globally there are billions of people who depend on NTFPs for part of their livelihoods, a figure that shows how central the orientation of meeting human needs is in people's relations with forests.

At the empirical level, this anthropocentric view is clearly seen in the findings of Desyanti (2023) and Makkarennu et al., (2025) which show that palm sugar, bamboo, rattan, petai, and forest honey are positioned primarily as sources of income and meeting family consumption needs. In this context, forests are interpreted as "granaries" that provide economic security for households, in line with the findings of Derebe et al., (2023) which shows that the contribution of NTFPs to household incomes in the Asian and African regions can reach more than one-third of total income, depending on market access and the level of commercialization of products. This view is important and morally valid, because the community around the forest does need a decent and just source of livelihood.

However, the synthesis of literature also shows the vulnerable side of the anthropocentric perspective when used narrowly. If forests are solely positioned as a tool to meet human needs without paying attention to ecological limits, the use of NTFPs has the potential to shift to exploitation. Shackleton et al., (2024) warn that under certain conditions, people's dependence on NTFPs can actually turn into a "poverty trap" if utilization is carried out without adequate management, so that short-term economic benefits actually sacrifice the long-term sustainability of resources. These findings confirm that anthropocentric orientation, although departing from legitimate needs, needs to be balanced with awareness of the carrying capacity of ecosystems so as not to get caught up in short-term exploitative logic.

An Ecocentric View: Forests as Interdependent Systems of Life

The second view that emerges from the synthesis of the literature is the ecocentric perspective, which expands the anthropocentric perspective by placing forests not just as a collection of resources, but as ecosystems that have interdependent internal structures, functions, and balances. In this view, the sustainability of NTFP benefits for humans can only be maintained if the integrity of the forest ecosystem is maintained. Sari et al., (2025) show that the perception of the Sumberejo community towards NTFPs cannot be separated from the awareness of environmental sustainability, where the community views the use of forest resources as something that must be maintained so that it can continue to be enjoyed by the next generation.

This ecocentric perspective is also seen in the findings regarding local wisdom in various indigenous communities in Indonesia. For example, studies of customary forest management in Kalimantan show that community-based monitoring practices and the preservation of sacred sites contribute to forest sustainability because communities view forests as a whole system that sustains life, not solely as a source of commodities (Mulyani et al., 2024). Similarly, customary mechanisms such as sasi in Maluku show how limiting the harvesting time of natural resources serves to maintain resource population regeneration while distributing benefits equitably among community members (Annisa et al., 2024). Such patterns affirm the ecocentric principle that the use of forest honey, palm, rattan, bamboo, petai, and other types of NTFPs must take into account the regeneration capacity, environmental carrying capacity, and balance of the habitat where these resources grow.

At the institutional level, this ecocentric perspective is also closely related to the success of community forest governance. Pasaribu et al., (2021) emphasized that the development of NTFPs in Indonesia still faces challenges in policy aspects, cultivation technology, processing innovations, and institutional strengthening, all of which have implications for the ecosystem's ability to continue to provide benefits in a sustainable manner. Rachmina et al., (2024) show that the sustainability of social forestry programs is greatly influenced by community involvement and local institutional capacity in regulating harvesting patterns, benefit-sharing, and area protection. Without institutions that function as guardians of ecosystem balance, the use of NTFPs risks being individual and unplanned, making it difficult for ecocentric principles that emphasize interconnectedness in the ecosystem to be realized in practice. Thus, the

ecocentric perspective emphasizes that the economic well-being of the communities around the forest ultimately depends on the collective ability to maintain the forest as a intact living system.

The Biocentric View: Moral Responsibility to Non-Human Living Beings

The third view found in the synthesis of literature is the biocentric perspective, which places further emphasis on the value of life itself. In this perspective, non-human living things, both plants, animals, and microorganisms that make up forest ecosystems, are not only seen as valuable because of their benefits to humans, but also have an intrinsic value that should be respected. This thinking is in line with the tradition of deep ecology developed by Naess (1989), which emphasizes that the well-being and development of human and non-human life has value in itself, regardless of its usefulness for human purposes. In the context of NTFP management, this biocentric view demands an ethical awareness that palm-producing trees, trees where bees nest, bamboo clumps, rattan, and various other forest species are part of a network of life that has its own position, not just an object waiting to be utilized.

The relevance of this biocentric perspective is also seen in the study of contemporary environmental philosophy. As emphasized in Naess's review of thought, the principles of self-realization and biocentric equality assume that every natural entity has an equal position in the network of life, so human actions towards nature need to be based on self-identification with the entire network, not just a calculation of economic benefits and losses (Madsen, 2023). In the practice of NTFP management, this kind of awareness can be seen in the way the community treats honey-producing trees or bamboo clumps not only as production assets, but as part of the environment that must be maintained. This kind of knowledge and ethics generally do not arise instantly, but are formed through long experience and are inherited between generations as part of the local wisdom of the community (Sari et al., 2025).

This biocentric view also gives a moral dimension to NTFP management which cannot be reduced to a purely technical or economic problem. Communities benefit from forests, but at the same time bear the responsibility to maintain the sustainability of these livelihoods for other living things that also inhabit forest ecosystems. Within the framework of the narrative study used in this study, such moral obligations appear to be part of the narrative of community resilience: when people cultivate palm, harvest honey, utilize bamboo, or make rattan-based products, they not only produce commodities, but also maintain the knowledge, skills, and ethical relationships that have long been inherent in their lives with other living beings around the forest.

Synthesis: Three Philosophical Views as One

Based on these three philosophical views, the results of this study show that NTFPs have a multidimensional meaning that cannot be partially understood. The anthropocentric view emphasizes that NTFPs help communities meet household needs and strengthen livelihood resilience, so their existence should not be ignored in any community forest management policy. The ecocentric view emphasizes that these economic benefits can only be sustained if the structure and function of forest ecosystems are maintained, so that community welfare and ecosystem health are two sides of a mutual relationship. The biocentric view adds an ethical dimension that non-human living beings that make up forest ecosystems have their own existence value, so the use of NTFPs requires moral awareness, not just profit-loss considerations.

These three views basically do not negate each other, but complement each other in forming a complete environmental ethical framework for NTFP management. These findings are in line with a study on local wisdom in the Baduy indigenous people, which shows that community behavior towards their local wisdom also forms a natural resource management pattern that maintains environmental sustainability without ignoring daily economic needs (Naniko & Saharuddin 2023). In other words, communities around forests have actually been, empirically and reflectively, incorporating these three philosophical orientations into their daily practice,

although they have not always been explicitly articulated as a framework for environmental philosophy.

The main findings of this study can be formulated in one big pattern, namely that the fulfillment of the economic needs of the community through NTFPs takes place in a negotiation space between human needs (anthropocentric), the sustainability of ecological systems (ecocentric), and moral responsibility towards non-human living things (biocentric). Communities need NTFPs to survive and improve their well-being, but the sustainability of these benefits can only be maintained if forests are treated as ecosystems that have social, cultural, ecological, and moral value at the same time. Therefore, the results of this study support the need for community forest management that integrates the three philosophical orientations in a balanced manner, so that the use of NTFPs can be a model of development that is economically productive, socially just, rooted in local knowledge, and ecologically and ethically responsible.

CONCLUSION

This study concludes that the use of Non-Timber Forest Products (NTFPs) in the context of community forests is a multidimensional socio-ecological practice, where commodities such as forest honey, palm, bamboo, rattan, and petai have been proven to play a role as a safety net for livelihoods for communities around the forest as well as an instrument of household economic resilience. The sustainability of these benefits is highly determined by the integrity of the forest ecosystem and the active participation of the community in local governance, as evidenced by various local wisdom practices that regulate harvesting patterns collectively to maintain resource regeneration. From the point of view of environmental philosophy, the use of NTFPs cannot be understood through a single lens, but rather through the integration of three complementary perspectives: anthropocentrism that affirms people's right to a decent livelihood, ecocentrism that places ecosystem health as a prerequisite for economic sustainability, and biocentrism that demands moral responsibility for the value of the existence of non-human living beings in forests. Thus, effective community forest management must integrate the three philosophical orientations in a balanced manner so that the use of NTFPs can become a development model that is both economically productive, socially just, rooted in local knowledge, and ecologically and ethically responsible.

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