



ECO-CULTURAL FISCAL GOVERNANCE OF VILLAGE ORIGINAL INCOME: BUILDING A FRAMEWORK FOR SUSTAINABLE RURAL DEVELOPMENT

SHELLA BUDIAWAN¹, MELINDA IBRAHIM^{1*} AND LILIK PURWANTI²

¹Faculty of Economics, Universitas Ichsan Gorontalo, Kota Gorontalo, Indonesia

²Faculty of Economics and Business, Universitas Brawijaya, Kota Malang, Indonesia

*Corresponding author: melindaibrahim99@gmail.com

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ABSTRACT

Village original income (Pendapatan Asli Desa or PADes) is essential for strengthening local fiscal governance in Indonesia. However, its management remains dominated by technocratic approaches that overlook the ecological stewardship, cultural identity, and community-based governance dimensions critical to sustainable rural resilience. This study aimed to conceptualise an eco-cultural governance framework for PADes by integrating economic, ecological, and cultural resources as interdependent foundations of rural sustainability. An interpretative ethnographic approach was employed in Daenaa village, an indigenous community in Eastern Indonesia, involving in-depth interviews with 13 informants, participant observations over seven months, Focus Group Discussions (FGDs), and document analysis. Data were analysed following Spradley's domain, taxonomic, and componential stages to capture the meanings and practices embedded in community life. The findings revealed that PADes functioned not merely as a fiscal instrument but also as a collective symbol of village dignity, leveraging local assets and traditional practices through village enterprises and ecotourism. Customs served as a normative filter, ensuring fairness and legitimacy. This study theoretically contributes by extending the Social-ecological Systems (SES), Community-based Natural Resource Management (CBNRM), and Sustainable Rural Livelihoods (SRL) frameworks into the domain of village fiscal governance by demonstrating how ecological stewardship, community-based resource management, and livelihood sustainability are institutionally embedded in local cultural values and customary practices, offering a contextual model that bridges fiscal decentralisation theory with eco-cultural governance at the village level. It is recommended that village governments and policymakers integrate eco-cultural values into PADes planning, strengthen customary institutions alongside formal mechanisms, and design adaptive governance mechanisms that recognise eco-cultural values.

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Introduction

Sustainable development in rural areas depends heavily on the capacity for effective fiscal governance and the management of villages as interrelated foundations. Specifically, *Badan Usaha Milik Desa* (BUMDes), agriculture, and ecotourism are inseparable from the preservation of forests, land, and rivers, as well

as socio-cultural practices such as cooperation, customary rituals, and collective norms.

A fundamental paradox underlies this condition. On the one hand, villages in Indonesia possess abundant ecological assets, including forests, rivers, and agricultural land, as well

as rich cultural resources, such as customary norms, harvest rituals, and community cooperation practices, that have historically sustained local livelihoods and social cohesion. On the other hand, the dominant framework for managing Pendapatan Asli Desa (PADes) remains narrowly technocratic, treating village fiscal governance primarily as an administrative compliance exercise rather than as a mechanism for integrating these ecological and cultural foundations (Sang *et al.*, 2021; Rao *et al.*, 2023; Yuan *et al.*, 2025). This paradox reveals a structural disconnect: the ecological and cultural resources that constitute the foundation of rural sustainability are systematically excluded from the fiscal governance framework designed to strengthen them (Turner *et al.*, 2010; Ostrom, 2014). As a result, PADes often prioritises short-term revenue generation over long-term ecological stewardship and cultural legitimacy, thereby undermining the adaptive capacity of rural communities to pursue sustainable development.

In response to this paradox, this study aims to conceptualise an eco-cultural governance framework for PADes by integrating economic, ecological, and cultural dimensions (Musgrave, 1959; Oates, 1999). In Indonesia, village fiscal governance is legally regulated through the Regulation of the Minister of Home Affairs No. 20 of 2018 on Village Financial Management (2018), which authorises villages to manage their own original income (PADes) as a financial basis for local development. Within this decentralisation framework, villages in Indonesia receive approximately 93.9% of their total revenue from fiscal transfers (51% from the Village Fund and 37.3% from ADD). In comparison, PADes accounts for only approximately 5.5% (World Bank, 2020). In this study, the term “village small businesses” refers to Small and Medium Enterprises (SMEs) operating in rural contexts, including Village-owned Enterprises (Badan Usaha Milik Desa, or BUMDes), which together constitute the local economic base that directly contributes to PADes.

This fiscal condition indicates a critical problem: villages remain highly dependent on fiscal transfers, indicating that PADes is often not optimised as an instrument of fiscal autonomy. Such dependency creates fiscal vulnerability, suggesting that sustainable rural development cannot be achieved solely through technocratic logic and short-term administrative compliance. The literature on local public finance highlights that fiscal capacity and sustainability depend not only on administrative efficiency but also on the institutional ability to innovate, diversify revenue sources, and strengthen governance accountability (Bird & Smart, 2002; Shah, 2004; Rodden, 2005). However, in the Indonesian context, PADes management often remains narrowly framed within technocratic and compliance-oriented approaches. Such practices tend to prioritise administrative compliance over local adaptive capacity and community empowerment, thereby limiting the transformative role of fiscal decentralisation. Recent studies have further noted that fiscal governance in rural areas is shaped by multiple interdependent domains like economic, ecological, and socio-cultural, determining the legitimacy and sustainability of local revenue systems (Agrawal & Gibson, 1999; Jones *et al.*, 2024).

The theoretical foundation for understanding these interdependencies can be derived from three interrelated frameworks. The SES framework explains that the resilience of rural systems emerges from the continuous interaction among social, ecological, and institutional domains, whose balance determines governance sustainability (McGinnis & Ostrom, 2014; Ostrom, 2014). CBNRM and SRL emphasise that fiscal arrangements at the local level should be embedded within the ecological and institutional environment (Berkes, 2009; Lele *et al.*, 2013). In the Indonesian context, PADes provides a fiscal mechanism through which these interdependencies can be operationalised by integrating local ecological assets, cultural practices, and community participation into a coherent governance structure. When fiscal governance fails to recognise these

interconnections, it risks producing short-term compliance rather than strengthening adaptive capacity.

Beyond these theoretical frameworks, the literature on adaptive governance and deliberative planning offers complementary perspectives for incorporating intangible values in public governance, including village-level fiscal governance (Fabricius *et al.*, 2007; Fedele *et al.*, 2019). Comparative studies in South Africa and Latin America have demonstrated that integrating rights, resources, and local institutions into deliberative fiscal frameworks enhances the effectiveness of resource management (Allison & Horemans, 2006).

Despite these theoretical advances, existing studies on village fiscal governance in Indonesia largely adhere to conventional patterns, viewing fiscal matters merely as administrative and economic instruments rather than as an arena for integrating social, cultural, and ecological values. Non-economic dimensions such as spirituality, cultural identity, and protected values, which constitute the basis of social legitimacy in resource management (Turner *et al.*, 2010; Ostrom, 2014), remain largely absent from fiscal governance frameworks. This absence represents a critical gap: Without incorporating ecological stewardship and cultural legitimacy into fiscal governance, PADes management risks becoming structurally disconnected from the very community foundations that sustain it.

From this review, three knowledge gaps stand out. First, studies on PADes in Indonesia rarely integrate cultural values and socio-ecological relations into fiscal governance. Second, although SES and CBNRM frameworks have advanced globally, their application to village-level public finance in Indonesia remains scarce. Third, an inclusive and eco-cultural fiscal governance model has not yet been conceptually articulated or empirically grounded. Addressing these gaps will enrich the fiscal decentralisation literature while strengthening village fiscal capacity for sustainability.

There is therefore an urgent need to reframe village fiscal governance beyond its

technocratic boundaries. Rather than a mere academic proposition, integrating eco-cultural values into fiscal governance represents a practical necessity for achieving sustainable rural development in Indonesia. Specifically, eco-cultural governance offers a transformative strategy for local revenue mobilisation by repositioning village fiscal autonomy not merely as an administrative function, but as a culturally and ecologically grounded practice (Musviyanti *et al.*, 2022; Hilmawan *et al.*, 2023). Without such reframing, villages will continue to underutilise their ecological and cultural assets, thereby perpetuating fiscal dependency and undermining long-term sustainability.

To address these issues, this study asks two questions: (1) How do local cultural values and ecological relations shape socio-economic practices in PADes management? and (2) How can an eco-cultural fiscal governance framework for PADes be derived from local community practices? To address these questions, the study adopts an interpretive ethnographic approach to capture how fiscal meanings and socio-ecological practices are locally constructed and sustained. Consequently, the proposed framework is designed not merely as an analytical model but as a contextually grounded governance paradigm for sustainable village fiscal management.

Building on these objectives, this study contributes in three aspects. Theoretically, it extends the application of the SES framework by integrating it with fiscal governance and local public finance literatures. It introduces the concept of the Customary Normative Filter, a mechanism through which cultural values and customary norms mediate fiscal decisions and legitimise resource governance at the village level. Methodologically, it offers an eco-cultural PADes governance model grounded in local community practices through an ethnography and deliberative planning approach, thereby producing a contextually relevant and replicable fiscal framework. Practically, it provides actionable insights for village governments, policymakers, and relevant stakeholders to

design sustainable village fiscal policies that leverage social capital, local wisdom, and ecological assets to strengthen PADes.

Materials and Methods

Research Design and Data Collection

This study employed an interpretive ethnographic design within a qualitative framework to examine the meanings, symbols, and socio-ecological practices that shape the eco-cultural fiscal governance of PADes. This approach was chosen to capture the complex interactions among cultural values, ecological relations, and formal fiscal policies, which are often difficult to explain with quantitative methods or structured surveys. Notably, interpretative ethnography enabled the researchers to explore the emic perspectives of the community, identify the local logics underlying fiscal practices, and uncover policy adaptation processes within the village's socio-ecological context (Creswell & Creswell, 2022).

The research was conducted in Deanaa Village, an indigenous community in Eastern Indonesia, which was purposively selected because it exemplifies a community with strong cultural values, preserved ecological knowledge, and established formal PADes mechanisms. Consequently, the village served as an ideal arena to examine the integration between modern fiscal governance and traditional practices. Fieldwork was conducted over seven months, from December 2023 to June 2024, providing sufficient time for the researchers to build trust with the community and gain a deep understanding of local practices.

A total of 13 informants participated in this study, selected through a combination of purposive and snowball sampling techniques. Initial informants were purposively selected based on two key criteria: (a) A minimum of three years of experience in PADes management, or (b) active participation in village deliberation forums. Using the snowball technique, these initial informants then recommended other

community members with relevant knowledge and experience. The final sample comprised the village head, BUMDes managers, customary leaders, village officials, representatives from women's groups and youth, farmers, and small entrepreneurs directly involved in resource management. Data collection persisted until theoretical saturation was achieved, as evidenced by the recurrence of similar themes and the absence of new substantive information in subsequent interviews.

Data collection was executed through participant observation, in-depth interviews, and FGDs (Creswell & Creswell, 2022). Participant observation allowed the researchers to document social interactions, resource management practices, and village deliberation mechanisms firsthand. In-depth interviews were conducted to explore personal narratives and individual interpretations of PADes policies and perspectives on the relationship between cultural values and fiscal governance. FGDs were employed to clarify and validate preliminary findings and build a collective understanding of the proposed governance framework. Field notes, audio recordings, and visual documentation supplemented all data collection processes.

Data Analysis and Validation

Data analysis followed Spradley's (1980) ethnographic framework, consisting of domain analysis, taxonomic analysis, and componential analysis. In the domain analysis stage, researchers identified general categories related to the socio-ecological practices informing PADes. The taxonomic stage then mapped hierarchical relationships between these categories to uncover the internal structure of practices and their underlying values. Finally, the componential stage differentiated the specific attributes of each category, such as cultural values, ecological relations, and institutional mechanisms. This process was carried out iteratively using constant comparison to maintain interpretive consistency (Lahman, 2020).

These three analytical stages functioned as a sequential and cumulative process through which the eco-cultural fiscal governance framework was progressively constructed. Domain analysis identified broad ecological, cultural, and socio-economic categories; taxonomic analysis mapped their relational structures; and componential analysis specified the distinctive attributes of each category, ultimately defining the framework's dimensions. This inductive pathway ensured that the framework reflected the emic logic of villagers rather than externally imposed theoretical categories.

To ensure validity, the study employed triangulation of sources, methods, and member-checking (Garcia & Gluesing, 2013). Triangulation was achieved by cross-referencing data from different informant categories (e.g., village officials vs. customary leaders) and across multiple collection methods (observation vs. interviews vs. FGDs). Member-checking was conducted collectively through a focus group session with key informants at the analysis stage. During this session, preliminary interpretations and the proposed eco-cultural governance framework were presented for validation. Feedback from these informants led to refinements in the categorisation of cultural practices and clarified the relationship between customary norms and formal fiscal mechanisms. Additionally, reflexivity and critical reflection were maintained through field notes and discussions with analysis partners, ensuring the credibility, dependability, and confirmability of the findings.

The research team consisted of academics from institutions outside the Daenaa Village community. While their positionality as etic (outsider) researchers afforded analytical distance, it also carried the risk of missing embedded cultural nuances or misinterpreting local meanings. To mitigate these limitations, the researchers conducted an intensive seven-month period of fieldwork to build relationships and understanding with the community. Regular informal interactions with villagers outside of formal interviews helped the team grasp subtle contextual nuances. In addition, a collaborative

verification process involving community members ensured that interpretations accurately reflected local perspectives rather than imposing an external academic framework. The researchers further acknowledge that, as academics interested in eco-cultural governance, they may have been prone to confirmation bias, leading them to highlight the harmonious aspects of community practices. To address this potential bias, the researchers deliberately documented the tensions, conflicts, and challenges expressed by informants, particularly regarding intergenerational value tensions and friction between formal policies and customary rules.

Ethical principles were rigorously applied throughout the research to ensure procedural integrity and respect for the local community. Data collection commenced only after obtaining formal ethical approval from a recognised institutional review board. Prior to engaging in any interview, observation, or focus group discussion, participants were fully informed of the research objectives, procedures, and their rights, including the voluntary nature of participation and the option to withdraw at any time without consequences. Accordingly, written informed consent was obtained from all participants, emphasising respect for cultural values and community norms. To maintain confidentiality, all data were anonymised and securely stored in encrypted digital files, with access restricted to the research team only. These measures ensured that the research was ethically sound and culturally sensitive to the indigenous context of Daenaa Village.

Results

The findings of this study revealed that the management practices of PADes in Daenaa village are deeply rooted in the integration of ecological values, cultural traditions, social norms, and local institutions. These interrelated elements shape collective practices that cannot be explained solely through formal fiscal approaches, but rather through an eco-cultural framework that interconnects natural heritage,

community spirituality, and socio-economic practices. Specifically, patterns of PADes production and distribution were influenced not only by formal village policies but also by customary norms, collective traditions, and value-based community participation. To provide an initial synthesis, Table 1 presents a summary of the four key dimensions that formed the foundation of PADes management based on local values.

The findings in these four dimensions directly address RQ1 by demonstrating how ecological and cultural values were integrated into PADes governance. At the same time, the ecological and cultural dimensions illustrate the normative and symbolic foundations of governance. In contrast, the socio-economic and institutional dimensions demonstrate how this integration operated in benefit distribution practices and institutional mechanisms. Furthermore, the variation of meanings among actors within the institutional dimension serves as an entry point to address RQ2, illuminating how inter-actor relations influence the legitimacy and sustainability of PADes governance. In addition, traditional arts are recognised as cultural expressions that reinforced community

identity and cohesion, serving as symbolic assets that indirectly supported fiscal legitimacy. The following sub-sections elaborate on these dimensions, drawing on informant quotations compiled in Table 2.

The quotations presented in Table 2 reflect the diverse voices of community members across ecological, cultural, socio-economic, and institutional domains. Rather than isolated expressions, these statements represent recurring patterns of meaning that emerged consistently across interviews, FGDs, and field observations. The following sub-sections elaborate on how these eco-cultural dimensions shape the management and sustainability of PADes in Daenaa Village, beginning with the integration of ecological and cultural values in PADes governance.

Integration of Ecological and Cultural Values in PADes Governance

The management of PADes in Daenaa village could not be reduced solely to a fiscal instrument but had to be understood as a social practice rooted in ecological values and local culture. In this context, PADes functions as a mechanism that links natural heritage, moral responsibility,

Table 1: Summary of key findings based on analytical dimensions

Analytical Dimension	Summary of Main Insights	Empirical Indicators
Ecological	Forest and garden assets were regarded as ancestral heritage; conservation was carried out through customary norms	Prohibitions on cutting young trees; water rituals (<i>larung sungai</i>); deliberations before land clearing
Cultural	Harvest rituals, river offerings (<i>larung sungai</i>), the value of shame in crop failure, and cooperation strengthened social structures, traditional arts and performances that reinforce cultural identity and strengthen collective belonging	Shame (<i>malu</i>) as a social control mechanism; annual harvest ceremonies observed during fieldwork
Socio-economic	BUMDes functioned as collective symbols; rotating savings systems and training programmes revitalised the spirit of local entrepreneurship	BUMDes as primary PADes contributor; multiple rotating savings groups are active in village
Institutional	Tensions between formal structures and customary institutions, as well as variations in interpretation, influenced outcomes and the effectiveness of governance	Documented scheduling conflicts between formal activities and sacred days

Source: Author's analysis based on fieldwork data (2024)

Table 2: Informant quotations from fieldwork in Daenaa Village

No.	Informant	Quotation	Theme/Domain
1	Customary leader	<i>"We plant not only for today's harvest, but for our children and grandchildren."</i>	Ecological: Intergenerational heritage
2	Farmer group leader	<i>"If we fail to harvest, we feel ashamed, as if we cannot manage our parents' inheritance properly."</i>	Cultural: Productivity as honour
3	BPD member	<i>"BUMDes is not just a business; it is the dignity of the village. If PADes is high, it means we are respected."</i>	Socio-economic: Collective pride
4	Small entrepreneur	<i>"If we only rely on fiscal transfers, the village will not grow. BUMDes and small enterprises can be the strength."</i>	Socio-economic: Fiscal self-reliance
5	Community leader	<i>"If the forest is destroyed, there will be no water, and harvests will disappear. The economy must run, but the forest must not be forgotten."</i>	Ecological: Ecological interdependency
6	Middle-aged woman, farmer group	<i>"We cannot plant corn carelessly. We must first obtain permission through customary rituals. Otherwise, the harvest will be bitter or even fail to yield. For us, the earth has a soul. If we become greedy, we may become angry."</i>	Ecological: Animistic cosmology
7	Young teacher	<i>"Children today want to work in the city; who will take care of the gardens in the future?"</i>	Cultural: Intergenerational tension
8	Young villager	<i>"Our parents say planting must follow our feelings. However, young people now want quick results, often using chemical fertilisers to achieve higher yields. Yet the soil becomes hard, and water can no longer seep in."</i>	Cultural: Intergenerational value tension
9	BUMDes manager	<i>"If we chase quick profits, the pine trees may be damaged. But if we focus only on conservation, PADes revenues will also slow down."</i>	Ecological: Conservation vs. revenue tension
10	Customary leader	<i>"Sometimes the officials schedule communal work on sacred days. That violates customary rules."</i>	Institutional: Formal-customary friction
11	Villager	<i>"When there is major work, people still practice cooperation; it is part of customs that strengthen PADes."</i>	Cultural: Gotong royong
12	Village officer	<i>"If we only depend on external funds, the village will not be strong. What sustains us are the pine forests, the river, and the customs that we continue to practice."</i>	Socio-economic: Village resilience
13	BUMDes manager	<i>"The challenges are indeed significant, especially regarding licensing and visitor management, but if well managed, the benefits will return to the village."</i>	Institutional: Governance challenges

Source: Author's analysis based on fieldwork data (2024)

and collective dignity. This orientation shapes a distinctive governance model in which economic dimensions were constantly negotiated against customary norms, spirituality, and social solidarity.

At the domain analysis stage, ecological heritage emerged as a form of intergenerational trust. Pine forests, rubber plantations, and food crops are conceptualised not only as the village's economic base but also as symbols of sustainability that bound moral obligations across generations. As a customary leader affirmed, ecological assets are considered inherited trusts that obligate present and future generations to practice responsible resource stewardship (Table 2).

This affirmation reveals a profound temporal orientation in resource governance that transcends immediate economic calculation. The phrase “children and grandchildren” signifies that ecological assets are not perceived as commodities to be exploited but as inherited trusts to be preserved. This intergenerational awareness transforms PADes from a mere revenue tool into a moral contract that binds current actors to future generations. The mindset of managers embedded in this statement shows that fiscal sustainability in Daenaa cannot be separated from ecological management; economic gains that sacrifice the long-term sustainability of resources will be considered a violation of ancestral trust.

Nevertheless, the Daenaa community went further, attributing spiritual meaning: Land and forests were treated as living entities with moral rights to be respected. This orientation gave rise to customary conservation practices, such as prohibitions on cutting young trees, water rituals, and deliberation before land clearing. These practices not only maintained the ecological base but also constituted the fiscal foundation of PADes, since revenues from BUMDes, forestry, and agriculture depended on resource sustainability. In other words, custom functioned not as a supplement but as a governance mechanism that ensured fiscal stability at the village level.

In the ecological domain, land and forests are treated as living entities with moral rights. This orientation gives rise to traditional conservation practices, including prohibitions on harvesting young trees, water ceremonies, and customary deliberations prior to land clearing. These practices safeguard not only the ecological foundation for community life, but also the fiscal foundation of PADes, as revenue from BUMDes, forestry, and agriculture depends on the sustainability of resources. Simultaneously, cultural values also function as living fiscal mechanisms. Norms of social honour and cooperation regulate work ethics, the collective distribution of burdens, and informal oversight of resource use. For farmers, productivity was understood not merely as crop yields but as a representation of social honour and family dignity. As a farmer group leader explained, agricultural productivity was deeply embedded in a moral economy where failure carried reputational consequences extending beyond the individual to the family lineage (Table 2).

This explanation reveals the profound interplay between economic performance and social identity in Daenaa society. The use of the term “*malu*” (shame) indicates that agricultural productivity operates within a moral economy where failure carries reputational consequences that extend beyond the individual to the family lineage. Furthermore, framing land and productive capacity as “parental inheritance” elevates these assets to a sacred legacy rather than neutral economic inputs. This cultural logic creates a powerful mechanism of informal accountability: Farmers are motivated not solely by profit maximisation, but by an obligation to honour ancestral trust and maintain social status. This type of internal accountability may be more effective than formal monitoring systems in ensuring sustainable resource use.

In addition, PADes is conceptualised as a symbol of collective pride. Revenues from BUMDes and village income streams are viewed as representations of community dignity. A member of the Village Consultative

Body (Badan Permusyawaratan Desa or BPD) emphasised the symbolic significance of PADes as a marker of village dignity and collective pride (Table 2).

This emphasis illustrates how fiscal performance serves as a marker of collective identity and social status in inter-village relations. The equation of PADes with “dignity” and “respect” demonstrates that village income transcends its instrumental function as a resource for development. High PADes symbolises communal capacity, independence, and eligibility for recognition from neighbouring communities and external authorities. Consequently, this symbolic dimension fosters a strong collective motivation for fiscal optimisation, which a purely technocratic approach cannot capture. Nonetheless, these practices are not free from internal tensions. The componential analysis revealed conflicts across generations, between formal and customary actors, and between short-term economic orientations and long-term conservation goals.

Particularly, younger generations exhibit a preference for service sectors and urban employment. The taxonomic analysis stage uncovered the relational structure of these practices. Pine management is executed through customary deliberations, enforcing prohibitions against overexploitation alongside annual river ceremonies. Collective activities, such as corn planting and harvest-sharing rotations, reaffirm productivity as a symbol of social honour. In the context of collective pride, BUMDes training and the open disclosure of PADes reports strengthened community trust. Furthermore,

harvest rituals and prohibitions on cutting young pine trees represent concrete expressions of the eco-cultural norms embedded in Daenaa society. The subcategories within each domain are presented in Table 3.

In addition to the practices described above, collective values such as “customary harvest rituals” and “taboos on cutting young pine trees” reinforce eco-cultural norms within PADes governance. However, these practices are not immune to internal tensions. The componential analysis revealed tensions across generations, between formal and customary actors, and between short-term economic orientations and long-term conservation goals. Most prominently, younger generations exhibit a growing preference for the service sectors and urban employment, thereby undermining the generational renewal of agricultural labour. As a young teacher explained (Table 2), these demographic shifts in occupational preferences pose a profound challenge to the long-term sustainability of eco-cultural governance.

This perspective reflects a fundamental shift in youth aspirations, with younger community members increasingly seeking social mobility through non-agrarian occupations. Consequently, this structural shift raises a critical concern regarding intergenerational continuity in eco-cultural governance. The teacher’s concern reveals a rift in the transmission of agricultural knowledge and conservation values to the younger generation. Urban migration and non-agricultural aspirations threaten the human capital needed to maintain traditional resource management practices. The question “who will

Table 3: Domains and subcategories of practices in taxonomic analysis

Domain	Subcategories of Practices and Values
Intergenerational heritage	Pine management through customary deliberations, prohibitions on overexploitation, and annual river ceremonies (<i>larung sungai</i>)
Productivity as honour	Corn planting through cooperation, harvest competitions among farmer groups, rotating savings, and harvest-sharing systems
Collective pride	BUMDes training activities, open publication of PADes reports, and symbolic affirmation of PADes outcomes

Source: Author’s analysis based on fieldwork data (2024)

tend the gardens?” is not merely practical, but existential; it questions whether the eco-cultural governance model can survive the generational transition. This tension indicates that the sustainability of PADes faces demographic and cultural challenges that cannot be resolved through fiscal policy alone, but require targeted strategies for youth engagement and the revitalisation of rural livelihoods.

From the perspective of village fiscal governance, this poses significant risks to PADes revenue bases derived from forestry and agriculture. Within the SLR framework, shifts in labour preferences illustrate the dynamics of human capital that is no longer fully absorbed into natural capital. Thus, the sustainability of village fiscal capacity depended on the extent to which the community could formulate adaptive strategies, either through the diversification of BUMDes enterprises or by reinforcing the legitimacy of cultural values to engage younger generations in resource management.

These tensions also manifest in village policies that occasionally clash with customary rules. Such conflicts created value frictions between formal and customary actors. For instance, several village policies were not aligned with customary rituals, such as land clearing during taboo days. As stated by a customary leader (Table 2), institutional friction emerged when formal bureaucratic scheduling conflicts with customary rhythms and sacred days, ultimately undermining governance legitimacy in the eyes of tradition-oriented community members.

This statement illuminates profound institutional friction between formal bureaucratic governance and the customary authority system. Specifically, scheduling of “communal work on holy days” represents a clash between administrative rationality (which prioritises efficiency and standardisation) and cultural rationality (which recognises temporal prohibitions and sacred rhythms). Furthermore, framing these scheduling conflicts as a “violation” suggests that traditional leaders view such disruptions not merely as administrative

inconveniences, but as violations of the moral order. This friction reveals that effective PADes governance requires institutional coordination mechanisms that respect the customary calendar and decision-making protocols. Failure to achieve such coordination risks eroding the legitimacy of formal governance structures in the eyes of tradition-oriented community members.

Ultimately, these findings indicate that although PADes was managed formally through village regulations, its social legitimacy remains deeply rooted in customary norms. These recurring conflicts underscore the importance of co-governance between formal and traditional actors to ensure that PADes governance operates harmoniously. Simultaneously, tension persists within the fiscal domain itself. While some actors push for returns from PADes profits through resource exploitation, others emphasise long-term conservation. A BUMDes manager explained that balancing revenue generation with ecological preservation remains the central governance challenge, as both pure exploitation and pure conservation are ultimately unsustainable (Table 2).

This statement captures the central dilemma in eco-cultural fiscal governance: The tension between short-term revenue generation and long-term ecological sustainability. The BUMDes manager’s formulation reveals sophisticated awareness that both extremes, pure exploitation and pure conservation, are unsustainable. The challenge lies in finding a dynamic balance that generates sufficient revenue to meet community needs while preserving the resource base for future productivity. This balance requires continuous negotiation among stakeholders with divergent time horizons and risk preferences. The managers’ articulation suggests that PADes governance in Daenaa operates through a deliberative process that weighs competing values rather than imposing uniform solutions.

Beyond institutional tensions, the eco-cultural dimension of PADes governance was also deeply shaped by spiritual beliefs governing human-nature relations. A middle-aged woman

involved in a farmer group illustrated (Table 2) that human-nature relations are understood through both spiritual and social lenses. Her perspective highlights an animistic cosmology that fundamentally informs agricultural practices and the overall trajectory of PADes governance.

This illustration affirmed an animistic cosmology that fundamentally shapes agricultural practices and, by extension, PADes governance. The belief that “the earth has a soul” and can “become angry” elevates nature to a moral agent with which humans must maintain a reciprocal relationship. The requirement to “obtain permission through traditional ceremonies” before planting transforms agriculture from a purely technical activity into a spiritual negotiation. This cosmological framework thus provides powerful ecological protection: Greed and indiscriminate exploitation are understood as direct triggers for natural retaliation in the form of crop failure. Such beliefs create self-enforcing conservation norms that operate independently of formal regulations. Under this framework, crop failures or poor harvests serve as both practical consequences and cosmic justice for violations of the proper human-nature relationship. In addition, these eco-cultural norms face internal pressure: A young villager described intergenerational value tensions, noting that while older generations approach planting through relational and intuitive knowledge rooted in ecological sensitivity, younger generations increasingly favour chemical-intensive methods that yield short-term results at the expense of long-term environmental sustainability (Table 2).

This description documents an emerging conflict between traditional ecological knowledge and modern agricultural intensification. The older generation’s approach, “planting must follow our feelings,” represents an intuitive mode of agriculture rooted in relationships and attentive to subtle environmental cues. The younger generation’s preference for “quick results” through chemical fertilisers reflects penetration of productivist logic into village agriculture. Critically, informants note concrete

ecological degradation: Soil compaction and reduced water infiltration. This observation suggests that the abandonment of traditional practices carries measurable environmental costs that ultimately undermine long-term productivity. The tensions documented here are not merely cultural but have material consequences for the sustainability of PADes’ income sources.

Conceptualising the Eco-cultural Framework of PADes Governance

The field findings indicate that village resources supporting PADes do not function in isolation; rather, they are deeply interwoven across economic, ecological, and cultural dimensions. Villagers frequently emphasise that these three dimensions form inseparable foundations. A village officer explained (Table 2) that ecological sustainability and cultural continuity are viewed as mutually reinforcing. The officer emphasises that strengthening PADes requires not merely revenue diversification but the cultivation of cultural practices that motivate and legitimate sustainable resource use.

This explanation articulates a holistic vision of village resilience that seamlessly integrates fiscal, ecological, and cultural elements. The officer’s rejection of dependence on “external funds” (fiscal transfers) in favour of endogenous assets “pine forest,” “river,” and “customs” represents a counter-narrative to the dominant fiscal decentralisation models that overemphasise top-down transfer mechanisms. Explicitly linking natural assets to cultural practices (customs we continue to practice) indicates that ecological sustainability and cultural continuity are understood as mutually reinforcing. This perspective suggests that strengthening PADes requires not merely revenue diversification, but the deliberate cultivation of the cultural practices that motivate and legitimate sustainable resource use.

Within the economic domain, villagers and officials frequently highlight the roles of BUMDes, small enterprises, agriculture, plantations, and ecotourism as vital pillars

driving PADes. A small entrepreneur emphasised that fiscal self-reliance requires diversification beyond government transfers, highlighting the strategic role of BUMDes and small enterprises as primary drivers of village economic independence (Table 2).

This emphasis affirmed the importance of fiscal self-reliance through diversification of local enterprises. BUMDes and small businesses were understood not merely as business units; however, as symbols of the village's capacity for self-sufficiency. In the ecological domain, pine forests, agricultural land, rivers, and community plantations were regarded as vital assets. Forests, agricultural land, rivers, and community plantations were regarded as vital assets. A community leader remarked that ecological interdependencies and their economic implications are deeply understood by villagers, affirming that sustainable economic activity must operate within ecological limits (Table 2).

This remark demonstrates a sophisticated understanding of ecological interdependencies and their economic implications. Specifically, the causal chain, forest destruction leads to water loss, leads to harvest failure, reflects an accurate comprehension of watershed functions. The formulation "the economy must run, but the forest must not be forgotten" acknowledges the necessity of economic activity while establishing ecological preservation as a non-negotiable constraint. Rather than representing an anti-development stance, this perspective insists on development bounded by ecological limits. The statement provides normative grounding for eco-cultural governance: Economic pursuits that "forget" the forest are delegitimised as unsustainable and ultimately self-defeating.

In the cultural domain, practices of cooperation, harvest rituals, and customs remained preserved and functioned as social bonds in village development. One villager explained that traditional cooperation practices, such as *gotong royong*, directly support fiscal governance by reducing monetary costs of village projects and strengthening social cohesion and collective commitment (Table 2).

This explanation reveals how traditional cooperation practices (*gotong royong*) directly support fiscal governance. Notably, the relationship between "cooperation" and "strengthening PADes" demonstrates that the mobilisation of traditional labour reduces the monetary costs of village projects. Therefore, it effectively represents contributions in kind to village development that complement formal fiscal resources. Furthermore, cooperative practices build social cohesion and collective commitment, which in turn facilitate other aspects of governance. The phrase "the community still practices" acknowledges that these traditions persist despite the pressures of modernisation, reflecting a cultural resilience that can be effectively leveraged for sustainable development.

The taxonomic analysis reveals that these assets perform broader functions across three interconnected domains: Economic, ecological, and cultural. The economic domain encompasses product diversification, sustainable agriculture, and village tourism; the ecological domain emphasises the conservation and utilisation of environmental potential; and the cultural domain is internalised through the strengthening of customary institutions and tradition-based enterprises. Sacred values embedded in these practices transformed village fiscal arrangements from mere administrative obligations to expressions of social commitment and community identity.

Within this fiscal framework, cultural practices served as mechanisms of legitimacy, thereby enhancing community compliance with fiscal obligations, including voluntary contributions and participation in village levies. The value of cooperation also reduced fiscal transaction costs by strengthening trust and minimising potential conflicts. Thus, cultural dimensions enhance fiscal accountability through heightened transparency and social oversight grounded in local norms.

The componential analysis further reveals distinctive characteristics of PADes, including its multidimensional impacts (economic, ecological,

and social), the range of actors involved (village government, community, and forestry office), and emerging challenges (licensing, visitor management, and sustainability). A BUMDes manager acknowledged that despite significant governance challenges in developing village assets, particularly in tourism-related enterprises, the community maintains a belief in its adaptive capacity to manage these challenges effectively (Table 2).

This acknowledgement reflects the complex governance demands involved in developing village assets, particularly in tourism-related enterprises. The reference to “licensing and visitor management” indicates that PADes development increasingly requires navigating regulatory frameworks and service quality standards that may exceed traditional village governance capacities. However, the managers’ conditional optimism “if well managed, the benefits will return,” suggests belief in the village’s adaptive capacity. Ultimately, this perspective frames these institutional challenges not as insurmountable obstacles, but as manageable governance problems that can be addressed through strategic leadership.

All field findings are synthesised and presented in Figure 1. The figure illustrates the flow of ethnographic analysis from the domain stage to taxonomic and componential stages, representing how local assets (economic, ecological, and cultural) were interpreted by villagers and processed in their everyday practices. This analytical process yields a set of contextual strategies for PADes development, including pine forest-based ecotourism, integrating cultural values into empowerment programmes, and strategically diversifying revenue streams aligned with local potential. Hence, PADes was not merely a fiscal instrument but functioned as a space for social, cultural, and ecological reproduction rooted in the village’s own strengths.

The ethnographic analysis yielded a conceptual framework illustrating the transformative mechanisms through which village assets are converted into sustainable

PADes strategies (Figure 1). This framework emerged inductively from field data rather than a priori conceptualisation, reflecting the emic logic of how Daenaa villagers themselves understand the relationship between their resources and fiscal governance.

The construction of this framework followed a three-stage analytical process. In the first stage, domain analysis of interview transcripts, field notes, and FGD records identified three broad asset categories consistently referenced by informants: Economic, ecological, and socio-cultural assets. In the second stage, taxonomic analysis mapped hierarchical relationships among these categories, revealing how specific practices such as *gotong royong*, *larung sungai*, and BUMDes operations were nested within broader governance domains. In the third stage, componential analysis distinguished the specific attributes, including involved actors, impacts, and institutional challenges, that determine how each asset contributes to PADes sustainability. The synthesis of these three stages, visualised in Figure 1, produced a set of contextual strategies that constituted the eco-cultural governance framework.

The synthesis of these findings is visualised in Figure 2, which presents the eco-cultural model of sustainable PADes governance as a bottom-up approach to village revenue management. Figure 2 illustrates the transformative trajectory of eco-cultural governance: Starting with eco-cultural foundations, moving to governance dimensions, evolving into socio-institutional collaboration, and ultimately producing village sustainability outcomes, including increased PADes, ecosystem preservation, and strengthened cultural identity.

As illustrated in Figure 2, the eco-cultural governance framework comprises three interconnected layers that operate sequentially from the village asset base towards sustainable outcomes. At the foundation of this framework are three categories of village assets that informants consistently identified as the basis for PADes formation. Economic assets, including BUMDes, small businesses,

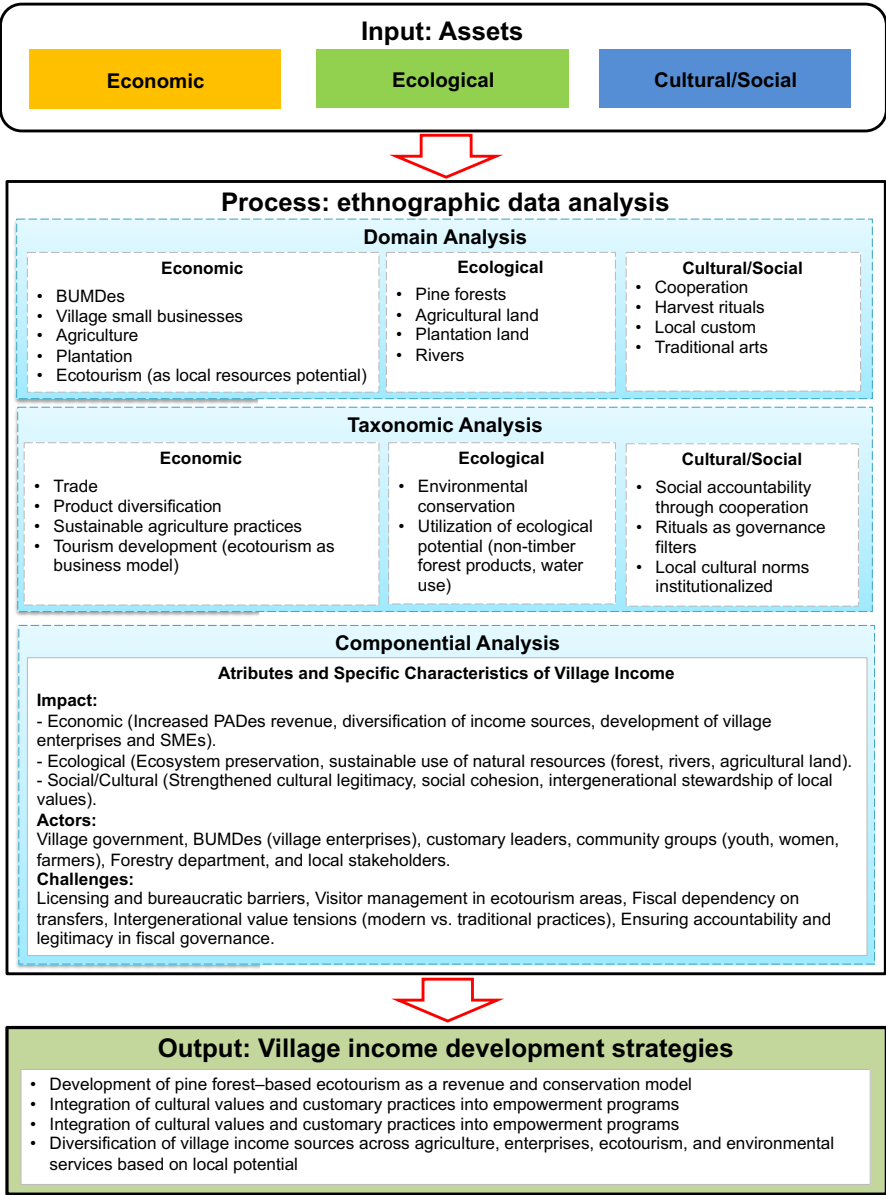


Figure 1: Mechanism of transforming local assets into PADes values

Source: Compiled by the authors based on data (2024)

agriculture, plantations, and developing ecotourism, represent the tangible productive base. Nevertheless, what distinguishes this framework from conventional fiscal models is the equal placement of ecological assets (pine forests, agricultural land, rivers) and cultural-social assets (cooperative practices, harvest

ceremonies, local customs). This tripartite structure reflects the informants’ worldview that economic productivity cannot be separated from ecological management and cultural integrity.

These assets undergo analytical transformation through ethnographic interpretation. Initial domain analysis identifies

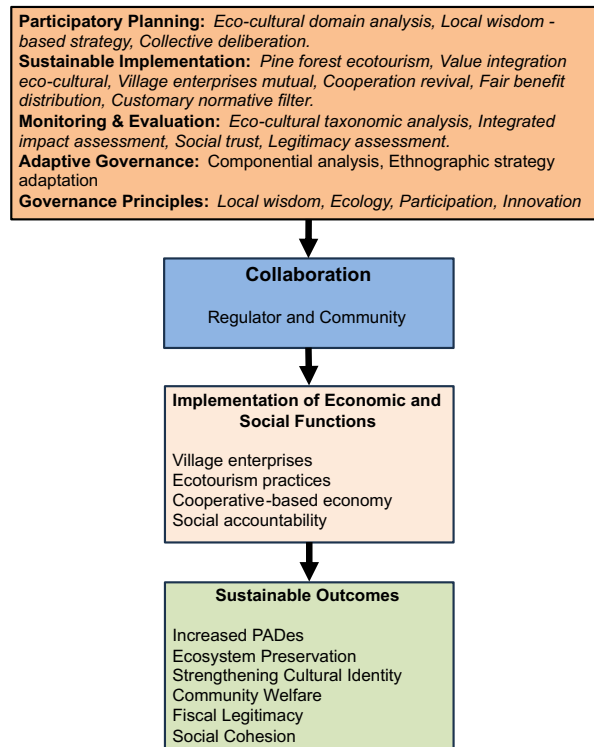


Figure 2: Eco-cultural model of sustainable PADes governance
Source: Compiled by the authors based on data (2024)

broad asset categories, while taxonomic analysis maps hierarchical relationships among subcategories. For example, pine forests have not only timber value but also spiritual significance, watershed protection, and tourism potential. Subsequent componential analysis distinguishes the specific attributes that determine how each asset contributes to PADes sustainability.

The analysis identified four concrete development strategies. These comprise pine forest-based ecotourism that simultaneously generates income and reinforces conservation norms; the integration of cultural values into economic empowerment programmes; diversification of income sources across sectors; and environmental service mechanisms that convert ecological management into monetary value. Critically, these strategies did not emerge as external prescriptions, but rather as expressions of practices already embedded in community life.

This framework demonstrates that PADes in Daenaa Village function not merely as a fiscal tool, but also as an arena for the reproduction of social, cultural, and ecological values. The reciprocal relationship among assets, analysis, and strategy signifies continuous feedback rather than linear causality; income generated by ecotourism reinforces the cultural value placed on forest conservation, which, in turn, informs how subsequent development decisions are evaluated.

Discussion

This section examines the study's main findings, evaluating the applied theoretical frameworks and their relevance to the broader literature on village sustainability. These findings reinforce the importance of socio-ecological approaches in local resource management. In the context of Daenaa Village, the interaction between

cultural values and ecological systems produced a collective meaning of PADes as a symbolic, economic, and spiritual entity.

The findings of this study demonstrate that PADes governance in Daenaa Village operates through a unique logic, which integrates ecological, cultural, and economic dimensions in a way that goes beyond the conventional application of the SES framework. Although Ostrom's (2014) general framework emphasises the interactions between resource systems, governance systems, resource units, and users, this study reveals an additional dimension: The role of cultural cosmology and moral economy in mediating these interactions. Indeed, recent literature reviews of SES applications highlight this specific dimension as theoretically underexplored and insufficiently operationalised (Partelow, 2018). The belief that "the earth has a soul" and can respond to human greed fundamentally shapes resource use decisions in ways that pure institutional analysis overlooks. Consequently, this finding challenges the implicit rationalist assumptions underlying much SES research, which tends to treat actors as strategic decision-makers responding to institutional incentives (Schlager & Ostrom, 1992). Recent scholarship has increasingly sought to address this gap by incorporating cultural and spiritual dimensions into socio-ecological analysis, recognising that indigenous worldviews holistically orient governance structures, ecological knowledge systems, and cultural expressions (Nepal, 2024; Fernández-Llamazares *et al.*, 2024).

In Daenaa, resource governance is deeply embedded in an animistic worldview in which ecological sustainability is not merely instrumentally valuable but also cosmologically obligatory. This insight suggests that the conventional SES framework may need to incorporate what Berkes (2009) refers to as "sacred ecology," the spiritual and cosmological dimensions of human-environment relationships that shape governance outcomes independently of formal institutional arrangements, while treating non-human and more-than-human

relationships seriously as a constitutive part of governance (Paul *et al.*, 2021).

This integration of shame (*malu*) as a governance mechanism further extends SES theory. McGinnis and Ostrom (2014) identified social norms as a primary driver influencing collective action outcomes. Nonetheless, the Daenaa case indicates how deeply these norms are intertwined with ancestral identity and lineage. Within this context, shame not merely functions as a reputational sanction, but also as an existential threat to the honour of the family across generations. The intensity of this normative pressure creates mutually reinforcing governance mechanisms that may be more resilient than externally imposed rules, a finding consistent with Cleaver's (2012) concept of "institutional bricolage," in which formal and informal institutions become inextricably linked.

However, the heavy cultural embeddedness of this governance structure also raises critical questions. If fiscal sustainability depends on cosmological beliefs that may not be shared by younger generations, what happens when cultural transmission weakens? The intergenerational tensions documented in this study—young people preferring urban jobs and chemical-intensive agriculture—suggest that the eco-cultural governance model faces significant demographic and cultural obstacles. Contemporary research on indigenous knowledge transmission confirms these challenges, noting that colonialism, forced assimilation policies, and the erosion of traditional lifestyles continue to disrupt intergenerational knowledge transfer in many indigenous communities globally (Bell *et al.*, 2025). This vulnerability is not adequately addressed in SES literature, which tends to assume a relatively stable cultural context (Cote & Nightingale, 2012).

This finding also challenges the dominant assumption in the literature on fiscal decentralisation, which generally views local revenue generation as a technical issue in expanding the tax base, improving collection efficiency, and diversifying revenue sources (Bird & Smart, 2002; Shah, 2004; Rodden,

2005). Recent assessments of Indonesia's fiscal decentralisation confirm that, despite two decades of implementation, many regions still depend heavily on central government transfers, with local own-source revenue averaging only 9.9% of total revenue in 2023 (Lewis & Lewis, 2023).

The Daenaa case shows that BUMDes operate simultaneously as economic tools, cultural symbols, and social contracts. The statement that “BUMDes are the pride of the village” indicates that fiscal performance has a meaning that goes beyond revenue maximisation. This symbolic dimension of local finance has been largely overlooked in the mainstream fiscal federalism literature, which operates within a rationalist paradigm focused on efficiency, equity, and accountability (Oates, 1999).

In the Indonesian context, this is important because recent reforms in the intergovernmental fiscal framework, such as the implementation of Law No. 1/2022, have changed incentives and oversight in ways that can strengthen or constrain local fiscal autonomy depending on how legitimacy is negotiated on the ground (Lewis & Lewis, 2023). Similarly, technical agendas to increase local tax mobilisation through administrative modernisation and digital systems are increasingly being implemented in practice. Nevertheless, their effectiveness depends on alignment with local norms and trust (Asian Development Bank, 2022). Daenaa's findings indicate that fiscal legitimacy, the perception of the truth of revenue claims, depends not only on procedural compliance but also on alignment with local values and cosmologies. This resonates with Moore's (2011) argument that taxation involves a social contract that must be culturally negotiated, not merely technically administered.

The concept of “Customary Normative Filter” that emerged from the findings represents a theoretical contribution to fiscal governance literature. This mechanism ensures that fiscal decisions pass through cultural validation before gaining social acceptance. Unlike

formal accountability mechanisms that operate through elections, audits, and sanctions, the Customary Normative Filter operates through moral judgments based on ancestral values. This finding extends Levi's (1989) work on quasi-voluntary compliance by identifying cultural legitimacy as a distinct source of fiscal consent beyond the instrumental calculations she emphasises. From a policy perspective, these findings imply that efforts to strengthen PADes through purely technical interventions, training, system improvements, and revenue diversification may achieve limited success if they ignore the cultural foundations of fiscal governance. The finding that scheduling conflicts between formal activities and sacred days undermine governance legitimacy illustrates how technocratic approaches can inadvertently delegitimise fiscal institutions by violating cultural rationalities.

This study extends CBNRM scholarship by demonstrating how community governance principles apply to the fiscal domain. At the same time, CBNRM literature has extensively examined community management of forests, fisheries, and wildlife (Blaikie, 2006; Fabricius *et al.*, 2007; Berkes, 2009); relatively little attention has been paid to how these governance logics extend to village-level public finance. The Daenaa case shows that the same cultural values, social structures, and deliberative practices that govern natural resources also shape PADes management. This finding challenges the implicit compartmentalisation in development practice, where natural resource management and fiscal governance are treated as separate technical domains requiring different expertise. The evidence from Daenaa suggests that villagers do not experience these as separate domains; rather, pine forest conservation and PADes revenue are understood as interconnected aspects of community well-being governed by shared values. This holistic perspective aligns with indigenous governance scholarship that emphasises the integration of ecological, economic, and spiritual domains (Whyte, 2018; Artelle *et al.*, 2019). Nonetheless, the tendency within CBNRM literature to

romanticise community governance must be balanced with the tensions documented in this study. Conflicts between formal and customary actors, between older and younger generations, and between conservation and exploitation orientations demonstrate that “communities” are not homogeneous actors with unified interests. These findings support critiques of CBNRM that highlight internal community differentiation and power dynamics (Agrawal & Gibson, 1999).

This contribution is particularly relevant to the growing literature on village fiscal governance in Indonesia. While recent studies have examined the structural dimensions of local fiscal autonomy (Musviyanti *et al.*, 2022) and the role of village funds and village-owned enterprises in rural development (Hilmawan *et al.*, 2023), these accounts predominantly focus on formal fiscal mechanisms. The present study complements this literature by demonstrating that sustainable PADes governance cannot be achieved solely through formal fiscal instruments; rather, it requires alignment with the ecological and cultural foundations of community life.

The documented tensions between generations regarding agricultural methods, employment preferences, and environmental values directly relate to the SRL framework (Chambers & Conway, 1992; Scoones, 2015). The SRL framework identifies human capital, including knowledge, skills, and labour capacity, as critical to livelihood sustainability. The finding that young people prefer urban employment and reject traditional agricultural knowledge indicates an erosion of the human capital base necessary for eco-cultural governance. This finding extends SRL studies by highlighting the cultural dimensions of human capital. Technical agricultural knowledge is embedded in a cosmological framework that younger generations may not embrace.

The traditional approaches to planting that follow “feelings” and obtain “permission through customary rituals” represent not merely a technique but a relational ontology that positions humans within rather than above nature. When

young people adopt chemical fertilisers for “quick results,” they are not simply choosing a different technique but implicitly rejecting this ontological position. The implications for PADes sustainability are significant: If the cultural foundations of eco-cultural governance erode, the institutional mechanisms that currently ensure sustainable resource use, such as shame sanctions, cosmological prohibitions, and customary deliberations, may lose their effectiveness.

The findings indicate that the governance of PADes in Daenaa exhibits characteristics of adaptive governance. Specifically, the capacity to respond to social and ecological changes through iterative learning and institutional adjustment (Fabricius *et al.*, 2007; Decaro *et al.*, 2025). The deliberative processes used by villagers to negotiate the tension between economic development and ecological conservation demonstrate significant institutional flexibility. This adaptive capacity appears to emerge from the integration of formal and customary institutions rather than from formal institutions alone. The collective deliberation processes that characterise customary governance provide a forum for value negotiation that purely bureaucratic structures lack. Nonetheless, the study also reveals constraints on adaptive capacity. Institutional friction between formal scheduling and sacred days suggests that formal governance structures have not fully adapted to customary rhythms. Recent studies of adaptive governance warn that such efforts can be deemed illegitimate if they are not grounded in enduring institutions and locally accepted rule systems, particularly in pluralistic legal environments (Datta, 2019). This tension between formal standardisation and cultural specificity represents a governance challenge that merits further research attention.

As presented in Figure 2, the eco-cultural model demonstrates the transformative trajectory of PADes governance: Starting with eco-cultural foundations, moving to governance dimensions, evolving into socio-institutional collaboration, and ultimately producing village

sustainability outcomes. This model was not an externally imposed normative construction. Rather, it reflected the concrete experiences of villagers who understood PADes as a space for social, cultural, and ecological reproduction.

As demonstrated in Figure 2, this bottom-up approach to village revenue (PADes) governance asserts that integrating ecology, culture, and society supports village sustainability. This model contributes to theory by providing a framework for understanding how fiscal governance can be embedded within socio-ecological systems. Unlike technocratic models that treat fiscal instruments as neutral tools for resource allocation, the eco-cultural model recognises that fiscal governance is shaped by and embedded in cultural meanings, social relations, and ecological practices.

Conclusions

This study develops an eco-cultural fiscal governance framework for PADes by demonstrating that village fiscal sustainability cannot be achieved through technocratic approaches alone. However, it requires the integration of ecological stewardship, cultural legitimacy, and community-based governance. The key finding confirms that PADes in Daenaa Village function not merely as fiscal instruments but also as collective arenas for the reproduction of social, cultural, and ecological values rooted in local customary practices. The concept of the Customary Normative Filter, which emerged from the findings, represents the most original theoretical contribution of this study: It demonstrates how cultural values and customary norms serve as a mediating mechanism that filters fiscal decisions through moral, ecological, and communal criteria, thereby legitimising resource governance beyond formal institutional frameworks. Theoretically, this study enriches the SES, CBNRM, and SRL literature by operationalising these frameworks at the village fiscal level in an Indonesian indigenous community context, thereby extending their application beyond natural resource management into village fiscal governance

and local public finance. Methodologically, this study demonstrates how an ethnographic approach can uncover non-economic dimensions of village fiscal governance that are often overlooked by quantitative methods. Practically, this study provides strategic guidance for village governments and policymakers in designing development programmes that combine fiscal revenue generation with ecological conservation and cultural identity strengthening.

Nevertheless, this study presents several notable limitations: Empirical data are derived from a single case study, which limits generalisability; the research focuses predominantly on socio-ecological dimensions rather than quantitative fiscal aspects; and the involvement of external factors, such as local governments and the private sector, is not explored in depth. Consequently, future research should conduct comparative studies across villages with contrasting socio-ecological contexts, integrate qualitative methodological approaches with quantitative fiscal analysis, and expand the analytical scope to encompass multi-level interactions between local communities and external actors. Such inquiries will facilitate the formulation of more comprehensive collaborative strategies for sustainable village fiscal governance. Ultimately, this study affirms that sustainable village fiscal governance cannot be separated from the ecological and cultural foundations of community life, and that eco-cultural governance represents a viable and necessary paradigm for rural development in Indonesia.

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Conflict of Interest Statement

The authors declare that this research was conducted in the absence of any personal, commercial, or financial relationships that could be construed as a potential conflict of interest.

Author Contributions Statement

Shella Budiawan contributed to the conception and design of the study, as well as the analysis and interpretation of the data. Melinda Ibrahim was responsible for drafting the manuscript and critically revising it for important intellectual content. Lilik Purwanti participated in the critical revision of the manuscript for intellectual content and provided final approval of the submitted version. All authors agreed to be accountable for all aspects of the work, ensuring that questions related to the accuracy or integrity of any part of the study are appropriately investigated and resolved.

Data Availability Statement

This study used qualitative data from human participants. To protect confidentiality, raw interview transcripts cannot be shared publicly. De-identified excerpts, the codebook, and analytic memos that support the findings are available from the corresponding author (Melinda Ibrahim) upon reasonable request at melindaibrahim99@gmail.com.

Ethical Conduct

This research obtained ethical clearance (Number: 021/SR/FE-UNISAN/VI/2024) from the Research and Community Service Agency (LPPM), Faculty of Economics, Universitas Ichsan Gorontalo, which states that the research design and methodology employed in this study adhere to the highest ethical standards and comply with all applicable regulations. In

addition, formal written consent to publish and use institutional data was obtained from the Head of Daenaa Village Government, who reviewed and authorised the publication of the research findings through the Consent to Publish.

Declaration of AI-usage

During the preparation of this manuscript, the authors used AI-assisted tools solely for language editing and grammatical refinement. The authors carefully reviewed and edited all generated content to ensure accuracy and originality and take full responsibility for the integrity of the manuscript.

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