

From Custom To Policy: The Role of Community Attributes in Shaping Local Governance in Tenggerland

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Abstract

This research focuses on the management of village funds among the Tengger indigenous people, which is an important example of the implementation of Common Pool Resources (CPR) in the local context. The Tengger people, with their strong social systems and indigenous leadership, face challenges in balancing the government's formal policies with long-standing customary values. Although some research has highlighted the importance of integrating local values in CPR management, there is still a lack of understanding of how community attributes, such as customary norms and leadership structures, affect local governance, especially among the Tengger indigenous peoples. The purpose of this study is to analyze the adaptive mechanism of the management of Village Funds as CPR, explore the relationship between the village head election process and the legitimacy of traditional leadership, and examine the role of the attribute of community of the Tengger community in the formation of regional public policy. This study uses a qualitative approach with the Institutional Analysis and Development (IAD) Framework. Data were collected through in-depth interviews, participatory observations, and documentation in two Tengger villages: Ngadas and Pandansari. The triangulation method is used to improve the validity of the data. The analysis was carried out using the N-Vivo 12 Plus software and the IAD framework to identify the factors affecting the management of the Village Fund. The study identified that the attributes of the Tengger people, such as the traditional leadership structure, the deliberation system, and spiritual values, play an important role in determining local public policy. In addition, the customary-based social control system and the principle of mutual cooperation increase transparency and accountability in the management of Village Funds. These findings show that the integration of customary values in the management of Village Funds can improve the sustainability and legitimacy of policies. The study suggests that public policies should consider local social and cultural contexts to increase participation and reduce conflict among indigenous peoples.

Keywords: Village Fund Management, Tengger Indigenous Peoples, Common Pool Resources, community attribute

INTRODUCTION:

The management of Common Pool Resources (CPR) is a crucial global issue, given that nearly 3.4 billion people around the world—especially in rural areas and indigenous communities—depend on shared resources such as farmland, forests, and water for their survival (Vallury et al., 2022). The World Bank (2021) reports that around 3.4 billion of the world's population—mostly living in rural and customary areas—depend on forms of shared resources, such as collective farmland, customary forests, clean water, and development funding schemes such as the Village Fund, for their survival (Bank, 2021). In particular, the Village Fund in Indonesia has been a strategic instrument since 2015, distributing more than Rp624 trillion to more than 74,000 villages by 2023 (RI, 2024). Data from the Food and Agriculture Organization shows that about 40% of global food production depends on collective irrigation systems that are vulnerable to environmental degradation and climate change (Vallury et al., 2022). Longitudinal studies in the United States and Asia prove that the success of CPR management is strongly influenced by the interaction between formal rules and community norms (Burbach et al., 2022). This phenomenon confirms that governance designs that ignore local socio-cultural attributes risk exacerbating resource degradation and triggering conflict.

In Indonesia, the fiscal decentralization policy through the Village Fund since 2015 has channeled more than Rp 400 trillion to more than 74,000 villages, including customary territories such as Tenggerland. However, without the integration of customary values and mechanisms, these policies have the potential to undermine social legitimacy and the effectiveness of local resource management (Handayani et al., 2023). A study by Heinen et al. (2022) in five countries shows that adaptive governance that is not tailored to community attributes is likely to fail to drive participation and sustainability (Heinen et al., 2022). In indigenous peoples, the impacts of poor socio-cultural integration include declining public trust,

exclusion of minority groups, and conflicts between formal and informal leaders, which in turn threaten social and ecological stability.

Andersson's research (2020) shows that voluntary leadership at the local level is able to form effective institutions to manage CPR, provided there is social legitimacy and community support (Andersson et al., 2020). Cosens et al. (2021) underscore the importance of integrating science, law, and governance in managing complex systems such as CPR (Cosens et al., 2021). However, research that empirically links community attributes—including customary norms, traditional leadership structures, and dual legitimacy—to the success of adaptive governance in the context of Village Funds in indigenous communities, is still rare. The IAD Framework is widely applied to a wide variety of disciplines to analyze institutions and governance, and can also be applied to CPR institutions to make comparisons and evaluations (Son, Fadillah. Sanusi, 2019). One of the parameters of the IAD Framework is the attribute of community, namely social and cultural factors, namely trust, mutual understanding, social capital, and social treasures (Ostrom, 2011), the IAD Framework model can be seen in figure.1. The emerging gap research is how the attributes of indigenous communities can serve as drivers of adaptive governance linking formal policies with local socio-cultural practices, particularly in Tenggerland.

This study aims to analyze the role of community attributes in shaping adaptive local governance in the management of Village Funds in the indigenous peoples of Tenggerland. Practically, this research will provide policy recommendations based on local wisdom to increase community participation, accountability, and sustainability. Academically, the study expands the understanding of hybrid governance that blends customary norms and formal policies, enriching the framework of Institutional Analysis and Development (IAD) and adaptive governance theory. Given the global pressure on shared resources, the findings of this study are important as a model of integration between custom and policy that can be replicated in other indigenous communities.

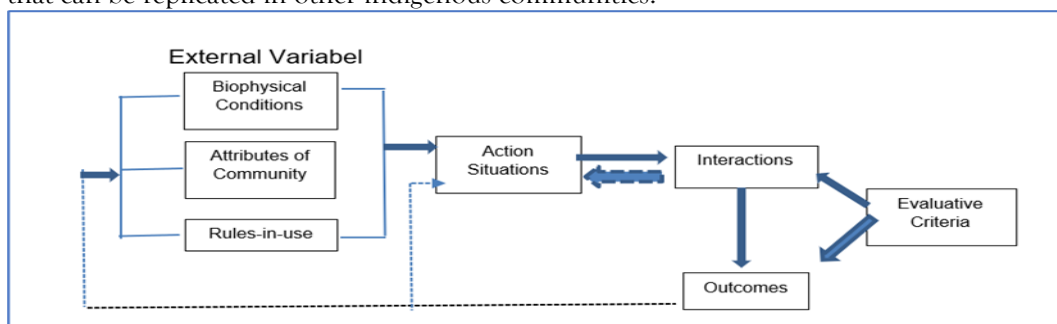


Fig.1 Institutional Analysis Development Framework
Source: (Ostrom, 2011)

LITERATURE REVIEW:

This literature review highlights the complex interaction between common pool resources (CPR) and local governance as affirmed by Ostrom (1990) within the framework of the Social-Ecological System (SES) which combines biophysical dimensions, community attributes, and institutional rules for the sustainability of shared resources (Montes et al., 2022) (Watkins & Westphal, 2016). The SES framework emphasizes the importance of understanding local conditions and interactions between actors in managing limited resources. Studies on the knowledge commons show that challenges such as free-riding and cross-actor coordination are similar to nature-based CPR (Heywood et al., 2018) (Barton et al., 2017) (McNaughton & Rao, 2018), thus requiring an institutional design that accommodates differences in capacity and interests. The Institutional Analysis and Development (IAD) approach is a relevant analytical tool to map rules, norms, and strategies that affect the success of resource management (Amin & Essay, 2017) (Cole, 2017), both on a local scale and in cross-regional networks.

Integration and conflict between traditional and formal institutions often shape the local policy arena. The nested institutions framework explains how different levels of institutions are layered and interact, while the concept of institutional bricolage shows how customary authorities make creative adaptations to state policies (Whaley, 2018) (Whaley & Weatherhead, 2015) (Amin & Essay, 2017). Cross-sectoral studies, starting from energy (Ghadge, 2019) to organic farming (Carter et al., 2016) and water governance (Jones-Crank, 2024) (Oñate-Valdivieso et al., 2021), showing that successful integration depends on clarity of mandate, inter-agency coordination, and the ability to manage power relations. Carter et al. (2016) emphasize that a hybrid approach requires synergy between formal roles and customary practices rooted

in local contexts (Carter et al., 2016), while Schoderer et al. (2021) highlight the need for negotiation mechanisms to reduce potential policy friction (Schoderer et al., 2021).

Community attributes—such as the value of mutual cooperation, informal social structures, customary calendars, and social control mechanisms—play a dual role as a filter and catalyst for public policy (Johnson & Mehta, 2022) (Oh & Hettiarachchi, 2020). Within the framework of IAD, these attributes influence interaction patterns and policy outcomes through the internalization of norms, the strengthening of social networks, and the formation of trust between actors (Watkins & Westphal, 2016) (Villamayor-Tomas et al., 2015). Social norms are often more effective behavioral guides than written rules, so policies that align with local norms tend to be more accepted and implemented voluntarily by communities.

Leadership in local communities is sustained by dual legitimacy—traditional (spiritual/ritual) and legal-formal—that is in harmony with Weber's typology of legitimacy (Parry et al., 2025) (MacKinnon, 2018). This leadership model allows indigenous leaders to gain moral and symbolic recognition from the community, while formal recognition from the state provides access to resources and administrative legitimacy. Poteete & Welch (2004) and Davidson & Vaast (2010) assert that policies would be more effective if formal recognition did not ignore traditional legitimacy, as this reduces social resistance and increases participation. Public policies produced by public organizations that have political connections with their own constituents or supporters are not only related to formal matters but also informal, because they build connections and networks that are closely formed through various kinds of social interactions that build collective decision-making behavior and action (Peters, 2015).

Hybrid governance models often emerge as a result of interaction and integration between traditional and modern institutions. In this model, communities have the capacity to selectively choose external policies that are in line with local needs and values, while rejecting or adjusting policies that are deemed irrelevant or detrimental, such as the Direct Cash Assistance (BLT) program (Schoderer et al., 2021). Cross-case evidence—from community-based disaster governance (McNaughton & Rao, 2018) to the management of the water-energy-food nexus (Kuzma et al., 2018)—shows that the success of hybrid governance relies heavily on institutional bricolage, local autonomy, and the ability to leverage multi-stakeholder networks (Barandiarán et al., 2019).

In general, this literature confirms that the sustainability of governance in a region like Tenggerland requires a combination of a solid conceptual framework and a deep understanding of local dynamics, both in terms of community attributes and institutional structures. Although the conceptual framework has been rich, research gaps are still visible in quantitative measurements of the relationship between community attributes, dual legitimacy, and the effectiveness of hybrid governance, particularly in mountainous customary areas (Barandiarán et al., 2019) (Grossman, 2019). Comparative studies between regions and longitudinal research are needed to test the adaptability of governance to rapid socio-ecological dynamics, as well as to identify a combination of attributes and institutional mechanisms capable of shaping sustainable and inclusive public policies.

METHOD

This study uses a qualitative approach with the framework of Institutional Analysis and Development (IAD) to analyze the policy of managing Village Funds during the Covid-19 pandemic in the context of the Tengger indigenous people. This approach allows for an in-depth exploration of formal and informal institutional interactions in managing the Village Fund as a common pool resource institution (CPRI). The research locations include Ngadas Village and Pandansari Village, Poncokusumo District, Malang Regency, which were chosen due to differences in Village Fund management strategies: Ngadas maintains a customary mechanism without BLT, while Pandansari adopts BLT.

Participants were selected by purposive and snowball sampling, including village heads, traditional shamans, BPD chairs, beneficiaries of the Village Fund (2020–2022), village assistants, and village officials. Data was collected through in-depth unstructured interviews, participatory observations, and documentation (RPJMDes, APBDes, realization reports). The field process includes three stages: licensing, blending with the community, and systematic data collection.

The analysis was performed simultaneously with data collection using the Creswell & Poth (2018) spiral model and NVivo 12 Plus software for coding, theme development, and visualization (John W. Creswell and Cheryl N. Poth, 2018). The IAD framework is used to identify the influence of biophysical conditions, community attributes, and local rules on the sustainability of Village Fund governance.

Validity is maintained through triangulation of sources and methods, selection of relevant informants, and direct involvement of researchers.

RESULTS AND DISCUSSION

Attributes of the Tengger Indigenous Community as Determinants of Local Public Policy

The Tengger indigenous people in the Bromo-Tengger-Semeru area have unique characteristics in integrating traditional government systems with modern public policies, thus creating a policy implementation model that is different from the general pattern of government administration in Indonesia. As a society that has maintained a traditional social structure and value system for centuries, the Tengger community developed a special mechanism in responding to and transforming policies originating from the central government in accordance with the context and values of the local community. The community attributes possessed by the indigenous people of Tengger not only function as cultural identity, but also act as determinants that actively shape the direction, substance, and implementation of public policies at the local level. This phenomenon is important to understand because it shows how local wisdom and customary institutions can play a role in the process of modern governance without losing the essence of cultural heritage that is the foundation of community identity, as explained in figure 2 and table 1. And the results of data analysis through the coding process of the N-Vivo 12 Plus tools produce the following project map visualization:

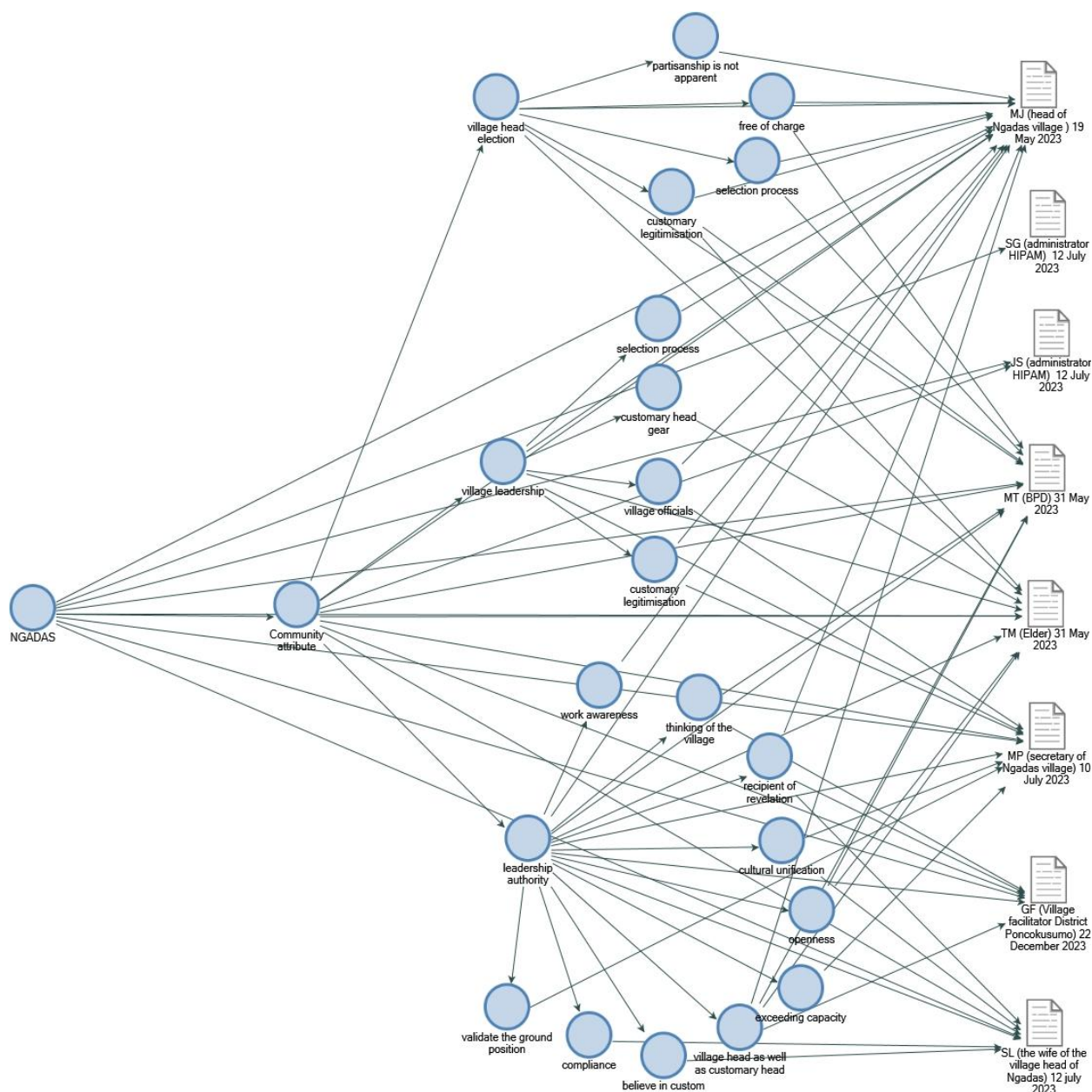


Fig 2. Attribute of community Ngadas Village 1.

Source: N-Vivo 12 Plus Analysis Data Sri Handayani

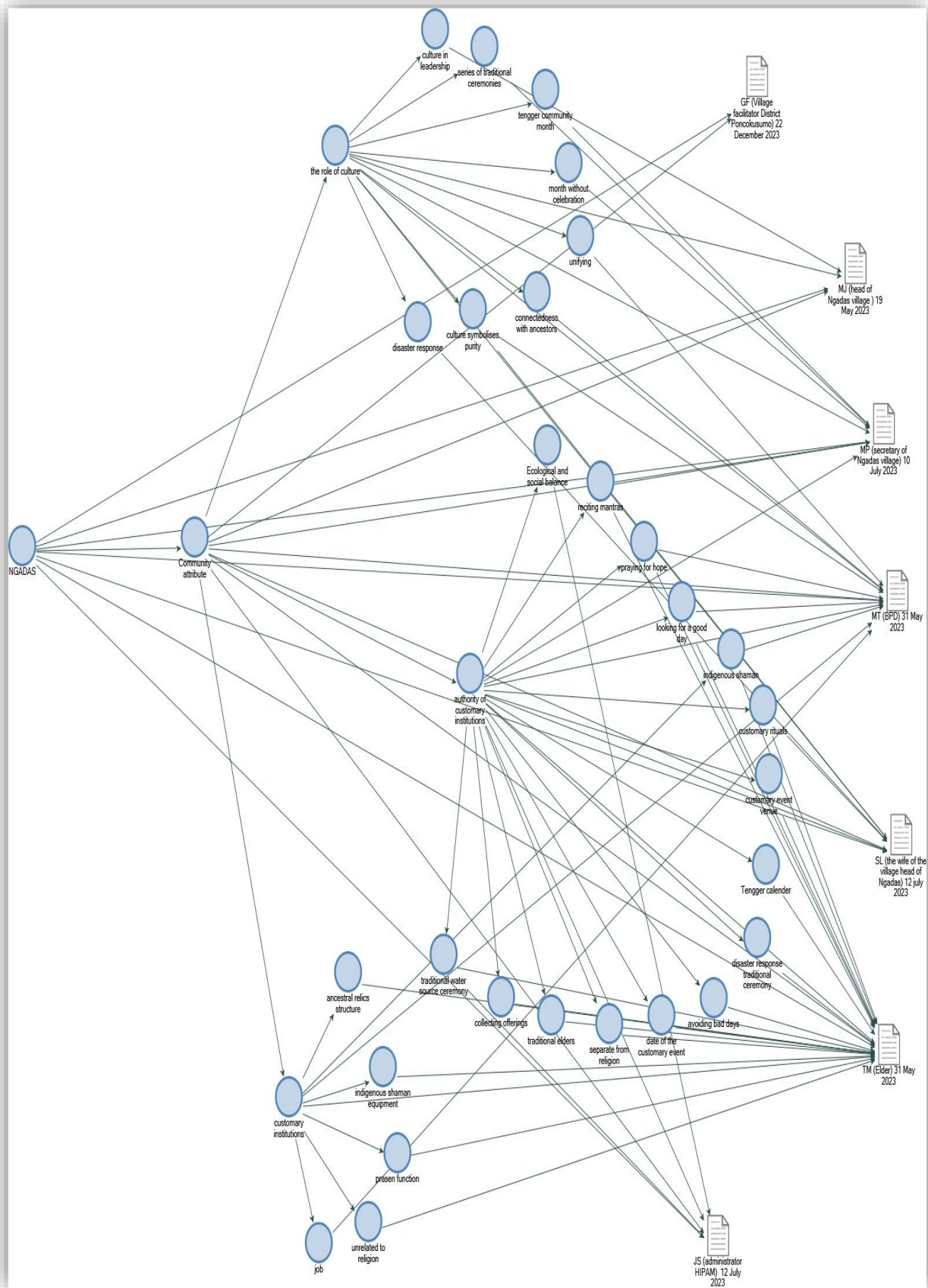


Fig 3. Attribute of community Ngadas Village 2.
Source: N-Vivo 12 Plus Analysis Data Sri Handayani

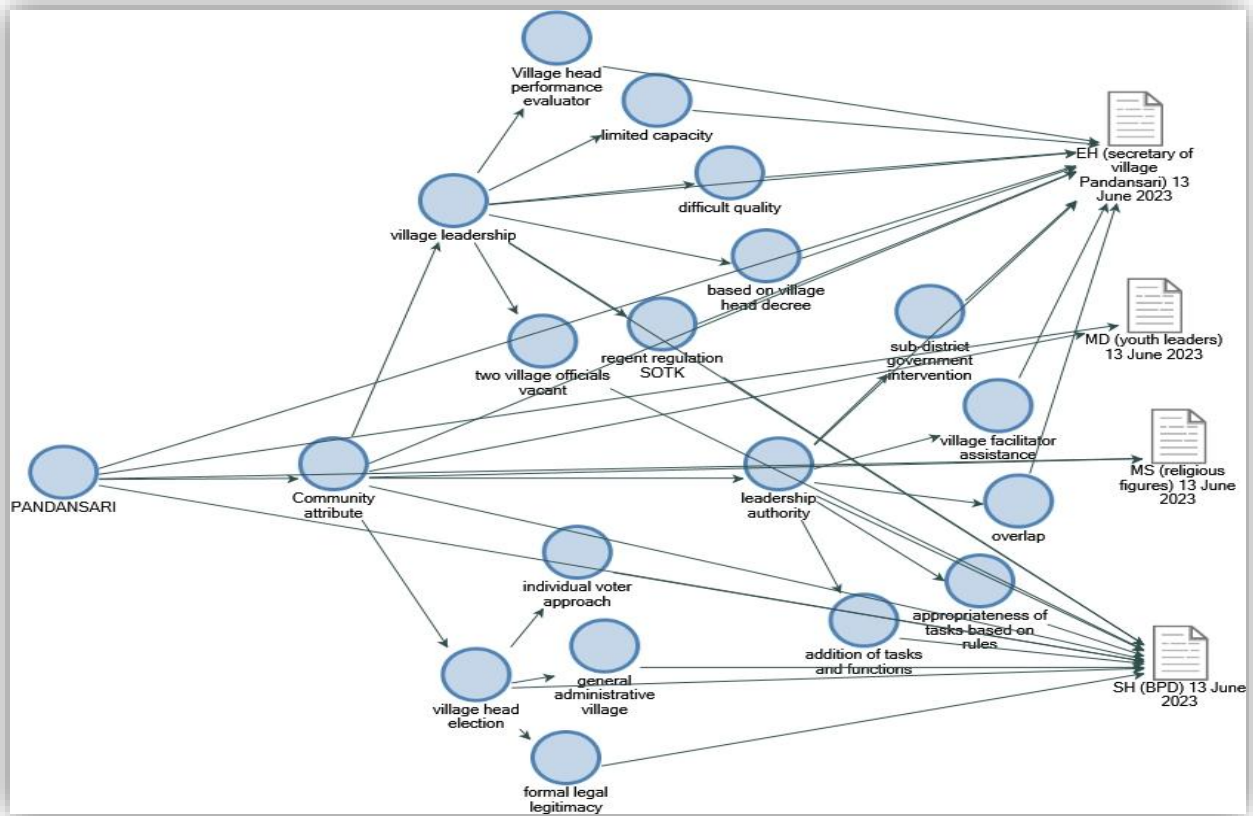


Fig 4. Attribute of community Pandansari 1
 Source: N-Vivo 12 Plus Analysis Data Sri Handayani

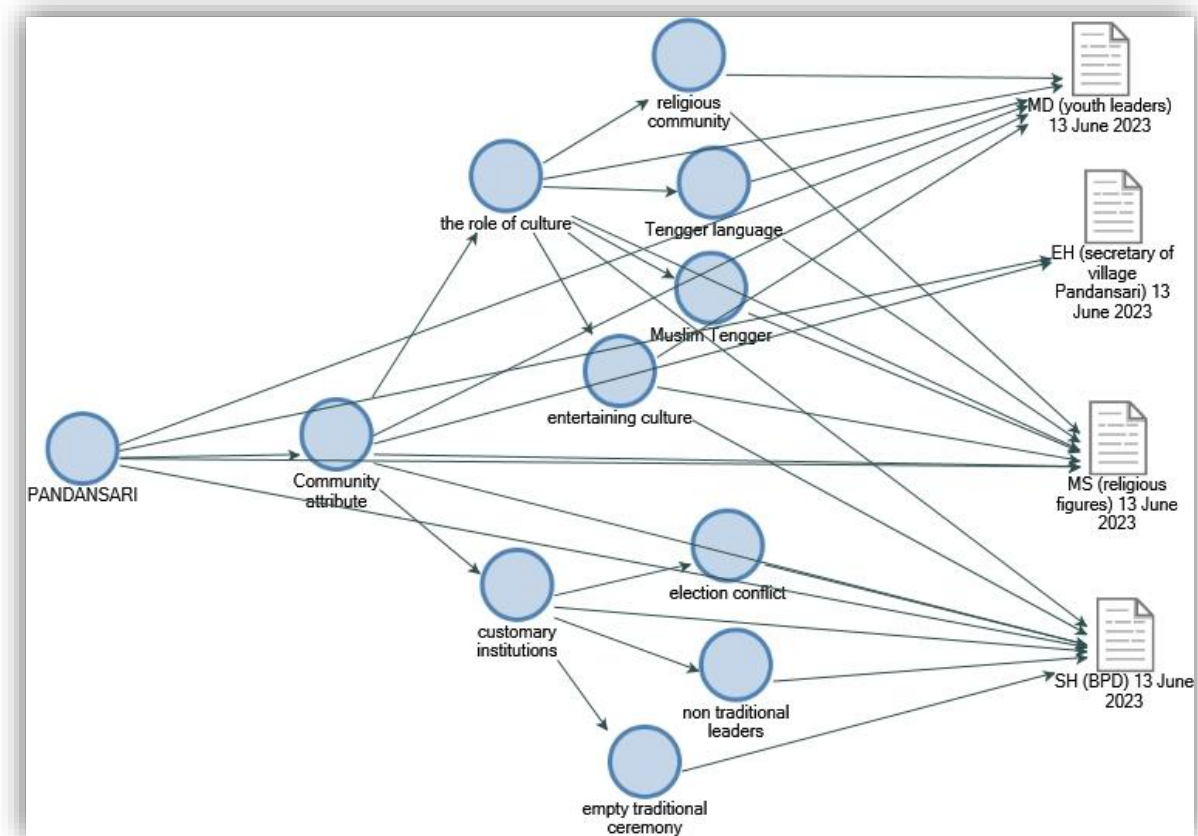


Fig 5. Attribute of community Pandansari 2
 Source: N-Vivo 12 Plus Analysis Data Sri Handayani

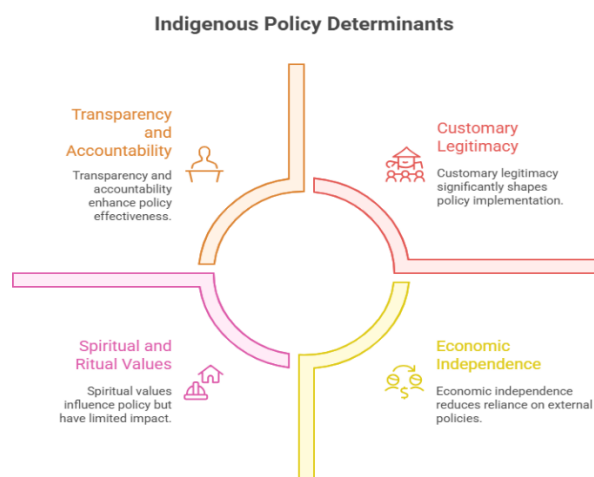


fig. 6. Attributes of the Tengger Indigenous Community as Determinants of Local Public Policy

Table 1. Attributes of the Tengger Indigenous Community as Determinants of Local Public Policy

Community Attributes	Role as Policy Determinant	Implementation Examples	Report
Indigenous Leadership Structure	The village head must go through customary legitimacy (Mayu) before he can manage his community	The village head cannot carry out his duties fully before the Mayu ceremony	TM (belt)
Traditional Deliberation System	Decision-making must go through customary consensus involving the structure of customary elders	All development policies and village programs require the approval of the shaman to determine the good days.	TM (belt)
Structured Custom Hierarchy	Strategic decisions require the approval of the old shamans to the community	The structure of the old shaman, the legendary shaman, the elder regulates the implementation of rituals and customary decisions	TM (belt)
Local Wisdom System in Resource Management	The BLT policy was rejected because it was not in accordance with independent values and local wisdom.	Rejection of COVID-19 BLT because the community feels unaffected	MJ (Head of Ngadas Village)
Principles of Transparency and Customary Accountability	Leadership must be honest and transparent to gain public support	The community will support the program if the leader is honest	TM (belt)
Traditional Cooperative Systems	Development policies must involve the participation of non-governmental organizations	Every infrastructure development involves community service work	TM (belt)
Spiritual and Ritual Values in Policy	Every building program must consider the spiritual aspect	Look for a good day to start a construction project	TM (belt)
Indigenous Peoples' Social Control System	Violation of customary norms receives effective social sanctions	The system of internal control through customary law is more feared than formal law	MJ (Head of Ngadas Village)
Principles of Economic Independence	Assistance policies must be in accordance with the real economic conditions of the community.	Rejection of various assistance because the community is already economically independent	MT (Chairman of BPD Ngadas)

Communal Natural Resources Management System	Water and land management policies must involve local customary institutions	Management of HIPAM with traditional rituals and community deliberation	JS (Administrator HIPAM)
Religious Diversity in Indigenous Unity	Policies must accommodate religious diversity in one customary bond	Empowerment program for all places of worship without discrimination	MP (Secretary of Ngadas Village)
Custom Calendar and Time Systems	The implementation of the policy must be in accordance with the calendar and customary time	Program scheduling by month and day according to the Tengger calendar	MP (Secretary of Ngadas Village)
Principles of Ecological Balance	Development policies must consider environmental sustainability	Water saving and reforestation ceremonies to protect water sources	JS (Administrator HIPAM)
Dual Legitimacy System	Policy requires legitimacy, both formal and customary.	The village head functions as the head of government as well as the traditional head.	MJ (Head of Ngadas Village)
Principles of Customary Land Protection	Land policy must protect communal ownership	Prohibition on the sale of land to outsiders to maintain the integrity of customary territories	MP (Village Secretary)

An in-depth analysis of the Tengger indigenous people's community attribute table shows that community attributes play a role in determining local public policy through complex and multi-layered mechanisms. The structure of indigenous leadership (interview with Mbah Tomo, 2023) shows that dual legitimacy is a fundamental prerequisite for policy implementation, where village heads must obtain formal and spiritual recognition through Mayu ceremonies before they can fully exercise government functions. The customary deliberation system then serves as a policy filter that ensures that each development program has been consulted with the customary hierarchy, from the old shamans to the lower levels, thus creating a participatory decision-making process while maintaining the customary authority structure.

The dimension of local wisdom in resource management shows the capacity of the Tengger community to conduct a critical evaluation of external policies, as can be seen from the rejection of the COVID-19 BLT program which is considered incompatible with economic conditions and the value of community independence (interview Mujianto MR, 2023). The prevailing principles of transparency and accountability operate through public expectations of the honesty of leaders, where political support depends on moral integrity, not mere technical competence. The traditional gotong royong system then transforms the implementation of development policies into a collective process involving non-governmental organizations, thereby creating a sense of ownership of government programs.

The spiritual and ritual aspects of public policy integrate the sacred dimension into the modern administrative process, where the timing of program implementation must take into account the customary calendar and the search for good days. The customary social control system serves as a more effective surveillance mechanism than formal sanctions, creating community compliance through the internalization of communal values. The principle of economic independence is a parameter for policy evaluation, where assistance programs will be rejected if they are not in accordance with the real conditions of the community's economic capabilities (Mistono interview, 2023).

The management of communal natural resources through institutions such as HIPAM shows how community attributes create alternative governance that integrates modern technical aspects with traditional rituals, as seen in water conservation practices that are carried out periodically to maintain the sustainability of water resources (Jusir interview, 2023). The diversity of religions in the customary unity creates a unique model of pluralism, where differences in beliefs do not hinder the implementation of development policies because they are bound by a shared commitment to Tengger customary values.

The customary calendar and time system regulates the rhythm of policy implementation according to the spiritual cycle of society, creating a distinct periodization in the formal administrative calendar. The

principle of ecological balance integrates the environmental dimension into every development policy, ensuring long-term sustainability through ritual practices that support conservation. Dual legitimacy creates a hybrid authority structure in which the village chief functions as an executive as well as a spiritual leader, allowing for the integration of formal policies with indigenous values. The protection of customary land through the prohibition of sales to outsiders (interview by Pak Mispu, 2023) shows how community attributes create land policies that protect the territorial integrity and identity of the community.

The comprehensive findings of this analysis reveal that the attributes of the Tengger indigenous community play a role as determinants of local public policy through the establishment of a "negotiation space" that allows for the selective transformation of formal policies according to the local context, creating a contextual, participatory, and sustainable policy implementation model. This determinant mechanism not only screens external policies based on relevance and conformity to community values, but also transforms the governance process from a top-down model to an integrative approach that recognizes the legitimacy of traditional knowledge systems and institutions, resulting in policy outputs that are more responsive to the real needs of the community while maintaining the sustainability of cultural heritage as the foundation of community identity.

The Relationship between the Village Head Election Process and the Legitimacy of the Traditional Leadership of the Tengger Community

The legitimacy of leadership in Tengger society represents the complexity of the relationship between traditional authority and modern government structures that cannot be understood in a monolithic manner. As an indigenous community that has experienced various levels of modernity, the Tengger people show significant variations in the construction of leadership legitimacy influenced by the dynamics of customary preservation, religious orientation, and adaptation to the constitutional system. A deep understanding of this phenomenon is crucial given that leadership legitimacy not only determines the effectiveness of government at the local level, but also reflects the negotiation process between traditional values and the demands for modernization that occur in contemporary Indonesian indigenous peoples. A comparative analysis between Ngadas Village, which still maintains a holistic customary leadership structure, and Pandansari Village, which has undergone a transformation towards a modern leadership pattern, reveals a diverse spectrum of legitimacy within the same ethnic entity, as described in Table 2.



Fig 7. The Legitimacy of the Tengger Community's Traditional Leadership

Table 2. The Legitimacy of the Tengger Community's Traditional Leadership

Aspects	Ngadas Village	Pandansari Village	Report
Selection Process	No campaign fees, full self-help	Follow official government rules	MJ (Head of Ngadas Village)
Leadership Legitimacy	Must go through the Mayu ceremony to become a traditional head	Immediately work after being inaugurated by the Regent	TM (Elder)

Dual Leadership Roles	Village heads and traditional heads	No traditional leadership roles	Suliasih (Village Chief's Wife)
Community Support	Based on customary and spiritual consensus	Based on the approach of the Islamic Organization (NU)	MJ (Head of Ngadas Village)
Decision Making System	Involve traditional elders in every important decision	Following a formal deliberation mechanism	TM (Elder)
Leadership Requirements	Must meet spiritual criteria and ability to lead rituals	Meet formal administrative requirements	MJ (Head of Ngadas Village)
Relationship with Indigenous Structures	Fully integrated with custom hierarchies	Separate from traditional structures	SH (Chairman of BPD Pandansari)
Confirmation Process	Through the community-funded Mayu ritual	Enough with an official inauguration	MJ (Head of Ngadas Village)
Leadership Authority	Spiritual and administrative authority	Administrative authority only	TM (Elder)
Control over Policies	Must consult with a traditional elder	Follow government policies directly	TM (Elder)

Analysis of the Relationship between the Village Head Election Process and the Legitimacy of Traditional Leadership

The table above shows the fundamental differences in the construction of leadership legitimacy between the two Tengger communities with different cultural orientations. The analysis shows that the legitimacy of leadership in the Tengger community cannot be understood as a homogeneous phenomenon, but rather as a spectrum influenced by the degree of preservation of tradition and the penetration of modernity.

In Ngadas Village, leadership legitimacy is built through a dual process that combines formal legality with spiritual authority. The free and consensus-based process of village head elections shows that legitimacy cannot be bought or manipulated through transactional politics. As expressed by Mujianto MR, "The village head here is the village head when the time comes, so don't let me disappoint the community" (Mujianto, 2023). This statement shows that legitimacy is built on the basis of people's moral beliefs and expectations, not through economic patronage.

The most significant aspect is the necessity of undergoing the Mayu ceremony as an absolute requirement to gain full legitimacy. Mbah Tomo, an old shaman, emphasized that "even though the elected Head of Village has been inaugurated by the Regent, but has not carried out Mayu's wishes, it is still not recognized by the residents" (Mbah Tomo, 2023). This phenomenon shows that in the context of Ngadas, the legitimacy of customary authority according to Weber (1947) is still strong, where power comes not only from formal legality but also from spiritual and ritual recognition that connects the leader with the customary cosmos.

On the contrary, Pandansari Village shows a transformation of leadership legitimacy that has undergone secularization and modernization. Sholeh as the Chairman of BPD stated that "Pandansari Village has become an advanced, modern/general village. For customary issues, there are almost no people here" (Sholeh, 2023). This statement shows that the legitimacy of leadership has shifted from a traditional-spiritual pattern to a legal-rational pattern that is more in line with the modern system of government.

In the context of Pandansari, the basis of leadership legitimacy has been transformed into a combination of formal legality and the support of Islamic religious organizations, especially Nahdlatul Ulama (NU). The process of gathering support through a personal approach to NU figures shows that although the traditional customary structure has weakened, the pattern of patronage still continues, but on a different

basis. Legitimacy no longer comes from traditional rituals, but from social and religious networks that have taken root in society.

This difference in legitimacy base has profound implications for leadership and decision-making patterns. In Ngadas, the village head has dual authority as administrative and spiritual leader, which necessitates consultation with traditional elders on every important decision. Mbah Tomo explained that in village development, "Village Heads get funds from anywhere that are intended to build villages... they are also still looking for good days" (Mbah Tomo, 2023). This suggests that traditional legitimacy results in a unique system of oversight and balance, in which administrative power is limited by spiritual authority. On the other hand, the modern legitimacy in Pandansari results in a more autonomous leadership pattern in administrative decision-making, but remains tied to the expectations of political constituents. Village heads can directly carry out government functions without having to go through traditional inauguration rituals, which show higher administrative efficiency but with a lower level of social-spiritual integration. A comprehensive analysis of the relationship between the village head election process and the legitimacy of traditional leadership in the Tengger community reveals that leadership legitimacy is not a single phenomenon but is a continuum influenced by the level of preservation of traditional traditions and the penetration of modernity in society. In Ngadas, leadership legitimacy is built through the synthesis between formal legality and spiritual authority obtained through Mayu rituals, creating a holistic leadership system that integrates administrative and cosmological dimensions, while in Pandansari, legitimacy has transformed into a legal-rational pattern that is separate from traditional customary structures and more reliant on the support of Islamic religious organizations, suggesting that in the context of a society of the same ethnicity however Differing in cultural orientation, the basis of leadership legitimacy can vary significantly depending on the internal dynamics between tradition and modernity.

Mechanism for Managing Village Funds as Adaptive Common Resources (SDA) in the Context of the Tengger Indigenous Peoples

The management of Village Funds as a Shared Resource (SDA) in the context of indigenous peoples presents unique challenges that require a more nuanced theoretical approach than the conventional model proposed by Ostrom (1990). The Tengger indigenous people in Malang Regency have developed a governance system that integrates traditional structures with modern regulatory frameworks, creating an adaptive and resilient shared resource management mechanism. This system not only manages to avoid the tragedy of shared resources, but also maintains social cohesion and cultural identity in the face of the pressures of modernization and standardization of government policies. The complexity of the mechanisms that develop within these communities encompasses eight key interinteracting dimensions: customary consensus-based decision-making systems, transparent and participatory allocation of resources, multi-level monitoring through social and formal control, selective adaptation to external changes, preservation of resources based on rituals and traditional practices, conflict resolution through deliberation and the principle of togetherness, dual leadership legitimacy (formal-custom), and the preservation of traditional knowledge systems in modern governance operations, as described in Table 3.

Fig 8. Village Fund Management Mechanism

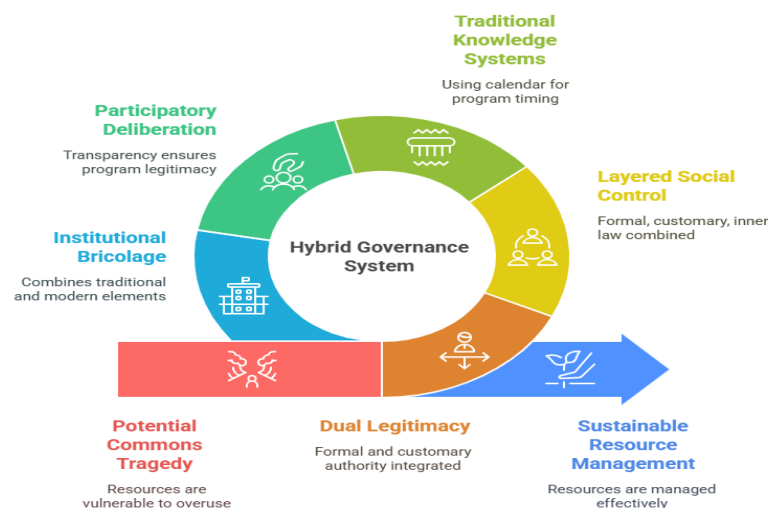


Table 3. Mechanism for Managing Village Funds as Adaptive Common Resources (SDA) in the Context of the Tengger Indigenous Peoples

Category	Aspects of CPR	Adaptive Mechanisms	Village	Report
Decision Making System	Custom-Based Deliberation	Decision-making is carried out through deliberation involving traditional elders, with the village head as the traditional head as well as the traditional leader.	Ngadas	TM (Chair)
Decision Making System	Community Consensus	Decisions are made by mutual agreement without anyone feeling forced	Ngadas	TM (Chair)
Decision Making System	Participation of Religious Leaders	Religious leaders and youth are actively involved in verification and decision-making	Pandansari	MS (Youth Figure)
Resource Allocation	Priority Based on Collective Needs	Distribution of funds based on deliberation by considering common needs	Pandansari	EH (Secretary of Pandansari Village)
Resource Allocation	Management Transparency	Disclosure of Fund Management as the Key to Public Trust	Ngadas	MP (Secretary of Ngadas Village)
Resource Allocation	Self-Help as a Contribution	The community contributes to improve the effectiveness of the fund	Ngadas	TM (Elder)
Monitoring and Operation	Layered Surveillance	BPD conducts supervision ranging from planning to accountability	Pandansari	EH (Secretary of Pandansari Village)
Monitoring and Operation	Internal Social Control	The community supervises each other based on customary norms	Ngadas	Yf (Village Facilitator)
Monitoring and Operation	Adaptive Sanctions	Sanctions are adjusted to local norms, not just formalities	Ngadas	MJ (Head of Ngadas Village)
Adaptation to change	Program Flexibility	Ability to adapt the program to local conditions	Ngadas	MJ (Head of Ngadas Village)
Adaptation to change	Selective Resistance	Rejection of programs that do not conform to local values	Ngadas	MJ (Head of Ngadas Village)
Adaptation to change	Custom-Modern Integration	Integrating customary systems with government regulations	Ngadas	MP (Secretary of Ngadas Village)
Resource Conservation	Custom-Based Conservation	Environmental conservation through rituals and customary practices	Ngadas	Juasir (HIPAM Manager)
Resource Conservation	Access Restrictions	Rules that limit the use of resources based on agreements	Ngadas	MP (Secretary of Ngadas Village)
Resource Conservation	Ritual Pelestarian	Traditional ceremonies to maintain the balance of nature	Ngadas	Juasir (HIPAM Manager)
Conflict Resolution	Customary Mediation	Conflict resolution through customary mechanisms	Ngadas	Mbah Tomo (Elder)

Conflict Resolution	Settlement Deliberation	Conflicts are resolved through deliberative forums	Ngadas	JS (Administrator HIPAM)
Conflict Resolution	Principle of Togetherness	Conflict is minimized through the principle of mutual cooperation	Pandansari	EH (Secretary of Pandansari Village)
Legitimacy and Leadership	Dual Leadership	The village head plays the role of government and customary leader	Ngadas	TM (Elder)
Legitimacy and Leadership	Spiritual Validation	Leadership legitimacy through traditional rituals	Ngadas	MJ (Head of Ngadas Village)
Legitimacy and Leadership	Communal Accountability	Leaders are accountable to the community and ancestors	Ngadas	MJ (Head of Ngadas Village)
Knowledge Systems	Custom Calendar System	The Use of the Tengger Calendar to Determine the Implementation Time	Ngadas	MP (Secretary of Ngadas Village)
Knowledge Systems	Knowledge Transfer	Traditional knowledge is passed down from generation to generation	Ngadas	MP (Secretary of Ngadas Village)
Knowledge Systems	Documentation of Tradition	Preservation of knowledge through books and practices	Ngadas	TM (Elder)

Analysis of the Village Fund Management Mechanism as an Adaptive Common Resource for the Tengger Indigenous People

Based on the analysis of the table above, the management mechanism of Village Funds as a Shared Resource (SDB) in the indigenous people of Tengger shows characteristics that are very different from the conventional SDB management model proposed by Ostrom (1990). The systems that have developed in the Tengger community demonstrate a complex integration between traditional governance structures and modern regulatory frameworks, thus creating what can be termed a "hybrid governance system" in the management of shared resources.

The most striking aspect of this system lies in the decision-making mechanism that involves dual legitimacy, as revealed in Mbah Tomo's statement that "now, for example, in the future, we will want the traditional ceremony of Unan-unan in the month of Muharram." The Village Chief asked me, "What day is Unan-unan mbah Shakun?". This suggests that the formal authority of the village head must be validated by the customary system through consultation with spiritual elders. This phenomenon is in line with the concept of "nested institutions" put forward by Ostrom (1990), but with the unique characteristic that customary institutions have an equal or even higher position than formal institutions in a given domain. The mechanism of resource allocation in this system demonstrates the application of the principle of distributive justice that is not solely based on technical-administrative criteria, but is integrated with communal values and spiritual considerations. As revealed by Edi Haryanto, the deliberation process involves "exploring ideas from RT RW and community leaders" which are then brought to the village level. This process demonstrates the application of deliberative democracy on a micro scale, where the legitimacy of decisions comes not only from formal procedures, but also from communal consensus built through intensive dialogue between stakeholders.

The system of supervision and control that has developed in the Tengger community shows a very effective multilevel governance. The layered supervision carried out by the BPD in the formal aspect, combined with internal social control through customary norms, creates a comprehensive system of supervision and balance. The concept of "law in itself" conveyed by informants from Ngadas shows a very deep internalization of norms, where compliance with communal rules does not depend on external supervision, but on moral obligations that have been internalized. This is in line with the theory of social capital put forward by Putnam (1993), where trust and reciprocity are the foundation of collective action. The adaptation of this system to external changes shows remarkable resilience. The case of BLT rejection in Ngadas during the COVID-19 pandemic, as stated by Mujianto MR that "in the end I still insisted on

not accepting it so that we still budgeted 40% but there was no absorption", shows a strategic selective resistance. The public does not reject all aspects of modernization or government regulations, but rather filters based on conformity with its fundamental values. This phenomenon reflects what Scott (1998) calls the "weapon of the weak" in a more sophisticated form, in which resistance is carried out through available formal mechanisms.

The differences in adaptation between Ngadas and Pandansari provide interesting insights into the variability of institutional adaptation. Pandansari, which is more integrated with NU's Islamic values, shows a different adaptation model, in which Islamic religious leaders act as mediators between traditional values and modernity. This confirms the argument of institutional diversity put forward by Agrawal (2001), that there is no one optimal model in the management of CPR, but rather its effectiveness depends on a particular socio-cultural context.

The integrated knowledge system in the management of the Village Fund shows the sustainability of traditional ecological knowledge in the context of modern governance. The use of the Tengger calendar to determine the timing of the program, as expressed by Mr. Mispu about the "search for good days" and the use of "dragon year, day, galengan year", shows that traditional knowledge systems play a role not only as cultural artifacts, but also as an operational framework that influences the decision-making process. The transfer of knowledge that occurs from generation to generation ensures the sustainability of the governance system, while maintaining cultural legitimacy in the context of modernization.

The conflict resolution mechanisms that have developed in this system show a preference for restorative justice over punitive action. Conflict resolution through deliberation and the principle of togetherness, as Edi Haryanto stated that "we do not blame each other, we walk together", shows priority on maintaining social cohesion, rather than enforcing rigid rules. This is in line with the concept of ubuntu in African philosophy, where individual well-being is inseparable from collective well-being.

These findings suggest that the Tengger indigenous people have successfully developed a Village Fund management system as an adaptive RJP through creative integration between customary and modern institutions, where dual legitimacy (formal-custom), layered social control (formal-informal-spiritual), and hybrid (modern-traditional) knowledge systems work synergistically to prevent tragedies of shared property. This system shows that effective governance in the management of the RJP does not necessarily require institutional standardization or uniformity, but can be achieved through an institutional bricolage that combines elements from various governance traditions in accordance with the socio-cultural characteristics of the community, thereby creating a resilient, legitimate, and sustainable governance model in the face of modernization challenges and external policy changes.

DISCUSSION

This study aims to analyze how the attributes of the Tengger indigenous people play a role in shaping the direction of local public policy, with a focus on the management of the Village Fund as a Common Pool Resources (CPR). Previous research has highlighted how customary institutions such as local indigenous leaders, spiritual authorities, and deliberative forums play a central role in community governance in Tengger (Handayani et al., 2023) (Nurcahyono, 2019) (Putri, 2022). These structures—which often overlap with formal governance—help ensure that policies are aligned with customary values, especially through rituals such as Mayu (Putri, 2022) (Pratiwi et al., 2024). As part of this analysis, various aspects of the research results will be further discussed, including comparisons with the existing literature on dual legitimacy (Yoder, 2023), the implications of spiritual authority in state decision-making (Rhama, 2017) (Budiman and Oue, 2025), and analysis of unexpected findings such as the internalization of CPR principles into ritual behavior (Liu et al., 2024) (Partasmita et al., 2020).

Summary of Findings and Interpretation

The results of the study show that the management of the Village Fund in the Tengger indigenous people is not only influenced by formal administrative mechanisms, but also by social values and norms rooted in customary institutions (Sumarmi et al., 2024) (Aliman et al., 2025). One of the key findings is that village chiefs must gain legitimacy from indigenous authorities through Mayu rituals before they can fully exercise their governmental functions, a finding consistent with Nurjaya & Koeswahyono (2024) describing Dual legitimacy as a prerequisite for leadership (Pratiwi et al., 2024). This dual system, which combines legal-bureaucratic legitimacy and spiritual-cultural authority, has also been described by Cochrane (2007) and Prasetyo (2019) in the context of other customary governance. Furthermore, the decision-making process through deliberation with traditional elders reflects a participatory mechanism

that has long been embedded in Tengger social life (Salam & Zuliana, 2024) (Nooteboom, 2003). These mechanisms not only prevent the implementation of externally driven policies, but also strengthen communal accountability and context-sensitive governance (Sumaryati et al., 2020) (Praptika et al., 2024) (Mahavira, 2023). Thus, the community strengthens collective action around shared resources, in line with the Ostrom CPR framework adapted by Handayani et al. (2023) and Putri et al. (2022) in the context of Tengger (Handayani et al., 2023) (Putri, 2022).

Comparison with Existing Literature

Agreement with Previous Research

The study's findings are in line with theories developed within the framework of Institutional Analysis and Development (IAD) by Elinor Ostrom. IAD emphasizes that the management of shared resources, such as the Village Fund in this context, is influenced by various institutional elements, both formal and informal. Ostrom (1990) explained that institutions include not only formal rules, but also social norms and power relations that are formed in society. The findings of this study suggest that community attributes in Tengger society—including traditional leadership structures, deliberation systems, and spiritual values—play an important role in influencing decision-making and management of shared resources (Village Funds). For example, village chiefs are required to gain legitimacy from customary authorities through Mayu rituals before undertaking government duties, which suggests that leadership legitimacy depends not only on formal authority, but also on spiritual recognition governed by customary norms and power structures. Therefore, the study goes further by identifying the specific mechanisms by which such integration operates through dual legitimacy systems and hybrid knowledge systems.

This statement is in line with the view of Villamayor-Tomas et al. (2015), who stated that "institutions are not only formal rules set by the government, but also include social norms and power relations that arise in the daily practice of society". This reflects how the "action situation" within the framework of the IAD in the Tengger community involves interaction between actors with various existing rules, both formal and informal, which in turn influences the decisions and outcomes achieved in the management of shared resources. Liu et al. (2024) also underscore that "the power of informal institutions and power relations in society can encourage or limit collaboration in the management of shared resources", which is in line with the finding that customary deliberative systems strengthen internal social control in Tengger society. In addition, the results of this study are also in line with the findings in a World Bank report (2021) which states that around 3.4 billion people in the world, mainly those living in rural areas and indigenous peoples, are highly dependent on shared resources such as collective farmland and community participation-based development schemes. This is in line with the context of the Tengger indigenous people who manage the Village Fund as Common Pool Resources (CPR) by involving customary values in every management decision. Nagendra and Ostrom (2014) also show that the success of CPR management is highly dependent on how actors in society interact with existing rules, and how these rules are influenced by social beliefs and local norms.

Differences with Previous Research

In contrast to the more general research on Village Fund management that prioritizes a formal administrative approach, the findings in this study suggest that the Tengger indigenous people developed a Village Fund management system that is closely related to their social and cultural structure, which also includes spiritual aspects and social norms. In the context of IAD, this indicates a more complex interaction between formal rules (set by the government) and informal rules (shaped by customary values). Filgueiras & Lui (2023) explain that "the social, physical, and economic contexts that shape these action situations have a major impact on how rules are applied and interpreted on the ground", explaining how the Tengger people, with their thick social and cultural systems, adapted external policies by adapting formal rules to their local wisdom.

This statement is also supported by Hidayat et al. (2020) who reveal that "the governance of Village Funds in Indonesia often focuses on formal and administrative mechanisms regulated by the central government, without much room for local social values in decision-making". However, in the Tengger community, the management of the Village Fund is directly influenced by a deep social structure, which combines formal rules with customary norms. The rejection of Direct Cash Assistance (BLT) during the COVID-19 pandemic in Ngadas Village, even though it is contrary to the central government's policy, reflects the strong local social and economic norms in determining the policies accepted by the community.

Clement (2010) also adds a political-economic element within the framework of the IAD to explain how "political forces and interests influence the behavior of actors in action situations", which is particularly relevant in the context of Tengger society. Here, the management of the Village Fund is not only influenced by formal government policies, but also guided by a stronger customary power structure in decision-making. The BLT's rejection illustrates how the Tengger community chooses to filter external policies based on their conformity with their economic and social values, a phenomenon rarely found in the context of other Village Fund management research that prioritizes full acceptance of government policies.

These findings strengthen the IAD framework by showing how local and social structural values play an important role in existing "action situations". The rejection of the BLT shows how societies can tailor external policies to their socio-ecological priorities and contexts, in accordance with the IAD principle that shared resource management involves actors with different goals, influenced by the physical, social, and economic contexts that shape their interactions. This opens up space to better understand how IAD theory can be extended by considering the deep cultural and spiritual dimensions in the analysis of public policy on indigenous peoples.

New Contributions in the Field of Research

This research offers an important contribution in understanding the dynamics of CPR management in the context of indigenous peoples that combine formal and traditional mechanisms. The concepts of "dual legitimacy" and "empowerment through local wisdom" open up new perspectives in the study of hybrid governance, which recognizes the importance of indigenous values as an integral part of sustainable public policymaking.

Implications of the Findings

Theory Development:

The findings of this study enrich existing theories about shared resource management, especially in the context of indigenous peoples. By highlighting the importance of community attributes in decision-making and resource management, the study shows that Ostrom's Social-Ecological Systems (SES) theory can be extended to include more in-depth social and cultural aspects. This research also strengthens the argument that resource management is not only influenced by formal regulations, but also by the norms and values that develop in society.

Practical Applications:

In practical application, these findings provide valuable insights for policymakers to integrate indigenous values in the design of Village Fund management policies. A more inclusive and consensus-based approach can increase community participation and strengthen policy legitimacy, thereby reducing potential conflicts and distrust of village governments.

Policy Considerations:

Local and central governments should pay attention to the social and cultural diversity of indigenous peoples in formulating public policies, especially those related to the management of natural resources and village funds. Policies that ignore social structures and local wisdom risk causing tension and rejection, as seen in the case of BLT rejection in Ngadas Village.

Unexpected Results

One of the findings that is quite surprising is the rejection of BLT in Ngadas Village, which is contrary to the central government's policy of prioritizing direct assistance to people affected by COVID-19. This rejection shows that even though they are encouraged to follow government policies, the people of Tengger still prioritize economic independence and the value of mutual cooperation. This shows that in the context of indigenous peoples, traditional values such as independence and social equality can be a filter in the acceptance of external policies.

Methodological Strengths and Limitations

The qualitative approach used in this study, with the IAD analytical framework, allows for an in-depth understanding of the dynamics of Village Fund management in the Tengger indigenous people. The main

strength of this methodology lies in its participatory approach and data triangulation that provides high validity. However, the limitation of this study is that it focuses on two villages representing the Tengger indigenous people, so the results may not be fully generalized to all indigenous peoples in Indonesia.

CONCLUSION

This study reveals that the Tengger indigenous people manage village funds through a hybrid governance model that combines formal administrative mechanisms with traditional institutional structures. Key findings highlight the importance of dual legitimacy (formal and spiritual), customary consensus-based decision-making, and strong internal social control norms, as exemplified by the community's rejection of COVID-19 direct cash assistance (BLT) programs. This dynamic illustrates that community-based governance rooted in local values drives more participatory, context-sensitive, and sustainable public policy outcomes.

Future Research and Policy Recommendations

Future research should explore the application and variation of these hybrid governance models in other indigenous communities across Indonesia, especially in how they adapt to external policy pressures. Policymakers are advised to adopt a more flexible and inclusive approach that recognizes and integrates local customary systems into village fund governance. Central and local governments need to create institutional spaces for indigenous leaders to participate meaningfully in policy planning and oversight, thereby increasing the legitimacy and effectiveness of public programs.

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