



The Earth Charity Ritual (Methik Pari) in Maintaining Ecological Balance in Tugu Village, Rejotangan, Tulungagung Regency

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ABSTRACT

The Sedekah Bumi (Methik Pari) ritual, practiced by the community of Tugu Village, Rejotangan Subdistrict, Tulungagung Regency, is an agrarian tradition that serves not only as a cultural and religious expression but also plays a role in maintaining ecological balance. This study aims to analyze the role of the Methik Pari Ritual as a socio-ecological knowledge system that supports environmental conservation, natural resource management, and the resilience of agrarian communities. The study employs a qualitative approach using ecological ethnography. Data were collected through participatory observation, in-depth interviews with traditional leaders, village heads, farmers, and community leaders, focus group discussions (FGDs), and documentary analysis. Data analysis was conducted thematically using the frameworks of Traditional Ecological Knowledge (TEK) and Social-Ecological Systems (SES). The results indicate that the Methik Pari Ritual functions as a community-based resource management mechanism that strengthens social solidarity, transmits ecological knowledge across generations, and promotes conservation-oriented behavior in agricultural land management. This ritual instills values of environmental conservation, such as limiting excessive land exploitation, maintaining soil fertility, and protecting agricultural ecosystems. Despite facing challenges such as the renewal of ritual practitioners, urbanization, agricultural modernization, budget constraints, and climate change, the community has demonstrated its ability to adapt by revitalizing and transforming the ritual into a more inclusive village program. This study concludes that the Methik Pari Ritual is a local knowledge system that contributes to environmental sustainability, strengthened social cohesion, and the community's socio-ecological resilience. Therefore, the recognition and integration of traditional ecological knowledge into environmental policies and sustainable development are crucial for preserving the ritual's continuity and its ecological functions.

Keywords: Methik Pari; Traditional Ecological Knowledge; Social-Ecological Systems; environmental conservation; social-ecological resilience

INTRODUCTION

Global-scale anthropological and ecological research indicates that the religious rituals practiced by agrarian communities serve dual functions that go beyond mere symbolic expression (Danugroho et al., 2025). Specifically, these rituals function as adaptive

mechanisms that regulate the use of natural resources, water distribution, and determine agricultural crop rotation patterns. An ethnoecological approach reveals that inherited ritual practices are not cultural manifestations separate from ecological systems, but are institutionalized into structured frameworks that coordinate the agricultural calendar, preserve traditional ecological knowledge, and foster collective action in the management of shared resources. This phenomenon is empirically documented across various indigenous communities in the Northeast region of India, where ritual ceremonies are systematically conducted prior to the start of the annual agricultural cycle, which runs from late April to early May (Patar & Hazarika, 2023). Contemporary scientific research confirms that traditional rituals serve as adaptive strategies for maintaining ecological balance and strengthening communities' resilience in the face of global climate change and increasingly severe environmental degradation. A similar phenomenon has also been identified in rural and indigenous communities in Mexico, where religious ritual practices are closely aligned with natural cycles and seasonal agriculture (Lara et al., 2023). In Indonesia, specifically in Tugu Village, Tulungagung Regency, the community implements the Sedekah Bumi (Methik Pari) ritual as an integral component of an agrarian cultural system that connects the reciprocal relationship between human entities and the natural environment as a strategy for preserving socio-ecological resilience. This mechanism operates through the integration of spiritual dimensions with the practical management of agroecosystems. An analogous phenomenon is documented in a case study in Rancakalong, West Java, involving a series of symbolic procedures ranging from the selection of an optimal time based on traditional calculations to the presentation of offerings representing local biodiversity (Iskandar & Iskandar, 2022). Global research findings suggest that local knowledge systems integrated into ritual practices have the potential to conserve biodiversity and stabilize ecosystem functions. In the context of climate change pressures, the application of traditional agricultural practices in Southeast Asia serves not only as a cultural expression and an expression of gratitude but also as a medium for transmitting traditional ecological knowledge that facilitates communities' understanding of environmental dynamics and adaptive resource management (Franco et al., 2022). Furthermore, rice farming rituals such as Methik Pari reflect the ecological knowledge of agrarian communities regarding rice management techniques and environmental conservation. A similar finding is observed in the Bunga' Lalang tradition practiced by the Luwu community in South Sulawesi, which demonstrates a framework of thought that respect for nature is a prerequisite for the survival of farming communities (THAYYIB, 2021).

Although studies on agricultural rituals have seen significant global development, most scientific references in Indonesia still tend to focus on the cultural and symbolic dimensions of these ritual practices. In particular, the ecological and resource management aspects that are inherently embedded in ritual systems have yet to receive adequate attention in the national academic discourse. This situation creates a critical conceptual gap, stemming from the lack of recognition of the legitimacy of local knowledge and its integration into environmental policy frameworks and contemporary scientific discourse. A centralist technocratic paradigm and top-down interventions still dominate sustainability discourse, while traditional knowledge systems are often marginalized within academic and institutional power structures. Recent studies indicate that agricultural rituals practiced in East Java, including Sedekah Bumi, function as

adaptive mechanisms that reinforce the transmission of traditional ecological knowledge, regulate the exploitation of natural resources, and enhance community resilience in the face of environmental uncertainty. Traditional Ecological Knowledge (TEK), as manifested through rituals, taboos, and customary organizations, has been shown to make a substantial contribution to ecosystem preservation; however, this traditional knowledge system now faces various structural threats from the processes of modernization, globalization, and shifts in cultural values within society (Gómez-Baggethun et al., 2013). This paradigmatic situation indicates an urgent need for an in-depth examination of the Sedekah Bumi (Methik Pari) ritual in Tugu Village, Rejotangan Subdistrict, Tulungagung Regency, not limited to the perspective of cultural heritage but rather as a socio-ecological knowledge system actively operating in response to contemporary environmental dynamics.

Within a socio-ecological framework, agricultural rituals must be understood as an integral element of the constellation of biocultural relations that mediate the complex interactions between human communities and their habitats (Hanspach et al., 2020). Studies of indigenous communities in the Amazon Basin show that ritual practices and traditional knowledge play a central role in maintaining ecosystem balance through the regulation of long-term, dynamic anthropological interactions with nature (Schmidt et al., 2021). The SES framework, when applied to local knowledge, demonstrates that rituals operate as feedback mechanisms that regulate human behavior regarding the sustainable availability of natural resources. Within this conceptual framework, local institutions such as rituals function as informal regulatory mechanisms that maintain a balance between resource utilization and conservation. This finding is reinforced by research applying the social-ecological systems framework in the Peruvian Amazon, which reveals that local institutions, cultural practices, and traditional ecological knowledge play a vital role in building communities' adaptive capacity through community-based landscape management oriented toward environmental sustainability (Rodr et al., 2018). Rituals can be understood as a phenomenon of cultural adaptation that emerges in response to the ever-changing dynamics and pressures of the environment. Research on the Quechua farming community in the Andes, Bolivia, reveals that traditional agricultural practices, together with traditional ecological knowledge, function as an adaptive response to environmental change while preserving the sustainability of mountain ecosystems (Boillat & Berkes, 2013). Thus, the integration of rituals into contemporary environmental governance is a fundamental prerequisite for building resilient and sustainable socio-ecological systems in rural areas.

In contrast to previous studies that have focused on the cultural, symbolic, and religious dimensions of Sedekah Bumi, this investigation examines the Methik Pari ritual through the lens of Traditional Ecological Knowledge (TEK) and the social-ecological systems (SES) framework. This methodological approach opens a conceptual space for understanding the ritual not merely as a cultural tradition transmitted across generations, but as a community-based governance mechanism that contributes to the ecological conservation of agrarian communities. Thus, this research presents an innovative perspective on the ecological functions of agricultural rituals within the context of rural East Java. This study demonstrates that agricultural rituals are not limited to religious expressions and expressions of gratitude to the divine, but function as a vehicle for regulating the relationship between humans and the land, including determining the optimal time to

harvest rice (before the main harvest), limiting excessive exploitation, and the construction of communal social norms regarding land management (Pranoto & Tondok, 2024). Rituals operate as a subtle yet potent mechanism of social control in maintaining a balance between economic imperatives and environmental conservation. A similar phenomenon has been documented in the Satoyama practice in Japan, where agrarian traditions and traditional knowledge function as collective mechanisms for maintaining a balance between agricultural activities, the use of natural resources, and the conservation of rural landscapes in accordance with the principle of sustainability (Indrawan et al., 2014). Thus, previous studies that incorporate Traditional Ecological Knowledge (TEK), local wisdom, and agrarian indigenous knowledge provide a solid epistemological foundation demonstrating that Methik Pari is not merely a harvest ritual, but a cultural practice that plays an instrumental role in maintaining ecological balance in the agricultural regions of East Java.

Based on the conceptual framework outlined above, the Methik Pari Ritual can be categorized as an integral component of the socio-ecological system, as it embodies values of local wisdom that play a vital role in maintaining harmonious relations between the farming community and the surrounding ecosystem. This tradition serves as a vehicle for transmitting traditional knowledge, preserving ecological values, and consolidating intergenerational social solidarity within farming communities. Agricultural rituals do not merely represent symbolic cultural expressions but function as mechanisms for preserving collective socio-ecological memory, which holds significant importance in maintaining the resilience of agroecosystems and the sustainability of community-based environmental management (Barthel et al., 2010). This adaptation process occurs organically through the active participation of all community members in every stage of the ritual. A thorough examination of the social-ecological systems (SES) approach emphasizes the importance of maintaining connectivity between social and biophysical systems in a sustainable manner, so that rural development is not limited to an economic productivity orientation but also encompasses the dimensions of ecological sustainability and the adaptive capacity of local communities (Liu et al., 2023). Thus, sustainability cannot be articulated merely as an end goal, but rather as a process that is continually negotiated in the daily lives of communities.

METHODS

This study employs a qualitative approach using ecological ethnography methodology, which integrates participant observation, in-depth interviews, and documentary analysis as a data triangulation strategy to explore the relationship between humans and the environment within the context of local cultural practices (Villamor et al., 2014). The research location was purposively selected in Tugu Village, Rejotangan Subdistrict, Tulungagung Regency, East Java, considering that the village consistently performs the Methik Pari ritual as an integral component of the annual agrarian cycle of the local rice-farming community. Primary data collection was conducted through direct observation during the Methik Pari ritual, semi-structured interviews with three traditional elders, the village head, active farmers, and community leaders involved in agroecosystem management, as well as focus group discussions (FGDs) with farmer groups to validate empirical findings. Secondary data was obtained through ethnobotanical literature reviews, regional agricultural reports, and relevant local cultural archival documentation.

All data was analyzed using a thematic approach based on the frameworks of Traditional Ecological Knowledge (TEK) and Social-Ecological Systems (SES), which enabled the identification of patterns of ecological knowledge integrated into each symbolic element of the ritual. Data validity was ensured through source and methodological triangulation, as well as member checking with key informants to verify the accuracy of interpretations. Data collection took place over a two-month period (April–May 2026), coinciding with the first rice harvest cycle at the study site. The ecological ethnographic orientation in this study aligns with ethnoecological studies in Southeast Asia that demonstrate the effectiveness of this approach in revealing the ecological, social, and spiritual dimensions of agrarian practices based on traditional knowledge in an integrated manner (Persoon & Minter, 2020). Data analysis in this study was conducted interpretatively using a biocultural approach that positions agricultural rituals as an integrated system of knowledge, practice, and belief, rather than merely as static cultural artifacts. Each ritual element including offerings, processions, and the agroecological calendar system was evaluated based on its ecological significance, referencing the TEK conceptual framework. Findings were cross-validated between field data and international scientific literature to strengthen the analytical generalizations of this study. Ethical considerations in this research included obtaining informed consent from all participants, maintaining confidentiality of identities, and respecting the indigenous knowledge authority held by the Tugu Village community.

RESULT AND DISCUSSION

The findings of this study reveal that the Methik Pari ritual in Tugu Village, Rejotangan Subdistrict, Tulungagung Regency serves functions that go beyond mere cultural expression. Within the framework of Social-Ecological Systems (SES), this ritual can be conceptualized as an informal institution that bridges the interaction between social systems and biophysical systems through a set of norms, values, and collective practices that regulate the sustainable relationship between humans and agricultural land (Folke et al., 2021). Conceptually, this ritual represents a manifestation of Community-Based Resource Governance that strengthens social solidarity while consolidating collective responsibility for environmental sustainability. Social capital, constituted by trust networks, reciprocal norms, and collective action capacity, has proven to be a fundamental prerequisite for the successful sustainable management of shared resources (Oberle, M., 2016), and all three are tangibly manifested in the Methik Pari ritual procession. Similar patterns have been documented in various contexts across Southeast Asia: the Subak system in Bali, rice rituals in Vietnam and Cambodia, and indigenous communities in mountainous regions have been shown to function as socio-ecological coordination mechanisms that integrate agricultural calendars, water resource management, and spiritual values within a single adaptive framework (Danugroho et al., 2025). The spaces for interaction created during ritual processions allow for the formation of solidarity and more intimate social relationships among community members, even if they come from different economic strata (Dolorosa et al., 2024). Thus, the Methik Pari Ritual does not merely preserve cultural heritage but also supports community resilience against ecological and economic pressures that are constantly undergoing transformation.

The analytical dimension that makes Tugu Village an interesting case study lies in the fact that the Methik Pari Ritual has undergone an active revitalization process over the past five years not in the form of passive preservation, but rather as a fundamental transformation from a household-scale tradition into a village program that is managed systematically and inclusively. Based on information obtained from traditional elders, this tradition has its roots in Tawang Hamlet and has existed since previous generations, though it was initially practiced within the domestic sphere of individual farming families. The turning point in this transformation occurred when the village head, during his second term in office (around 2021), initiated discussions with traditional elders regarding the potential and feasibility of elevating this tradition into a village program that accommodates the participation of all residents. This transformation is not merely a technical modification in the procedures of implementation, but rather an epistemological shift from individual rituals toward communal rituals, which implicitly strengthens the community's social capital. This process demonstrates the convergence between the formal leadership of the village government and the cultural authority of traditional elders as two complementary poles in the governance of cultural-ecological heritage. This multi-stakeholder participation contributes not merely as a traditional activity, but as a space for cross-stakeholder collaboration that integrates local knowledge, community institutions, and resource management practices within the village's socio-ecological framework. The values intrinsic to the rituals encourage farmers to refrain from excessive exploitation, maintain soil fertility, and conserve the sustainability of food production (Sumarwati, 2022).

Socio-Ecological Dimensions of the Methik Pari Ritual

The ecological dimension of the Methik Pari ritual can be examined through the ritual's concrete mechanisms for regulating farmers' behavior toward the rice field ecosystem. Empirical field data demonstrate that this ritual implicitly enforces customary norms that prohibit tree felling along the edges of rice fields, the indiscriminate disposal of waste around agricultural zones, and the excessive application of pesticides and chemicals. These norms are not codified in written regulations but are internalized through collective participation in the ritual and the intergenerational transmission of values (Biggs, R., et al., 2015). This finding aligns with the concept of common-pool resource governance within Ostrom's epistemological tradition, where effective governance of shared resources frequently relies on informal institutions based on trust and social sanctions rather than formal state regulations (Barthel et al., 2013). The integration of spiritual dimensions into land management gives rise to a collective moral obligation that effectively curbs individual exploitative behavior without requiring external bureaucratic intervention. A comparative study in the Southeast Asian region demonstrates an analogous pattern, in which agricultural rituals function as ecological regulatory mechanisms that maintain a balance between the exploitation and conservation of land resources over the long term (Benyei et al., 2019). At the macro level, the Methik Pari ritual reflects what Escobar (2020) positions as a relational ontology namely, a worldview that rejects the human-nature dichotomy and affirms that both are bound in a constitutive relationship of mutual dependence. This worldview is explicitly embedded in the elders' narratives, which express that rice fields are a "trust from God, from the

ancestors, from nature,” obligating farmers to live in harmony, not merely to exploit. This relational dimension provides a philosophical foundation for the ecological function of rituals, as an awareness of organic dependence on nature fosters conservative behavior in resource management (Díaz et al., 2020).

The transmission of ecological knowledge through the Methik Pari ritual occurs through participatory mechanisms that involve all strata of the community, not limited to farmers who own land. Empirical field evidence demonstrates that residents who do not own rice fields also actively participate by bringing water jugs and joining in communal prayers at the rice field huts. This inclusive mechanism generates a phenomenon conceptualized as social-ecological memory the collective storage of ecological knowledge, experiences, and practices that enables the community to adaptively respond to the dynamics of environmental change. This situation reflects the dynamics previously identified regarding the vital role of knowledge keepers in maintaining the integrity of traditional ecological knowledge systems amidst the pressures of agrarian modernization (Tengö et al., 2021). However, the fact that this knowledge is concentrated among a small number of increasingly elderly elders poses a serious vulnerability to the sustainability of the ecological functions of these rituals in the future. Currently, there are only three traditional elders who possess comprehensive mastery of the prayers, incantations, and traditional calculation systems of the Naga Dino and Naga Tahun, which serve as ecological markers for determining harvest times.

Challenges, Adaptation, and Prospects for the Sustainability of the Methik Pari Ritual Amidst Agrarian Transformation

The sustainability of the Methik Pari ritual as a socio-ecological knowledge system faces four interconnected structural challenges. The first challenge relates to the threat to regeneration, namely the limited number of elders who possess comprehensive expertise in the rituals, prayers, and traditional calculation systems. The second challenge concerns institutional threats; the dependence of ritual execution on the individual dedication of the village head creates significant structural vulnerability, as expressed by field informants who fear the ritual may cease should a leadership transition occur. This tension reflects a conceptual dilemma between a community-based governance model rooted in the internalization of values versus a state-dependent model relying on formal regulations. The third challenge is budgetary constraints; the allocation of village funds can threaten the availability of resources for ritual implementation. The fourth challenge is one of relevance: the diminishing appeal to the younger generation, which is increasingly oriented toward non-agricultural work and digital culture. Urbanization and the migration of the younger generation to the industrial sector pose structural challenges that threaten the sustainability of rituals. Empirical field evidence demonstrates that the majority of the younger generation in Tugu Village choose to work in urban areas or factories, abandoning agriculture as their primary livelihood. This situation aligns with findings in Japan indicating that reduced youth engagement diminishes opportunities to gain direct experience as the primary medium for transmitting ecological knowledge (Okui et al., 2021). A comparative study of Southeast Asia confirms that demographic and social transformations contribute to the erosion of local ecological knowledge systems by

weakening the intergenerational transmission that has historically occurred through direct engagement in agrarian cultural practices (Chua et al., 2019). This situation aligns with the “generation gap” phenomenon in the global agricultural sector, driven by the dominance of digital culture and a shift toward non-agricultural employment among rural youth. Climate change adds a substantial layer of complexity. This knowledge adaptation mechanism demonstrates that Traditional Ecological Knowledge (TEK) is a dynamic system that continuously evolves through learning processes and responses to changing ecological conditions (Berkes et al., 2000). Integrating TEK with contemporary climate information can strengthen communities’ capacity to cope with climate variability and maintain the relevance of the local agricultural calendar.

Amid the complexity of the pressures faced, the Methik Pari Ritual expresses a noteworthy adaptive capacity. The transformation from implementation at every corner of individual rice fields to a single central location at the village rice field hall is a pragmatic adaptation that facilitates mass participation. Although it sacrifices the intensity of individual ecological engagement, this adaptation enhances the ritual’s relevance to a broader spectrum of participants. This phenomenon demonstrates that cultural practices can undergo formal metamorphosis in response to social transformation without eroding the underlying ecological functions and fundamental collective identity. A similar process has been documented among the Hani community in Yunnan, China, where modernization has progressively shifted agricultural rituals from integrated ecological practices to more symbolic expressions of cultural identity—a shift that requires careful consideration to avoid eroding the community’s adaptive capacity (Ma et al., 2024). Contemporary socio-ecological studies confirm that this type of social capital is a critical component of community resilience in the face of environmental and social disruptions, as it facilitates rapid and effective collective coordination in responding to crises (Folke et al., 2021). Sharing meals in the fields without distinction of social or economic status creates experiences of equality that strengthen communal cohesion and trust among residents as the foundation for collective action in the management of agricultural resources. From the perspective of transformative resilience, the Methik Pari Ritual in Tugu Village represents a form of biocultural resilience: the local community does not merely preserve existing cultural heritage but actively reconstructs its functions and meanings to remain relevant amidst the dynamics of modernization and demographic change.

Implications for Conservation Policy and Environmental Governance

A synthesis of the findings of this study yields a series of urgent policy implications. First, local governments need to develop a policy framework that explicitly recognizes the contribution of local knowledge systems such as Methik Pari to environmental governance and food security, not limited to the domain of cultural preservation. This formal recognition can be operationalized through the integration of local knowledge into village development planning as a component of a co-management approach that emphasizes collaboration between community knowledge systems and formal institutions (Berkes, 2009). Studies on the integration of TEK into environmental governance across various countries demonstrate that formal recognition of local

knowledge not only enhances policy effectiveness but also strengthens the legitimacy and sustainability of the knowledge practices themselves. Second, the urgency of systematically documenting ritual knowledge including transcriptions of prayers, performance protocols, and the traditional calendars of Naga Dino and Naga Tahun cannot be further delayed, given the advancing age of the elders and the absence of comprehensive written documentation. Studies on the integration of traditional ecological knowledge (TEK) into environmental governance in various countries demonstrate that formal recognition of local knowledge not only enhances policy effectiveness but also strengthens the legitimacy and sustainability of the knowledge practices themselves. Second, the urgency of systematically documenting ritual knowledge including transcriptions of prayers, performance protocols, and the traditional Naga Dino and Naga Tahun calendar systems cannot be further delayed given the advancing age of the elders and the lack of comprehensive written documentation. Documentation should be carried out in a participatory manner involving the community, village government, and academics to ensure both the authenticity and accessibility of the documented knowledge. Third, community-based educational programs that bridge the younger generation with ecological knowledge within rituals need to be designed innovatively. This approach aligns with the development of STEAM-based environmental education, which integrates contextual experiences into learning to enhance ecological awareness (Baek, 2023). Fourth, cross-sectoral collaboration between village governments, agricultural agencies, environmental agencies, and higher education institutions is necessary to integrate the TEK contained in Methik Pari into a more comprehensive sustainable agriculture program in Tulungagung Regency. Furthermore, this study demonstrates that the integration of local ecological knowledge into formal environmental governance requires a fundamental epistemological reorientation. Effective and equitable environmental governance requires recognition of epistemic pluralism that various knowledge systems, including local knowledge, possess validity on par with techno-scientific knowledge in addressing ecological crises (Santos, 2015). Studies on political ecology in Indonesia reveal a tendency toward state-centered environmental governance and an extraction-oriented logic that is unresponsive to local practices and knowledge. Findings from Tugu Village indicate that an alternative approach integrating agricultural rituals as a component of environmental governance rather than merely as a cultural ornament is practically more sustainable because it relies on the community's intrinsic motivations, which have been internalized over generations, rather than on external incentives vulnerable to policy changes.

The long-term prospects for the sustainability of the Methik Pari Ritual depend on the capacity of the community and stakeholders to navigate the tensions between preserving authenticity and the need for adaptation. Within the framework of transformative resilience, a sustainable socio-ecological system is not one that maintains a static state, but rather one that is capable of fundamentally transforming itself while preserving its essential functions. Essential functions that must be maintained include the reproduction of ecological balance, the strengthening of social cohesion, and the transmission of local agrarian knowledge, even as the forms of ritual expression evolve in response to socio-demographic dynamics. A study by Li and Han (Li & Han, 2022) confirms that strong environmental ethics and the flexibility of adaptive action are critical resources that

enable communities to withstand the pressures of environmental change without losing their knowledge identity. Communities that successfully maintain the relevance of their rituals in a modern context are those capable of renewing the symbolic narratives of rituals without eroding the essence of their ecological and social values. For Tugu Village, this challenge demands a communal commitment to passing on ritual knowledge to the younger generation, as well as a willingness to engage in dialogue regarding the ecological values of Methik Pari in light of the new challenges faced by the contemporary rural agricultural system of East Java.

CONCLUSION

The Methik Pari ritual in Tugu Village, Rejotangan Subdistrict, Tulungagung Regency represents a manifestation of a socio-ecological knowledge system that integrates spiritual, social, and ecological dimensions into a single coherent cultural practice. Through a multidimensional analysis encompassing symbolic significance, socio-ecological functions, SES dimensions, as well as the dynamics of challenges and prospects for sustainability, this investigation demonstrates that this rice-production ritual operates as an effective community-based resource governance mechanism, a vehicle for the intergenerational transmission of ecological knowledge, and a space for the reproduction of social cohesion that strengthens the community's adaptive capacity in the face of various environmental and social pressures. Through an analysis focusing on the contribution of Traditional Ecological Knowledge to biodiversity conservation, agricultural rituals can be understood as a component of local knowledge systems that support community-based environmental management and ecological sustainability. This investigation also highlights the unresolved tension between ongoing agricultural modernization and the imperative to preserve local knowledge systems, which are foundational to community resilience.

Studies on biocultural reinforcement across various agricultural landscapes in multiple countries demonstrate that practices based on traditional knowledge, including traditional food systems in Europe and Asia, make significant contributions to maintaining the sustainability of agroecosystems through the interconnections between culture, ecology, and place-based food systems. Urbanization, agricultural mechanization, the crisis of elder regeneration, and climate change simultaneously threaten the sustainability of Methik Pari, while institutional revitalization initiated by the village government offers hope that this ritual possesses sufficient adaptive capacity to survive in a form relevant to the contemporary era. The long-term sustainability of this ritual, therefore, depends not only on the community's commitment to passing it down, but also on the willingness of public policy to recognize and support traditional ecological knowledge as a legitimate component of a more comprehensive environmental governance strategy. The Methik Pari ritual, ultimately, is not merely a legacy of the past that needs to be protected from extinction, but a system of knowledge for the future that offers cultural and epistemological alternatives to modern approaches to managing the relationship between humans and nature in the contemporary era.

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