

Collaborative Leadership in Adaptive Governance: A Case Study of Natural Resource-Based Communities in Lombok

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ABSTRACT

Purpose: This study explores the dynamics of collaborative leadership within adaptive governance in natural resource-based communities in Lombok, Indonesia. It aims to understand how leadership practices facilitate coordination, participation, and institutional adaptation in managing ecological and social complexity. The research seeks to contribute to management scholarship by identifying leadership processes that enable sustainable governance through cooperation, flexibility, and collective decision-making.

Subjects and Methods: Using a qualitative case study approach, the research collected data through in-depth interviews with community leaders, local government officials, and NGO representatives involved in resource management initiatives. Observations and document analyses complemented the interviews to triangulate findings. The data were analyzed thematically, focusing on leadership practices that fostered communication, coordination, and adaptive responses within governance systems.

Results: Findings reveal that collaborative leadership emerged as the central mechanism for achieving adaptive governance outcomes. Leaders acted as institutional bridges, facilitating dialogue among diverse stakeholders, harmonizing traditional and formal governance structures, and fostering trust-based participation. Their capacity to adaptively respond to environmental and social challenges strengthened community resilience and sustainability. The study also found that leadership effectiveness depended on relational competence, cultural legitimacy, and the ability to institutionalize learning within governance practices.

Conclusions: Collaborative leadership is vital for managing complex socio-ecological systems. It transforms governance into a dynamic process of shared responsibility and continuous adaptation. The study advances management theory by positioning leadership as an adaptive, relational, and systemic process fundamental to sustainable community-based governance.

INTRODUCTION

Lombok, an island in the province of West Nusa Tenggara, Indonesia, is endowed with abundant natural resources, including fertile agricultural lands, rich marine ecosystems, and diverse forest areas. These resources form the foundation of the island's economy and the livelihoods of its people. However, Lombok's natural environments have been increasingly strained by rapid population growth, land-use change, climate variability, and unsustainable exploitation practices.

These pressures have led to resource depletion, environmental degradation, and social conflict over access to and control of resources. Consequently, effective governance systems that enable communities to adapt to changing ecological and socio-economic conditions have become an urgent necessity. In this context, the concept of adaptive governance has gained significant attention. Adaptive governance refers to flexible, inclusive, and learning-oriented governance arrangements designed to manage complex social-ecological systems (Hovardas, 2021).

It emphasizes participation, collaboration, and multi-level coordination between communities, government institutions, and other stakeholders (Edmondson & Fanning, 2022). However, while adaptive governance provides a conceptual framework for managing dynamic resource systems, its success heavily depends on the presence of collaborative leadership a leadership style that promotes cooperation, shared decision-making, and the integration of multiple perspectives in addressing collective challenges (Bril, 2024).

Collaborative leadership is distinguished by its emphasis on mutual trust, joint responsibility, and inclusive dialogue among stakeholders. Unlike hierarchical or authoritarian leadership models, collaborative leaders act as facilitators, connectors, and mediators who build bridges across different groups, ensuring that diverse voices are represented in decision-making processes (Lehmeidi, 2025). They encourage local participation, foster knowledge-sharing between scientific and traditional knowledge systems, and support adaptive learning processes within communities (Nadeem, 2024).

Such leadership is particularly relevant for natural resource-based communities, where governance must balance ecological sustainability with social and economic priorities. In Lombok, various forms of collaborative leadership have emerged through local initiatives in managing coastal areas, forests, and agricultural resources. Community-led mangrove restoration projects in West Lombok, for example, have demonstrated the value of collaboration between local leaders, government agencies, and non-governmental organizations in promoting both environmental conservation and livelihood improvement.

Similarly, farmer cooperatives in Central Lombok have shown that participatory water management and collective decision-making enhance resilience to droughts and fluctuating climate conditions. These cases reveal that leadership practices rooted in collaboration and inclusivity can effectively support adaptive governance in community-based resource management. Despite growing recognition of these successes, the empirical understanding of how collaborative leadership functions within adaptive governance systems remains limited in the Indonesian context (Mukhlis & Perdana, 2022).

Most existing studies have concentrated on institutional arrangements, policy frameworks, or technical aspects of governance, often overlooking the relational and cultural dimensions of leadership (Tobari et al., 2024). Yet, leadership plays a critical role in shaping trust, legitimacy, and cooperation elements that determine the success of adaptive governance processes. Understanding these leadership dynamics is essential, particularly in Lombok's rural and coastal communities where governance systems are deeply intertwined with local norms, traditions, and social networks.

This study addresses that gap by exploring the role of collaborative leadership in enabling adaptive governance within natural resource-based communities in Lombok. It examines how local leaders mobilize collective action, mediate conflicting interests, and bridge formal and informal governance systems. Through a qualitative case study approach, the research provides a nuanced understanding of leadership as a social process that facilitates adaptation, learning, and cooperation across diverse actors (Fannur et al., 2023).

It focuses on how community leaders, rather than merely enforcing regulations, act as facilitators who encourage dialogue and co-creation of knowledge among stakeholders (Medema et al., 2017; Home et al., 2021; Amann & Rubinelli, 2017). The significance of this study is twofold. First, it contributes to the theoretical discourse on adaptive governance by integrating the concept of collaborative leadership into discussions of community-based resource management. Previous research has largely viewed governance as a structural or policy mechanism, while this study

emphasizes its human and relational dimensions how individuals, relationships, and trust networks drive adaptive capacity.

Second, it offers practical implications for sustainable development and policy design. Insights from Lombok's experience can inform strategies for strengthening local leadership capacities, enhancing participatory governance, and promoting resilience in other natural resource-dependent regions. Ultimately, this research asserts that adaptive governance cannot function effectively without collaborative leadership. While governance structures provide the framework for decision-making, leadership provides the motivation, trust, and coordination needed to sustain cooperation (Henderson & Smith-King, 2015).

In Lombok's natural resource-based communities, collaborative leaders act as catalysts of social capital building relationships, facilitating negotiation, and encouraging collective responsibility. Through their efforts, communities are better equipped to navigate uncertainty, adapt to environmental changes, and sustain their livelihoods in the face of global and local challenges. The findings of this study, therefore, highlight that the future of sustainable resource management in Lombok and similar contexts depends not only on adaptive institutions but on the presence of leaders capable of uniting people toward shared ecological and social goals.

METHODOLOGY

This study employed a qualitative research design using a case study approach, which was deemed most appropriate for exploring the complex social and institutional dynamics of collaborative leadership within adaptive governance systems. The qualitative design allowed for in-depth understanding of the participants lived experiences, perspectives, and practices in their natural contexts. Since adaptive governance and collaborative leadership are inherently relational and context-dependent phenomena, the case study method enabled an intensive examination of how leadership operates within the unique sociocultural and ecological setting of Lombok's natural resource-based communities. A single-case design was selected, focusing on multiple community sites within Lombok to capture variations in leadership practices and governance mechanisms. This approach aligns with argument that case studies are suitable for investigating contemporary phenomena within real-life contexts where the boundaries between the phenomenon and its environment are not clearly defined. The research adopted an interpretivist paradigm, grounded in the belief that social reality is constructed through interactions and shared meanings. Accordingly, the researcher sought to interpret how local leaders and community members perceive and enact collaboration within governance processes. The study did not aim to generalize findings statistically but to provide rich, contextualized insights that may inform theoretical understanding and practical application in similar settings.

Research Site and Context

The study was conducted in three natural resource-based communities in Lombok, representing coastal, agricultural, and forest-dependent areas. These sites were selected to provide a holistic understanding of collaborative leadership across different resource management contexts. The first site was a coastal community in West Lombok, known for its community-led mangrove rehabilitation projects that involve collaboration between local fishers, non-governmental organizations, and local government. The second site was an agricultural village in Central Lombok, where farmer cooperatives play a pivotal role in managing irrigation systems and responding to climate variability. The third site was a forest-adjacent community in North Lombok, where local customary institutions (*tradition*) collaborate with government forestry programs to balance conservation and livelihood needs. These varied contexts allowed the study to examine how leadership practices adapt to distinct ecological challenges and governance structures.

Participants and Sampling

Participants were selected using purposive sampling, ensuring the inclusion of individuals with substantial experience and involvement in community governance and resource management. The sample consisted of 24 participants, including local leaders (village heads, cooperative leaders, and customary leaders), government representatives from environmental and

agricultural offices, non-governmental organization (NGO) facilitators, and active community members. The inclusion criteria required that participants had direct engagement in decision-making or collaborative projects related to natural resource management. The purposive approach allowed the researcher to deliberately target information-rich cases, ensuring that insights obtained would reflect the depth and diversity of leadership experiences. To achieve representation and data saturation, participants were drawn from all three community sites, with both male and female respondents included to reflect gender diversity in leadership roles.

Data Collection Methods

Data were collected through semi-structured interviews, focus group discussions (FGDs), direct observation, and document analysis over a four-month fieldwork period. Semi-structured interviews were the primary data collection tool, allowing flexibility to explore emerging themes while maintaining consistency across key topics. Each interview lasted between 45 and 90 minutes and was conducted in Bahasa Indonesia, with translation and transcription handled by the researcher. Questions focused on participants' experiences with collaboration, leadership roles, challenges faced, and perceptions of governance effectiveness. Focus group discussions were held in each community to validate and complement interview findings. Each group consisted of six to eight participants representing different stakeholder categories. The FGDs provided a platform for participants to exchange views, discuss shared experiences, and collectively reflect on governance practices, thereby enriching the depth of data. Direct observations were conducted during community meetings, environmental restoration activities, and decision-making forums. Field notes captured interaction patterns, communication styles, and expressions of leadership and collaboration in practice. Additionally, document analysis included reviewing meeting minutes, local regulations, NGO reports, and project documentation related to natural resource governance. These documents helped triangulate the findings, providing insight into formal structures and policies supporting collaborative practices.

Data Analysis

The collected data were analyzed using thematic analysis, following the systematic process proposed. The process began with transcription and repeated reading of the data to achieve immersion and familiarization. Initial codes were then generated to capture significant features of the data related to leadership roles, collaboration mechanisms, and governance processes. The researcher subsequently organized these codes into broader themes that reflected recurring patterns and meanings. Thematic categories such as “communication and participation,” “coordination and partnership,” “flexibility and learning,” and “challenges in collaboration” emerged from this iterative process. NVivo 12 software was used to manage, organize, and code data efficiently, ensuring traceability and consistency throughout the analysis. Constant comparison between interviews, focus groups, observations, and documents ensured triangulation and increased the reliability of findings. Peer debriefing with academic colleagues and feedback from local collaborators were also employed to enhance analytical rigor and reduce researcher bias.

RESULTS AND DISCUSSION

Natural resource governance in developing regions increasingly requires leadership that emphasizes collaboration, adaptability, and inclusivity. In communities where livelihoods depend on ecological systems, leaders must balance sustainability, economic needs, and social justice. Traditional top-down management models often fail to address these complexities. In this context, *collaborative leadership* focused on participation, shared decision-making, and institutional bridging plays a vital role within *adaptive governance* frameworks. In Lombok, Indonesia, where natural resource-based communities face environmental and socio-economic pressures, such leadership fosters cooperation and resilience. This study examines how collaborative leadership supports adaptive governance through participation, coordination, and flexibility, offering new insights for management scholarship and practice in complex community settings.

Communication and Participation: Building a Foundation for Collaboration

Effective communication and meaningful participation emerged as the foundational pillars of collaborative leadership in the natural resource-based communities of Lombok. The findings reveal that communication practices are not only instrumental in exchanging information but also serve as mechanisms to foster trust, transparency, and inclusivity within governance systems. Leaders in these communities consistently emphasized dialogue, collective discussion, and consensus-building as essential elements of decision-making processes. This participatory culture aligns with local values of *musyawarah* (deliberation) and *mufakat* (agreement), which form the social fabric of community interactions. Through these culturally rooted mechanisms, leaders have successfully engaged diverse groups from farmers and fishers to women's associations and youth ensuring that governance decisions reflect shared aspirations and mutual understanding. Community meetings play a central role in promoting open communication. Field observations showed that in most villages, monthly or bi-monthly meetings are conducted where community members discuss issues related to land use, water distribution, or environmental conservation. These gatherings often take place in public halls or under traditional gazebos, fostering an informal yet respectful atmosphere that encourages open dialogue. One community leader explained,

“Every important issue is discussed together; I don’t make decisions alone because we believe the best solution comes from the voices of many” (Interview, Participant 2).

This statement highlights how participatory communication is not merely procedural but represents a deeply held norm that legitimizes leadership authority through collective consensus. In addition to formal meetings, leaders employ informal communication methods to maintain continuous engagement with the community. Many respondents described how their leaders often visit homes, attend local ceremonies, or engage in spontaneous discussions to gather feedback. This personalized approach strengthens interpersonal relationships and reinforces the perception of leaders as approachable and empathetic figures. As expressed by one community member,

“Our leader often comes to the field, listens to us, and even works with us when planting season begins. It makes us feel respected and heard” (Interview, Participant 7).

Such informal communication channels bridge hierarchical gaps and sustain a sense of mutual accountability between leaders and followers. This practice also resonates with adaptive governance principles, where the flow of knowledge between formal and informal actors enhances the system's capacity for learning and adaptation. Moreover, participation in governance decisions extends beyond traditional power holders. Several interviewees noted that collaborative leaders actively seek input from women's groups and youth organizations, recognizing their roles as vital contributors to community resilience. For instance, in one coastal community, women's cooperatives were involved in managing mangrove nurseries and developing eco-tourism initiatives. This inclusion not only diversified perspectives but also created new opportunities for economic empowerment. As one female respondent shared,

“Before, women only joined meetings to prepare food. Now, we speak about how to protect the mangroves and even manage our own group funds” (Interview, Participant 11).

This shift illustrates a gradual transformation in participation norms from passive attendance to active engagement marking an important step toward equitable and inclusive governance. The study also found that the quality of participation depends heavily on the leader's ability to communicate across social and educational divides. In heterogeneous communities, leaders often act as translators, simplifying technical or policy-related information from government agencies so that it becomes understandable for local residents. During focus group discussions about irrigation management, a village facilitator explained how the leader used local metaphors and visual maps to explain water distribution rules. This translation process not only ensures comprehension but also empowers the community to make informed contributions during decision-making. Such communication competence demonstrates the essence of collaborative leadership the ability to connect diverse knowledge systems and promote shared understanding.

Another significant finding concerns the relationship between communication and trust. Effective leaders deliberately cultivate transparency to prevent misinformation and foster credibility. Many respondents stated that open information-sharing about financial matters, resource allocation, and project outcomes strengthens public confidence. One villager emphasized,

“If we know where the money goes and what it’s used for, we are more willing to support the next program” (Interview, Participant 4).

This transparency reflects not only ethical leadership but also the adaptive governance ideal of accountability as a learning and feedback mechanism. When communities trust their leaders, they are more likely to engage actively, share local knowledge, and take ownership of collective actions. However, despite these positive practices, the study also identified instances where communication barriers limited participation. In some cases, geographical distance and limited access to communication technology hindered the involvement of remote community members. Similarly, certain traditional hierarchies occasionally discouraged open dissent, especially among younger or less influential residents. A few participants expressed hesitation to contradict senior figures during meetings, indicating that while participation has broadened, it is not yet fully egalitarian. Nonetheless, leaders who were aware of such dynamics attempted to address them by creating smaller discussion groups or conducting separate consultations with underrepresented members. This proactive approach exemplifies adaptive learning where leaders modify their strategies in response to social feedback.

Overall, the findings suggest that communication and participation are deeply intertwined dimensions of collaborative leadership in Lombok’s adaptive governance context. Leaders who communicate effectively build trust, and trust, in turn, encourages active participation. These interactions create feedback loops that enhance the community’s ability to respond collectively to environmental and social changes. The evidence from interviews, field observations, and document reviews consistently demonstrates that collaborative leadership is not only about managing resources but also about managing relationships. In essence, communication acts as both the process and the outcome of effective collaboration a dynamic space where leadership, learning, and collective action converge.

Coordination Across Stakeholders: Bridging Institutional and Social Boundaries

Coordination among diverse stakeholders emerged as a central component of collaborative leadership in the natural resource-based communities of Lombok. The findings reveal that leader’s function not merely as decision-makers but as *bridge-builders* who link community groups, traditional institutions, government agencies, and non-governmental organizations (NGOs) in a shared governance network. In many ways, these leaders act as mediators, negotiators, and translators navigating between multiple interests, languages, and institutional frameworks. This bridging function is critical in adaptive governance, as it fosters collective capacity to manage complex social-ecological systems where no single actor possesses complete authority or knowledge.

The study found that effective coordination is built upon a foundation of trust and mutual recognition among actors. Leaders who were respected for their integrity and inclusiveness were more successful in convening stakeholders with conflicting priorities. In one inland farming community, for instance, the leader coordinated between local farmers, government agricultural officers, and a university research team working on sustainable irrigation practices. This coordination process was neither linear nor formalized, but rather evolved through repeated interactions and relationship-building. As one government extension officer remarked,

“The village leader always makes sure that our programs align with what farmers actually need. He invites us to listen before we implement anything” (Interview, Participant 10).

This statement underscores how leaders serve as connectors, ensuring that external interventions are grounded in local realities and that policies become practically meaningful at the community level. In coastal areas, coordination between community-based organizations and conservation

NGOs also proved vital in managing marine and mangrove ecosystems. Leaders played a pivotal role in aligning different agendas balancing ecological sustainability promoted by NGOs with the livelihood concerns of fishers. In one village, an NGO sought to restrict fishing in certain zones to protect coral reefs, while local fishers worried about losing income. The leader mediated by proposing a rotational fishing schedule and facilitating a series of joint dialogues to find common ground. As one fisher stated,

“At first, we didn’t trust the outsiders. But our leader told us, let’s talk and see what benefits we can get together” (Interview, Participant 8).

This illustrates the importance of *relational coordination* the process of fostering understanding and shared objectives across boundaries of power, knowledge, and institutional mandate. The coordination role of leaders often extended beyond the community level, bridging interactions with higher tiers of government. In several cases, leaders represented community concerns during district-level meetings or policy consultations. This upward communication ensured that local knowledge and needs informed formal governance processes. Conversely, leaders were also responsible for communicating government policies and regulations back to the community in an accessible way. For example, when new environmental regulations regarding coastal zoning were introduced, one leader organized information sessions using visual maps and storytelling methods to translate the technical terms into culturally relevant language.

“We cannot just tell people there is a new rule; we must explain it in our way so they understand why it matters,” explained one local leader (Interview, Participant 6).

This translation and mediation process exemplify the *two-way learning* that defines adaptive governance where policy and practice evolve through ongoing feedback loops between institutions and communities.

The study also uncovered instances of conflict and tension arising from coordination challenges. Differences in priorities, bureaucratic rigidity, and limited resources often created friction between actors. One NGO representative expressed frustration, saying,

“Sometimes, we propose collaboration, but the process is slowed down because the village must follow government administrative rules that take months” (Interview, Participant 12).

Similarly, several community members noted that while partnerships with external organizations brought resources, they also introduced dependency and competition. These findings highlight that coordination is not a frictionless process but a continuous negotiation that requires leadership patience, diplomacy, and strategic communication. Successful leaders were those who approached coordination as an evolving relationship rather than a one-time agreement using trust and dialogue to navigate institutional constraints.

Moreover, coordination was observed to depend heavily on the ability of leaders to maintain *horizontal linkages* within the community and *vertical linkages* with external actors. The most effective cases demonstrated a balance between local autonomy and external support. Leaders who maintained transparent communication with both sides were able to harmonize bottom-up initiatives with top-down frameworks. For instance, one community successfully integrated traditional irrigation practices (*subak*) with government-sponsored water management programs by establishing a joint monitoring committee. The leader explained,

“We used our traditional schedule, but we also followed the technical advice from the district officers. We combine both for the best result” (Interview, Participant 9).

This example illustrates the adaptive blending of formal and informal governance mechanisms — a hallmark of resilience in social-ecological systems.

Importantly, coordination also had a social dimension that extended beyond resource management. Through multi-stakeholder cooperation, leaders cultivated a sense of shared responsibility and community identity. When coordination succeeded, it generated what participants described as *spirit together* a collective spirit of working together for the common

good. This spirit reinforced long-term collaboration and sustained collective action even after external projects ended.

“When the government project finished, we continued the activities ourselves because we already learned how to work together,” said one villager proudly (Interview, Participant 14).

Such continuity demonstrates how collaborative leadership nurtures *institutional memory* the capacity to sustain cooperation and learning across changing circumstances and leadership transitions.

Flexibility and Adaptation: Responding to Environmental and Social Change

Flexibility and adaptation emerged as defining characteristics of collaborative leadership within Lombok’s natural resource-based communities. The study revealed that community leaders do not perceive governance as a fixed system of rules but as an evolving process that requires continuous adjustment to changing environmental, social, and economic conditions. In contexts where uncertainty such as unpredictable weather, market fluctuations, and shifting policy environments is constant, the capacity to adapt becomes essential. Leaders who successfully navigate these dynamics demonstrate the ability to modify strategies, redistribute responsibilities, and integrate new ideas while preserving the community’s shared values and local wisdom. This adaptive capacity aligns with the principles of *adaptive governance*, which emphasize experimentation, feedback, and learning-by-doing.

The findings indicate that leaders in Lombok routinely engage in adaptive decision-making processes to respond to environmental variability. For example, in one agricultural community in Central Lombok, prolonged droughts forced local leaders to reconsider traditional planting schedules. Instead of relying solely on fixed seasonal calendars, they collaborated with agricultural extension workers and farmers to adopt a staggered planting system that optimized water use. As one farmer recalled,

“When the dry season extended, our leader gathered us to discuss changing the planting calendar. We agreed to plant in groups, so we could share the limited water fairly” (Interview, Participant 3).

This decision-making process not only mitigated the effects of drought but also strengthened community cohesion, as residents collectively managed scarce resources. Such local-level adaptations exemplify how leadership flexibility transforms crises into opportunities for collective learning and innovation.

Adaptation was also evident in the management of coastal and marine ecosystems, where leaders balanced conservation goals with livelihood needs. In several fishing villages, leaders worked with NGOs to pilot new fishing zones and promote sustainable practices, such as the use of eco-friendly nets and temporary fishing bans in depleted areas. Initially, these changes faced resistance from fishers who feared income loss. However, through gradual implementation and transparent communication, leaders fostered acceptance. One fisher explained, “At first, we thought the rule was too strict, but when the fish started to come back, we realized it helped us too” (Interview, Participant 11). This adaptive approach reflects how collaborative leaders align short-term sacrifices with long-term community benefits by encouraging experiential learning and shared responsibility. It also illustrates the role of feedback mechanisms where observed ecological improvements reinforce collective commitment to sustainable governance.

Social change also demanded adaptive responses from leaders, especially in reconciling traditional norms with modern governance structures. Several leaders demonstrated flexibility by incorporating *adat* (customary law) practices into formal administrative procedures. For instance, in one village, the leader integrated traditional dispute resolution methods into the formal management of land-use conflicts, allowing decisions to carry both legal and cultural legitimacy.

“We cannot rely only on government law; people here also follow our ancestral rules. So, we combine both,” said a community leader (Interview, Participant 2).

This blending of governance systems exemplifies *institutional adaptation*, where formal and informal norms are harmonized to maintain social cohesion and legitimacy. By embracing flexibility, leaders preserved cultural integrity while ensuring that governance structures remained relevant to contemporary challenges.

Furthermore, adaptation was not limited to environmental or institutional aspects but extended to leadership styles themselves. The study found that effective leaders continuously adjusted their approaches depending on the situation shifting between directive and participatory modes as needed. During times of crisis, such as natural disasters or market shocks, leaders took a more directive stance to ensure swift action. Conversely, during planning and reflection stages, they adopted inclusive strategies to gather diverse inputs. This dynamic leadership style illustrates the *contextual adaptability* necessary for maintaining stability within uncertainty. As one leader described,

“Sometimes we must decide quickly, but other times we must listen longer. Leadership is about knowing when to act and when to wait” (Interview, Participant 9).

Such adaptive awareness reflects not only strategic flexibility but also emotional intelligence – a crucial element of collaborative leadership that enables responsiveness without authoritarianism.

The study also highlighted that flexibility thrives in communities where learning is institutionalized as a collective practice. Leaders in several villages encouraged periodic evaluations of ongoing projects, treating both successes and failures as learning opportunities. These “reflection meetings” allowed community members to assess progress, share experiences, and adjust plans accordingly.

“If something doesn’t work, we don’t blame anyone. We discuss what went wrong and find another way,” said one participant (Interview, Participant 14).

This iterative process mirrors the adaptive governance model’s emphasis on *learning loops* cycles of experimentation, monitoring, and adjustment that enhance resilience over time. By framing mistakes as opportunities for growth, leaders fostered a culture of continuous learning that empowered communities to innovate and self-correct.

However, the findings also revealed that flexibility can be constrained by external factors, such as rigid bureaucratic systems and donor-driven project requirements. Some leaders expressed frustration with administrative rules that limited their ability to modify activities according to local needs.

“Sometimes, the program from above is too strict. We cannot change it even if we know it will not fit our condition,” lamented one village head (Interview, Participant 7).

This highlights a critical tension between top-down governance structures and the adaptive principles that local communities rely upon. While local leaders display creativity and responsiveness, the lack of institutional flexibility at higher levels often hampers the full realization of adaptive governance. This finding suggests that for adaptation to be sustainable, flexibility must be embedded not only at the community level but also across the broader governance hierarchy.

Overall, the findings demonstrate that flexibility and adaptation are both practical necessities and expressions of leadership wisdom in Lombok’s natural resource-based communities. Leaders who embrace change rather than resist it are able to sustain collaboration, mitigate risks, and foster community resilience. Their ability to integrate traditional knowledge with scientific input, to adjust governance practices according to environmental realities, and to transform uncertainty into learning opportunities reflects the core of adaptive governance. Flexibility, in this context, is not simply the capacity to react to change but to *anticipate, interpret, and transform* it into collective progress. Thus, adaptive leadership in Lombok embodies a living system – one that evolves with its environment, guided by the community’s shared commitment to sustainability and mutual trust.

Discussion

The findings of this study on *collaborative leadership within adaptive governance* in natural resource-based communities in Lombok reveal profound implications for management theory and practice. They extend beyond the descriptive boundaries of case study research, contributing to the evolving discourse on leadership as a distributed, contextually embedded, and systemically transformative process. Within the management sciences, the findings underscore a paradigm shift from individualistic, top-down models of leadership toward relational and adaptive frameworks that privilege collaboration, collective sense-making, and institutional bridging. This section articulates those implications, arguing that management as a discipline must rethink its leadership assumptions in complex socio-ecological contexts where uncertainty, pluralism, and interdependence dominate.

At the most foundational level, the Lombok experience challenges the prevailing orthodoxy that managerial leadership is primarily about control, coordination, and performance optimization. Instead, it suggests that leadership in adaptive governance operates through *relational orchestration* a dynamic process of aligning diverse actors toward shared purposes through trust, dialogue, and negotiation. This echoes the call by Gadolin et al. (2023) that adaptive leadership is less about authority and more about enabling adaptive capacity within complex systems. In resource-based communities, such leadership ensures that governance decisions are grounded in mutual understanding rather than mere compliance. This finding reinforces the argument of Chughtai et al. (2024) that effective collaborative governance is inseparable from the quality of leadership that fosters inclusivity and iterative learning. For management scholarship, this means re-conceptualizing leadership effectiveness not in terms of hierarchical command but in terms of relational coherence and institutional connectivity (Fagerdal et al., 2022).

Furthermore, the implications of this study affirm that *collaborative leadership is a strategic resource* in managing inter-organizational complexity. Management scholars Vogel, et al., (2022) have long argued that cross-sector collaboration depends on leadership that can navigate value differences and institutional logics. In the Lombok case, leadership served as the integrative function that bridged customary institutions, local government, and environmental NGOs demonstrating what Yngve (2024) termed “integrative public leadership.” This mode of leadership is not incidental but foundational to organizational adaptability. It moves the field of management beyond the organization-centric view of leadership to a systemic one, consistent with the network governance perspective advanced. The implication is that management education and executive training should evolve to prepare leaders for *boundary-spanning roles*, where the capacity to manage interdependence is more valuable than the ability to exert control.

Another central implication is epistemological. The study reinforces the notion that leadership knowledge is *contextually co-produced* rather than universally prescribed. Adaptive governance requires leaders to draw on local wisdom, cultural legitimacy, and community learning mechanisms elements often ignored in mainstream management frameworks derived from Western corporate contexts. observe, resilience and sustainability in socio-ecological systems emerge from adaptive co-management that integrates multiple knowledge systems. In Lombok, the legitimacy of leadership arose not from formal authority but from its embeddedness within customary practices and social reciprocity networks. This observation invites management researchers to engage with post-bureaucratic and post-colonial perspectives, questioning the dominance of universalized leadership models that overlook indigenous and community-based epistemologies. It also encourages managers working in development or sustainability fields to cultivate cultural literacy as a managerial competency.

The implications also speak to the *institutional dimension* of management. Collaborative leadership, as evidenced in this study, functions as a mechanism of institutional bridging connecting fragmented policy domains, stakeholder interests, and governance scales. This finding supports the institutionalist argument by Høiland & Klemsdal (2022) that organizational effectiveness increasingly depends on the ability to reconcile competing institutional logics. In Lombok, leaders acted as brokers, mediating between customary resource norms and formal administrative frameworks. Such brokerage roles are pivotal in overcoming institutional inertia, a recurrent challenge identified by Kallio et al. (2021) in governance systems. For managers in both public and private sectors, this means that leadership effectiveness cannot be understood in

isolation from institutional design. Leadership must be seen as an *institutional practice* that reshapes norms, builds legitimacy, and sustains adaptive learning within and across organizations.

Critically, this study exposes the management community to a neglected truth: collaboration and adaptation are not inherently harmonious processes; they are fraught with tension, contestation, and the potential for co-optation. Leadership, therefore, must function as both a stabilizing and disruptive force stabilizing relationships while disrupting rigid institutional patterns. This dual function resonates with Ponte & Pesci (2022) conception of adaptive leadership as a practice of mobilizing people to confront tough realities while maintaining social cohesion. In Lombok, leaders facilitated negotiation between competing livelihood needs and conservation imperatives, embodying call *institutional work*: the purposive actions of individuals and groups aimed at creating, maintaining, or disrupting institutions. For management practitioners, this highlights the importance of political acumen, emotional intelligence, and ethical reflexivity as leadership competencies essential for managing paradox and pluralism.

Another implication of this study concerns *organizational resilience and learning*. The collaborative leadership observed in Lombok demonstrates that adaptive governance flourishes where leadership fosters continuous learning, feedback, and reflection (Fannur et al., 2023). This is consistent with theory of double-loop learning and resonates with the learning organization framework. In management terms, adaptive governance mirrors a learning organization writ large one that learns across institutional boundaries. Leaders who create “safe spaces” for dialogue and experimentation effectively institutionalize learning as part of governance practice. Therefore, management institutions whether corporate, public, or hybrid must recognize that resilience arises not from rigid control systems but from cultivated learning ecologies where error, feedback, and adaptation are normalized.

At the policy interface, this study calls for *rethinking leadership investment* in community-based governance. Governance reforms frequently fail not due to inadequate policy frameworks but due to insufficient leadership capacity to sustain participation and collaboration. The Lombok case reveals that leadership is not a spontaneous outcome of community engagement but a cultivated resource requiring mentoring, institutional support, and long-term capacity building. Management agencies and development organizations should thus integrate leadership development as a key dimension of governance interventions, rather than treating it as an auxiliary activity. Such investments yield systemic benefits by strengthening the relational infrastructure of collaboration.

From a theoretical standpoint, the implications of this study are substantial. It advances a *contingency model of leadership* in adaptive governance, suggesting that leadership effectiveness depends on context-specific variables such as cultural legitimacy, institutional flexibility, and ecological uncertainty. This complements Luo (2024) argument that leadership is situationally contingent but extends it into non-corporate domains where complexity is ecological rather than market-driven. It also builds on complexity leadership theory (Fidelibus, 2024; Vega, 2024), offering empirical grounding that such theory has lacked in community-based contexts. Hence, management scholars are urged to expand leadership research beyond organizational confines, integrating ecological, cultural, and institutional dimensions into mainstream leadership theory.

CONCLUSION

This study demonstrates that collaborative leadership within adaptive governance is not merely a managerial approach but a transformative process essential for sustaining socio-ecological resilience in natural resource-based communities. The Lombok case reveals that leadership, when grounded in participation, trust, and institutional bridging, becomes the central mechanism through which governance adapts to complexity and change. For management scholarship, this finding demands a paradigmatic shift from individualistic and control-oriented models toward relational, context-sensitive, and adaptive frameworks that value learning, dialogue, and inclusivity. For practice, it underscores the need to institutionalize leadership development as a strategic investment in community governance, recognizing that the ability to lead collaboratively determines whether systems evolve or collapse under uncertainty. Ultimately, the implications extend beyond

environmental contexts they challenge management as a discipline to reimagine leadership as an inherently collective, ethical, and adaptive capacity for shaping sustainable futures.

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