

# Leadership-Driven Institutionalization of Collaborative Governance in Rural Clean Water Supply: Evidence from Batuah Village

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| ARTICLE INFO                                                                                                                                                                                                                                                                                                                                                    | ABSTRACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <p><b>Keywords:</b><br/>Collaborative Governance;<br/>Institutionalization; Facilitative Leadership; Rural Water Supply; Batuah Village</p> <p><b>DOI:</b><br/>10.22437/p7y9dh34</p> <p><b>Received:</b><br/>August 10<sup>th</sup>, 2026</p> <p><b>Reviewed:</b><br/>August 13<sup>th</sup>, 2026</p> <p><b>Accepted:</b><br/>August 22<sup>th</sup>, 2026</p> | <p><i>This study examines the institutionalization process of collaborative governance in rural clean water supply in Batuah Village, Kutai Kartanegara Regency, Indonesia. The study aims to analyze how collaborative governance develops and becomes institutionalized through leadership-driven dynamics involving multiple stakeholders. A qualitative approach was employed using in-depth interviews, Focus Group Discussions (FGD), observation, and document analysis. Data were analyzed using the interactive analysis model of Miles, Huberman, and Saldaña, while the analytical framework integrated the Collaborative Governance Model of Ansell and Gash, the Integrative Framework for Collaborative Governance of Emerson and Nabatchi, and an institutionalization perspective. The findings reveal that collaborative governance in Batuah Village emerged from severe clean water limitations and evolved progressively through facilitative leadership, collective learning, trust-building, and adaptive institutional arrangements. Village leadership played a central role as initiator, mobilizer, and boundary spanner in connecting stakeholders and sustaining collaboration. Early program outcomes, including improved water access, reduced household water costs, and increased community participation, strengthened collaborative legitimacy and stakeholder commitment. Over time, collaboration evolved from informal interaction into a more structured governance system characterized by formal agreements, role distribution, and community-based management mechanisms. The study contributes to collaborative governance literature by proposing leadership-driven institutionalization, emphasizing local leadership in transforming collaborative initiatives into sustainable institutional arrangements in rural governance contexts.</i></p> |

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## 1. Introduction

Access to clean water remains one of the fundamental challenges in rural development, particularly in developing countries where limitations in infrastructure, governance capacity, and public services continue to affect community welfare. Clean water is not only essential for domestic consumption and sanitation, but also plays a strategic role in public health, economic

productivity, and sustainable rural development (Djaja et al., 2022; Kurniatin & Maksum, 2022). In many rural areas, the provision of clean water is often constrained by limited state capacity, inadequate infrastructure, and unequal access to natural resources. These conditions frequently force rural communities to rely on unsafe water sources or purchase water at relatively high costs, thereby increasing social and economic vulnerability. Consequently, the issue of rural clean water supply has increasingly been recognized not merely as a technical or infrastructural problem, but also as a governance challenge that requires collective action and multi-actor collaboration.

In the Indonesian context, the challenge of rural clean water provision remains highly relevant, particularly in villages experiencing geographical and infrastructural limitations (Pendong et al., 2019; Baidhowie, 2020). One of these cases can be found in Batuah Village, Loa Janan District, Kutai Kartanegara Regency, where limited access to clean water had become a longstanding problem for the local community. Prior to the development of the village-based clean water system, residents relied heavily on shallow wells that were vulnerable to drought during dry seasons and often produced water with poor quality. In certain situations, households were required to purchase clean water at relatively expensive prices, creating additional economic burdens for rural families. These conditions encouraged the emergence of local initiatives aimed at developing alternative clean water systems through collaboration involving village government, private sector actors, academics, local government institutions, and the community. The Batuah Village case therefore represents an important example of how rural governance innovation can emerge from local necessity and evolve through collaborative processes among multiple stakeholders.

The increasing complexity of rural clean water problems has encouraged the growing importance of collaborative governance approaches in public service delivery. Collaborative governance emphasizes the involvement of multiple stakeholders, including government institutions, private sector actors, academics, civil society, and local communities, in collectively addressing public problems and achieving shared goals (Ansell & Gash, 2008; Emerson & Nabatchi, 2015). In the context of rural water governance, collaboration becomes particularly important because the provision of clean water often exceeds the capacity of a single institution to manage independently. Through collaboration, various actors can contribute resources, technical expertise, funding, and social support necessary to sustain public service provision. Previous studies have demonstrated that collaborative governance can strengthen the effectiveness of rural water programs through community participation, inter-organizational coordination, and cross-sector partnerships (Permana & Agustine, 2022; Silviani & Eriyanti, 2023).

Several previous studies on collaborative governance in clean water management have primarily focused on identifying supporting and inhibiting factors, actor participation, and forms of inter-organizational cooperation. Kosat et al. (2025), for instance, examined collaborative governance in addressing clean water crises through technical approaches such as infiltration wells and environmental conservation involving government institutions, NGOs, and communities. Similarly, Silviani and Eriyanti (2023) analyzed collaborative governance in rural water programs by emphasizing operational implementation factors, including community participation, funding availability, and stakeholder coordination. Although these studies provide important contributions in understanding collaborative governance practices, most of them remain largely descriptive and have not sufficiently explained how collaborative governance evolves dynamically into a more institutionalized and sustainable governance system. In particular, limited attention has been given to understanding how leadership influences the long-term institutionalization of collaborative arrangements in rural governance contexts.

An initial exploratory study on collaborative dynamics in Batuah Village had previously been conducted through a secondary data-based approach in a paper entitled *Collaborative Dynamics for Clean Water Sustainability: The Case of Batuah Village in Achieving SDG 6* (Nurrahman et al., 2025). The study highlighted the importance of trust-building, collective commitment, and stakeholder interaction in supporting the sustainability of village-based clean water governance. However, the previous study primarily focused on collaborative interaction patterns and relied heavily on secondary sources, thereby limiting its ability to empirically explain how collaboration evolved into a more structured and institutionalized governance system. Consequently, there remains a need for empirical investigation capable of capturing the dynamic interaction processes, leadership roles, and institutional transformation occurring within collaborative governance practices at the local level.

To address this gap, this study integrates the Collaborative Governance Model proposed by (Ansell and Gash, 2008) with the Integrative Framework for Collaborative Governance developed by (Emerson and Nabatchi, 2015), while also incorporating an institutionalization perspective to explain the transformation of collaborative arrangements into sustainable governance systems. The integration of these perspectives enables a more comprehensive understanding of collaborative governance, not only as a process of interaction among actors, but also as a dynamic process through which collaboration gradually develops formal structures, shared norms, operational mechanisms, and institutional legitimacy. Within this context, leadership emerges as a central driving force in facilitating collaboration, mobilizing actors, sustaining collective commitment, and institutionalizing collaborative practices over time.

Based on these considerations, this study aims to analyze how collaborative governance in rural clean water provision develops and becomes institutionalized through leadership-driven processes in Batuah Village. Furthermore, this study proposes the concept of leadership-driven institutionalization of collaborative governance as a conceptual contribution to collaborative governance literature, particularly in explaining how local leadership can transform initially informal collaborative initiatives into more structured and sustainable institutional arrangements in rural governance settings.

This study is expected to contribute both theoretically and practically to the development of collaborative governance studies in rural public service provision. Theoretically, the study expands existing collaborative governance literature by emphasizing the role of leadership as a driving force in the institutionalization of collaborative arrangements. Practically, the findings provide insights for local governments and rural stakeholders regarding the importance of multi-actor collaboration, adaptive institutional design, and leadership capacity in sustaining rural clean water governance. By examining the empirical case of Batuah Village, this study also offers a contextual understanding of how collaborative governance can evolve within rural communities facing infrastructural and governance limitations.

## **2. Literature Review**

### **2.1 Collaborative Governance**

The increasing complexity of rural clean water problems has encouraged the growing importance of collaborative governance approaches in public service delivery. Collaborative governance emphasizes the involvement of multiple stakeholders, including government institutions, private sector actors, academics, civil society, and local communities, in collectively addressing public problems and achieving shared goals (Ansell & Gash, 2008; Emerson & Nabatchi, 2015). In the context of rural water governance, collaboration becomes particularly important because the provision of clean water often exceeds the capacity of a single institution to manage independently. Through collaboration, various actors can

contribute resources, technical expertise, funding, and social support necessary to sustain public service provision. Previous studies have demonstrated that collaborative governance can strengthen the effectiveness of rural water programs through community participation, inter-organizational coordination, and cross-sector partnerships (Permana & Agustine, 2022; Silviani & Eriyanti, 2023).

The analytical framework of this study draws on the Collaborative Governance Model of Ansell and Gash (2008), particularly starting conditions, facilitative leadership, institutional design, and collaborative process, and the Integrative Framework for Collaborative Governance of Emerson and Nabatchi (2015), emphasizing principled engagement, shared motivation, and capacity for joint action.

## **2.2 Leadership and Institutionalization**

The study incorporates an institutionalization perspective to explain how collaborative arrangements can evolve from informal interaction into more structured and sustainable governance systems. In this perspective, institutionalization involves the development of formal structures, shared norms, operational mechanisms, role distribution, and institutional legitimacy through repeated interaction and collective learning.

The integration of these perspectives positions leadership as a central driving force in facilitating collaboration, mobilizing actors, sustaining collective commitment, and institutionalizing collaborative practices over time.

## **3. Research Methodology**

### **3.1 Research Design**

This study employed a qualitative descriptive approach to examine the institutionalization process of collaborative governance in rural clean water provision in Batuah Village, Loa Janan District, Kutai Kartanegara Regency, Indonesia. A qualitative approach was considered appropriate because the study aimed to explore the dynamics of interaction, leadership roles, institutional development, and collaborative processes among actors involved in rural water governance.

### **3.2 Participants**

Data were collected through in-depth interviews, Focus Group Discussions (FGD), observation, and document analysis. The informants consisted of village government officials, community members, academics from Politeknik Negeri Samarinda, private sector representatives, local government institutions, and community-based water management actors involved in the clean water program. The combination of these techniques enabled the researchers to capture both institutional dynamics and stakeholder perspectives regarding the development of collaborative governance in the village context.

### **3.3 Instruments**

Data collection employed in-depth interviews, Focus Group Discussions (FGD), observation, and document analysis. These instruments were used to capture institutional dynamics, stakeholder perspectives, interaction processes, and the development of collaborative governance in the village context.

### **3.4 Data Analysis Procedures**

Data analysis employed the interactive analysis model developed by Miles, Huberman, and Saldaña (2014), consisting of data condensation, data display, and conclusion drawing. The analytical framework integrated the Collaborative Governance Model of Ansell and Gash (2008), particularly regarding starting conditions, facilitative leadership, institutional design, and collaborative process, with the Integrative Framework for Collaborative Governance

proposed by Emerson and Nabatchi (2015), emphasizing principled engagement, shared motivation, and capacity for joint action. In addition, this study incorporated an institutionalization perspective to analyze how collaborative arrangements evolved from informal interaction into more structured and sustainable governance systems. Through this integrated framework, the study developed the concept of leadership-driven institutionalization of collaborative governance to explain the role of local leadership in sustaining collaborative governance practices in rural clean water provision.

## **4. Findings**

### **4.1 Starting Conditions of Rural Clean Water Governance**

The development of collaborative governance in rural clean water provision in Batuah Village emerged from longstanding structural limitations related to water accessibility and public service provision. Prior to the establishment of the village-based clean water system, the community experienced significant difficulties in accessing safe and affordable water sources. Based on interviews and Focus Group Discussions (FGD), most residents relied on shallow wells and limited groundwater sources that were highly vulnerable to drought during dry seasons. In addition, the available water sources often produced poor-quality water characterized by turbidity and discoloration, making them unsuitable for domestic consumption. Under these conditions, some households were forced to purchase clean water at relatively high prices, creating additional economic burdens for rural families. These findings indicate that the clean water crisis in Batuah Village was not merely an infrastructural issue, but also reflected broader governance limitations in rural public service provision.

Historically, efforts to provide clean water in Batuah Village had already been initiated during the 1990s and early 2000s. However, previous programs were unable to operate sustainably and gradually experienced stagnation. The findings reveal that these earlier initiatives suffered from limited management capacity, weak operational systems, and minimal stakeholder involvement beyond the village government. As a result, water governance remained highly fragmented and lacked the institutional support necessary for long-term sustainability. This condition demonstrates that sectoral and government-centered approaches alone were insufficient to address the complexity of rural clean water problems. In this context, the failure of previous programs became an important starting point that later encouraged the emergence of collaborative approaches involving multiple actors.

Figure 1. Initial infrastructure of the Water Treatment Plant (WTP) in the development of a clean water supply system in Batuah Village



*Source: Researcher's Secondary Data, 2026*

The collaborative initiative began to re-emerge during the current village leadership period through a bottom-up approach driven by local necessity and community demands. Initially, the clean water system was developed using simple infrastructure and limited technological

resources, including temporary water storage facilities and basic treatment mechanisms. The development process also encountered social resistance and skepticism from certain community groups, particularly due to uncertainty regarding the sustainability of the program. Nevertheless, the findings indicate that gradual experimentation, collective learning, and continuous interaction among actors contributed to increasing public trust in the initiative. Over time, the clean water program began to attract broader stakeholder involvement, including academics, private sector actors, local government institutions, and community-based organizations.

The findings further show that the emergence of collaborative governance in Batuah Village was strongly influenced by the interaction between crisis conditions, local leadership initiatives, and the inability of single actors to independently solve public service problems. These conditions align with the collaborative governance perspective proposed by Ansell and Gash (2008), which emphasizes the importance of starting conditions in shaping collaborative dynamics. However, the Batuah Village case also demonstrates that starting conditions should not merely be understood as static background factors, but rather as dynamic pressures capable of stimulating institutional transformation and collective action. In this regard, the clean water crisis functioned as a catalyst that encouraged the formation of cross-sector collaboration and gradually opened pathways toward the institutionalization of collaborative governance in rural water provision.

#### **4.2 Leadership-Driven Collaborative Dynamics**

The findings reveal that leadership played a central role in initiating, mobilizing, and sustaining collaborative governance in the rural clean water program in Batuah Village. Among the various actors involved, the village head emerged as the key driving force behind the development of the collaborative initiative. The leadership role was not limited to administrative authority, but extended to facilitating interaction among stakeholders, mobilizing local resources, and encouraging collective participation in addressing the clean water crisis. In the early stages, the village leadership actively articulated the urgency of clean water provision as a shared public problem requiring collective action beyond the capacity of the village government alone.

Figure 2. Regular Focus Group Discussion (FGD) on collaboration in providing clean water in Batuah Village.



*Source: Researcher's Secondary Data, 2026*

The study found that the village head functioned not only as a facilitative leader, but also as an initiator, mobilizer, and boundary spanner capable of connecting actors across institutional boundaries. Through continuous communication and negotiation, the village leadership succeeded in attracting the involvement of multiple stakeholders, including academics from Politeknik Negeri Samarinda, private sector actors through corporate social responsibility (CSR) programs, local government institutions, and community groups. The village

government also played an active role in proposing program support, coordinating stakeholder contributions, and aligning collaborative activities to avoid overlapping interventions. These findings demonstrate that leadership became an important mechanism for reducing fragmentation and strengthening inter-organizational coordination within the collaborative process.

In addition, the findings indicate that leadership contributed significantly to the development of trust and shared commitment among stakeholders. Based on the FGD results, collaborative interaction initially faced skepticism and resistance from certain community members, particularly regarding the feasibility and sustainability of the clean water program. However, repeated communication, participatory engagement, and visible program improvements gradually strengthened community trust toward the initiative. The village leadership also encouraged inclusive participation by involving local communities not only as beneficiaries, but also as active participants in infrastructure development, operational management, and decision-making processes. This participatory approach strengthened the sense of ownership among community members and reinforced collective commitment toward sustaining the program.

#### **4.3 Institutional Design and Collaborative Structure**

The findings indicate that the institutional design of collaborative governance in Batuah Village evolved gradually in response to the increasing complexity of rural clean water management. In the initial stages, collaborative interaction was largely informal and relied heavily on personal communication, mutual trust, and situational coordination among actors. However, as the clean water program expanded and involved a broader range of stakeholders, the need for more structured institutional arrangements became increasingly apparent. This condition encouraged the development of formal and semi-formal governance mechanisms aimed at clarifying stakeholder roles, strengthening coordination, and ensuring program sustainability.

Figure 3. The signing of a memorandum of understanding as an initial institutional arrangement in the collaborative governance of clean water provision in Batuah Village.



*Source: Politeknik Negeri Samarinda (2021)*

One of the most significant institutional developments identified in this study was the establishment of cooperation agreements and role distribution mechanisms among stakeholders. The village government functioned as the primary coordinator responsible for facilitating collaboration, connecting stakeholders, and aligning program implementation. Private sector actors contributed through corporate social responsibility (CSR) support, particularly in infrastructure development and financial assistance. Academics from Politeknik Negeri Samarinda played an important role in technical assistance, including water treatment design, operational consultation, and water quality assessment. Meanwhile, local government institutions supported the program through infrastructure expansion, particularly in pipeline distribution development. Community members were also actively involved in operational

management and maintenance activities through community-based water management mechanisms.

The findings further reveal that institutional design in Batuah Village was characterized by adaptive and participatory governance arrangements rather than rigid bureaucratic structures. Coordination mechanisms were developed through continuous interaction, collective problem-solving, and negotiated responsibilities among actors. Based on the FGD results, proposals for infrastructure expansion, operational support, and program development were generally communicated through collaborative discussions involving multiple stakeholders. This flexible coordination mechanism enabled the program to adapt to changing needs and operational challenges while maintaining collaborative engagement among actors. In this regard, institutional design functioned not merely as a formal governance structure, but also as a dynamic mechanism for sustaining collaborative interaction and collective action.

At the operational level, the clean water system was managed through community-based organizational arrangements involving local water management groups associated with the PAMSIMAS framework. These groups were responsible for daily operations, infrastructure maintenance, and community contribution management. The implementation of user contribution mechanisms demonstrated efforts to strengthen financial sustainability and encourage local ownership of the clean water system. The findings suggest that community-based management played an important role in bridging formal governance structures and local participation, thereby reinforcing the institutional legitimacy of the collaborative arrangement.

#### **4.4 Collaborative Process and Collective Learning**

The collaborative process in Batuah Village developed through continuous interaction and gradual relationship-building among stakeholders involved in rural clean water provision. The findings indicate that collaboration did not emerge immediately in a fully structured form, but evolved progressively through repeated communication, negotiation, and joint problem-solving activities. In the early stages, interaction among actors was primarily informal and centered on addressing urgent clean water needs faced by the community. However, as stakeholder involvement expanded, collaborative interaction became increasingly organized through regular discussions, coordination meetings, and participatory decision-making processes involving village government, private sector actors, academics, local government institutions, and community representatives.

The study found that dialogue and face-to-face interaction played a crucial role in strengthening collaborative relationships and reducing potential conflicts among stakeholders. Based on the Focus Group Discussion (FGD) findings, communication forums became important arenas for exchanging information, identifying operational challenges, and aligning stakeholder expectations regarding the clean water program. These interactions enabled actors to gradually develop shared understanding and collective commitment despite differences in institutional backgrounds and interests. In this regard, collaborative forums functioned not only as technical coordination mechanisms, but also as social processes through which trust and mutual recognition were continuously constructed among participants.

The findings further demonstrate that trust-building became one of the most important dimensions sustaining collaborative governance in Batuah Village. Initially, some community members expressed skepticism regarding the feasibility and continuity of the clean water initiative due to previous unsuccessful programs and uncertainties surrounding resource availability. Nevertheless, visible program improvements, consistent communication, and the active involvement of stakeholders gradually strengthened public trust in the collaborative arrangement. The successful implementation of early infrastructure development and the

increasing accessibility of clean water services contributed significantly to reinforcing stakeholder confidence and collective commitment toward sustaining the program.

In addition to trust-building, the collaborative process also generated forms of collective learning and adaptive governance practices. Through continuous interaction, stakeholders developed shared experiences regarding infrastructure management, operational coordination, and institutional problem-solving. The involvement of academics and technical experts further facilitated knowledge exchange related to water treatment systems, infrastructure maintenance, and service management. These learning processes enabled stakeholders to adapt governance mechanisms according to local conditions and emerging challenges. Consequently, collaboration evolved not only as a coordination mechanism, but also as a collective learning system that strengthened the long-term adaptive capacity of rural water governance.

#### **4.5 Intermediate Outcomes and Legitimacy Building**

The findings indicate that the collaborative governance process in Batuah Village generated significant intermediate outcomes that strengthened both program sustainability and institutional legitimacy. One of the most visible outcomes was the improvement of community access to clean water services. Prior to the implementation of the collaborative clean water program, many residents experienced severe limitations in obtaining safe and affordable water, particularly during dry seasons. However, the development of water treatment facilities and distribution infrastructure gradually improved the availability and accessibility of clean water within the village. This improvement represented not only a technical achievement, but also an important indicator of collaborative effectiveness in addressing rural public service challenges.

Another significant outcome identified in this study was the reduction in household expenditures related to clean water access. Based on the FGD findings, before the establishment of the collaborative water system, some households were required to purchase clean water at relatively high prices. Following the operation of the village-based clean water system, water costs became substantially more affordable for local residents. This condition reduced economic burdens on households and increased the social acceptance of the collaborative initiative. The findings suggest that tangible program benefits played a crucial role in strengthening public support and reinforcing the legitimacy of collaborative governance among stakeholders.

The study also found that intermediate outcomes contributed to increasing community participation and stakeholder commitment toward sustaining the clean water program. As the program began producing visible improvements, community trust toward the collaborative arrangement gradually strengthened. Residents became more actively involved in infrastructure maintenance, operational management, and collective decision-making processes. Similarly, external stakeholders such as private sector actors and local government institutions demonstrated greater willingness to continue supporting program development. In this regard, successful early outcomes functioned as reinforcing mechanisms that expanded collaborative engagement and strengthened the sustainability of the governance arrangement.

### **5. Discussion**

The findings further suggest that leadership in Batuah Village extended beyond facilitative coordination and evolved into a driving force for institutional transformation. The ability of village leadership to continuously maintain stakeholder engagement, mobilize external support, and sustain collaborative interaction contributed significantly to the institutionalization of collaborative governance practices. In this regard, leadership functioned as a catalyst that transformed initially informal and fragmented collaboration into a more structured governance arrangement. This finding expands the collaborative governance perspectives proposed by Ansell and Gash (2008) and Emerson and Nabatchi (2015), which primarily position leadership

as a facilitative or coordinating mechanism within collaborative processes. In the Batuah Village case, leadership functioned more dynamically as an institutional driving force capable of sustaining stakeholder engagement, mobilizing external resources, and shaping the long-term sustainability of collaborative governance. These findings suggest that in rural governance contexts characterized by limited institutional capacity and resource constraints, leadership may play a more dominant role in driving the institutionalization of collaborative governance.

Nevertheless, the study also identified potential challenges regarding the sustainability of leadership-driven collaboration. Several informants expressed concerns that the continuity of the clean water governance system might remain highly dependent on the current village leadership. This condition indicates that although collaborative governance has evolved toward institutionalization, the process remains vulnerable to leadership transition and institutional instability. Therefore, strengthening formal governance mechanisms, organizational capacity, and community-based institutional arrangements becomes essential to ensure the long-term sustainability of collaborative governance beyond individual leadership dependence.

From a theoretical perspective, the Batuah Village case demonstrates that institutionalization in collaborative governance does not occur instantly through formal regulation alone, but rather develops progressively through repeated interaction, role adaptation, and collective learning among actors. The findings also show that institutional design was strongly shaped by leadership initiatives and collaborative dynamics emerging from practical governance needs. This condition supports the argument that collaborative governance institutionalization is an evolving process influenced by both structural arrangements and relational capacities among stakeholders. Consequently, the institutional structure observed in Batuah Village can be understood as a form of adaptive collaborative institutionalization emerging from locally driven governance practices.

From a theoretical perspective, the findings support Emerson and Nabatchi's (2015) collaborative governance framework, particularly regarding principled engagement, shared motivation, and capacity for joint action. However, the Batuah Village case also suggests that collaborative processes in rural governance contexts are strongly influenced by informal social interaction, local leadership intervention, and community participation patterns. The study therefore highlights that collaborative governance should be understood not merely as a formal governance arrangement, but as an evolving social process shaped by continuous interaction, collective learning, and locally embedded relational dynamics. These collaborative dynamics later became important foundations for the broader institutionalization of collaborative governance within the village clean water system.

From an institutional perspective, the findings demonstrate that intermediate outcomes served as an important catalyst for the institutionalization of collaborative governance. The visible success of the clean water program increased the legitimacy of collaborative arrangements and encouraged the continuation of stakeholder interaction over time. This condition indicates that institutionalization was not driven solely by formal agreements or governance structures, but was also reinforced by practical outcomes capable of generating trust, credibility, and collective commitment among actors. Consequently, the Batuah Village case suggests that intermediate outcomes should be understood not merely as program outputs, but as strategic elements that strengthen governance legitimacy and accelerate the transformation of informal collaboration into a more institutionalized governance system.

Nevertheless, the study also identified several challenges related to sustaining these outcomes in the long term. Maintaining infrastructure quality, strengthening community management capacity, and ensuring stable stakeholder commitment remain important concerns for the continuity of the collaborative governance system. Therefore, continuous institutional strengthening and adaptive governance mechanisms are necessary to ensure that the benefits

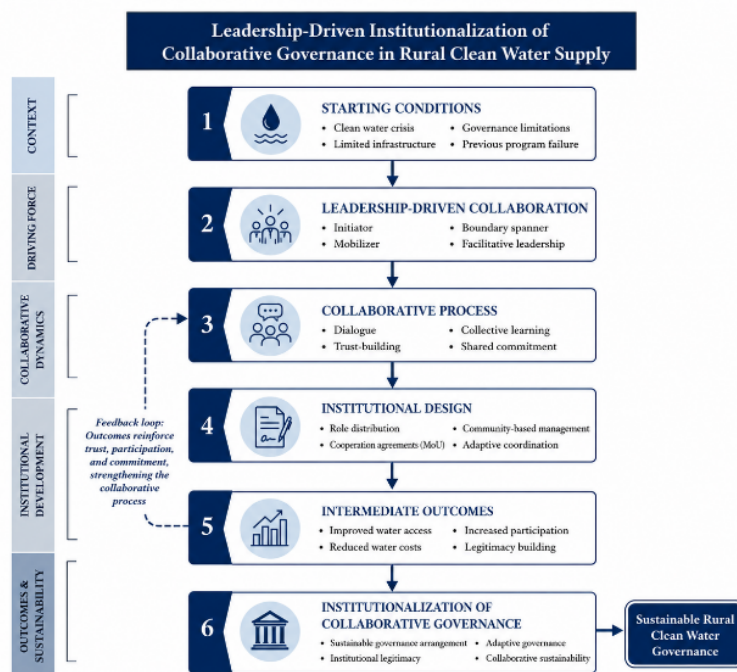
generated through collaboration can be maintained beyond the initial success phase. In this sense, the sustainability of collaborative governance depends not only on achieving short-term outcomes, but also on the ability of institutions and stakeholders to continuously adapt to evolving governance challenges.

### 5.1 Model Development: Leadership-Driven Institutionalization of Collaborative Governance

Based on the overall findings, this study proposes a conceptual model referred to as leadership-driven institutionalization of collaborative governance. The model explains that collaborative governance in rural clean water provision evolves gradually through leadership-driven processes emerging under conditions of public service crisis and governance limitations. In the Batuah Village case, the clean water crisis became the initial catalyst encouraging collaborative initiatives involving multiple stakeholders. However, the findings demonstrate that collaborative governance did not emerge automatically from crisis conditions alone. Instead, local leadership played a decisive role in mobilizing actors, facilitating interaction, sustaining stakeholder engagement, and transforming fragmented initiatives into more organized collaborative arrangements.

The findings further show that leadership functioned as the central connecting mechanism linking starting conditions, collaborative processes, institutional design, and governance sustainability. Beyond its facilitative role, leadership evolved into an institutional driving force capable of maintaining collaborative legitimacy, mobilizing external resources, and sustaining interaction among stakeholders over time. Through repeated interaction, trust-building, collective learning, and adaptive coordination, collaborative governance gradually evolved from informal collaboration into a more structured institutional arrangement characterized by role distribution, cooperation mechanisms, operational coordination, and community-based management practices.

Figure 4. Leadership-Driven Institutionalization of Collaborative Governance in Rural Clean Water Supply



Note: The model illustrates a dynamic and iterative process in which leadership-driven collaboration initiates multi-stakeholder engagement, leading to institutional design, outcomes, and the eventual institutionalization of collaborative governance in rural clean water supply.

Source: Developed by the authors based on research findings (2026).

Figure 1 illustrates the process of leadership-driven institutionalization of collaborative governance identified in this study. The model demonstrates that collaborative governance institutionalization in rural contexts develops through dynamic interaction between crisis conditions, facilitative leadership, collaborative processes, legitimacy-building, and adaptive institutional arrangements. The model also highlights that intermediate outcomes, such as improved water access, reduced household water costs, and increased public participation, function as feedback mechanisms that strengthen collaborative legitimacy and reinforce stakeholder commitment toward governance sustainability.

An important finding of this study also concerns the sequencing of collaborative governance components in rural contexts. While Ansell and Gash (2008) position institutional design as an antecedent condition preceding collaborative processes, the Batuah Village case demonstrates a different collaborative trajectory. In this study, institutional arrangements did not exist formally at the beginning of collaboration, but instead emerged gradually through repeated interaction, trust-building, adaptive coordination, and collective problem-solving among stakeholders. This finding suggests that institutional design in collaborative governance may function not only as a precondition for collaboration, but also as an evolving outcome of collaborative dynamics shaped by local governance contexts. In rural governance settings characterized by limited institutional capacity and informal social relations, collaborative governance may therefore develop through more adaptive and iterative processes rather than through fixed sequential stages.

The proposed model extends existing collaborative governance literature by emphasizing institutionalization as a dynamic and leadership-driven process. While previous studies primarily position leadership as a facilitative or coordinating mechanism (Ansell & Gash, 2008; Emerson & Nabatchi, 2015), the Batuah Village case demonstrates that leadership may function more centrally as an institutional driving force shaping the long-term sustainability of collaborative governance in resource-constrained rural settings. In this regard, institutionalization is understood not merely as the formation of formal governance structures, but as an evolving process shaped by repeated interaction, adaptive governance practices, collective legitimacy, and leadership capacity in sustaining collaboration over time. The Batuah Village case therefore suggests that collaborative governance institutionalization in rural contexts is fundamentally shaped by leadership capacity in sustaining collaborative legitimacy, mobilizing collective action, and transforming informal collaboration into adaptive and sustainable governance arrangements.

## **6. Conclusion**

This study demonstrates that collaborative governance in rural clean water provision in Batuah Village developed through a gradual and dynamic institutionalization process driven by local leadership and multi-stakeholder interaction. The findings reveal that severe limitations in clean water access, previous program failures, and governance constraints became important starting conditions that stimulated the emergence of collaborative initiatives within the village. In response to these challenges, local leadership played a central role in initiating collaboration, mobilizing stakeholders, facilitating interaction, and sustaining collective commitment throughout the governance process.

The study further shows that collaborative governance evolved progressively through trust-building, repeated communication, collective learning, and adaptive institutional arrangements involving village government, private sector actors, academics, local government institutions, and local communities. Over time, initially informal collaboration transformed into a more structured governance system characterized by cooperation agreements, role distribution mechanisms, operational coordination, and community-based management practices. The

findings also indicate that intermediate outcomes, such as improved clean water access, reduced household water costs, and increased community participation, contributed significantly to strengthening governance legitimacy and sustaining stakeholder engagement.

Theoretically, this study contributes to collaborative governance literature by proposing the concept of leadership-driven institutionalization of collaborative governance. The study argues that institutionalization in collaborative governance should not be understood solely as the formation of formal governance structures, but also as a relational and adaptive process strongly influenced by leadership capacity, collaborative dynamics, and collective legitimacy-building. The Batuah Village case demonstrates that local leadership can function not only as a facilitator of collaboration, but also as the primary driving force transforming fragmented collaborative initiatives into more sustainable governance arrangements. Therefore, strengthening leadership capacity, collaborative institutions, and community-based governance mechanisms becomes essential for sustaining rural public service governance in resource-constrained contexts.

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