



Collaborative Governance in Road Infrastructure Maintenance in Berau Regency

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ABSTRACT

This research investigates the application of collaborative governance in road infrastructure maintenance in Berau Regency. Employing a descriptive qualitative approach, data was collected through interviews, observations, and documentation. The findings indicate that collaboration in road infrastructure maintenance in Berau Regency has achieved significant success in implementing the principles of collaborative governance. Positive collaboration dynamics are reflected in the presence of shared principles and motivations among stakeholders, adequate capacity for joint action, and structured collaborative actions in strategy development, plan implementation, and adaptation to changing conditions. The positive impact of collaboration is evident in increased efficiency, effectiveness, and quality of road maintenance, as well as the ability of stakeholders to learn and adapt. Multi-stakeholder collaboration has also generated added value in the form of strengthened relationships, increased trust, and community empowerment.

INTRODUCTION

Berau Regency is a regency that is administratively included in the administrative area of East Kalimantan Province. Berau Regency has now also entered a massive development process to revive the economy in the region. The development that is currently being intensively implemented is certainly not free from problems in the process. One of the fundamental problems in the development of Berau Regency is the accessibility of the region which has not been fully easily reached, making it difficult to distribute goods and services. Increasing accessibility can make it easier for people to obtain basic education and health services. A major challenge in development in the transportation sector is that there are several areas that are difficult to reach, especially remote areas and borders.

In 2017, there was a significant decrease in the number of public passenger car transportation units from 126 units (2016) to 104 units (2017). The number of land transportation passengers fluctuates quite a bit each month (9,604-16,290 passengers) with a total of 149,195 passengers in 2017. However, the quality of accessibility infrastructure in Berau Regency until 2020 is still inadequate and uneven, indicated by the fact that there are still 8.27 percent gravel roads and 5.59 percent dirt roads. In addition, in terms of road conditions, when compared to the surrounding districts/cities, Berau Regency still has quite a lot of badly damaged roads (11.68%) and damaged roads (9.01%).

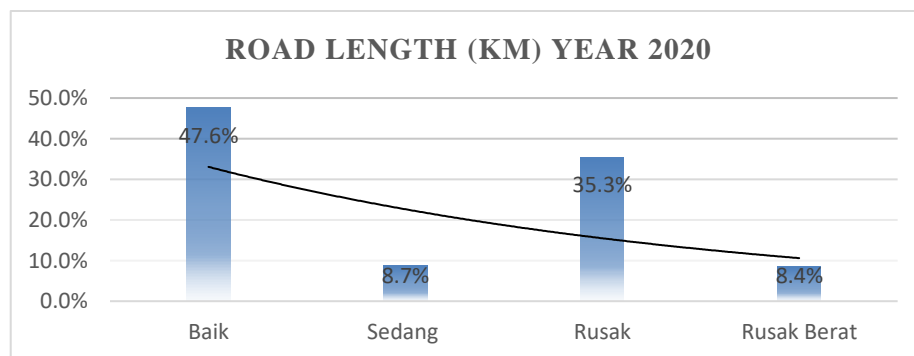


Figure 1. Road conditions in Berau Regency in 2020-2021

Source: DPUPR Berau Regency, 2024

Infrastructure development is carried out not only in urban areas, but also inland, coastal and outermost areas. Such as road infrastructure connecting Tanjung Redeb (capital of Berau Regency) with Talisayan District along 150 kilometers (km). Throughout 2019 - 2020, it was known that 1686.07 KM in Berau Regency was identified as having damage with various conditions, which in 2021 began to be identified and further repairs and maintenance were carried out. In addition, it is known that the Tanjung Redeb - Talisayan road section, Berau Regency along 150 km from 2019 to 2023, around 60 km has been carried out with rigid pavement with a target of 2026 being 100 percent or in good condition. Increasing road capacity to withstand vehicle loads which are currently almost an average of above 8 tons, with a road construction of 7 meters wide and 1 meter shoulder each. Activities are divided into two segments. The first segment is 3.2 km long and the second segment is 1.8 km long.

Furthermore, in relation to the maintenance of road infrastructure in Berau Regency, it is known from the data from the PUPR Service for the Regency for 2020-2023 as follows.

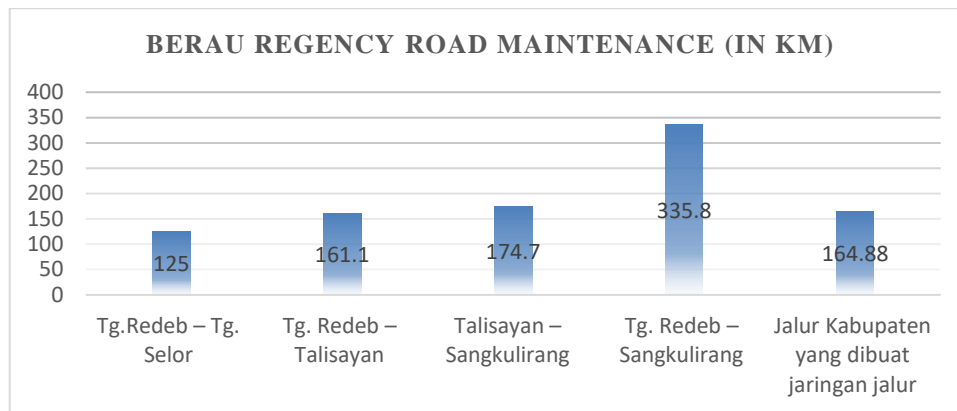


Figure 2 Condition of Berau Regency Roads under Maintenance
Source: DPUPR Berau Regency, 2021

The Public Works Department (PU) of Berau Regency provides an overview of the road planning, construction and maintenance process. Road planning is based on the Heaviest Axle Load (MST) for national roads of 8-10 tons, meaning that all roads are 8-10 tons, meaning that for all existing roads the maximum load of a single axle of a vehicle is 8-10 tons, if it exceeds it, the road's design life will be drastically reduced. In road construction activities, each construction implementation unit is always closely monitored by the government as the project owner and supervising consultant, to avoid any deviations in quality.

The study of collaborative governance is very relevant to use in this case because it describes the cooperative relationship between various parties and is useful for identifying and resolving government problems. It is hoped that with this concept, the collaborating parties will be able to understand their respective tasks and functions so that coordination is established in achieving goals. This study seeks to fill this gap by comprehensively analyzing how collaboration between local governments, the private sector, civil society, local communities, and academics can be realized and contribute to more effective and sustainable road infrastructure maintenance in Berau Regency.

LITERATURE REVIEW

Collaborative Governance

Ansell and Gash (2004) explain the new strategy of government called collaborative governance. A form of governance that involves various stakeholders simultaneously in a forum with government officials to make joint decisions. Kirk Emerson, Tina Nabatchi, and Stephen Balogh (2012) explains that the collaboration process consists of: (1) collaboration dynamics, (2) collaboration actions, and (3) impacts and adaptations in the collaboration process (Emerson et al., 2012).

1. *Dynamics of Collaboration*

In the process of collaboration, the dynamics of collaboration are the most important part. The disclosure of how well the implementation of collaboration is in the dynamics, which contains the movement of shared principles, shared motivations, and the capacity to take joint action.

2. *Collaborative Action*

Actions in collaboration in practice are very diverse, and are a reflection of the dynamics of collaboration. Whatever actions are taken in the form of activities/events or discussions and so on, and the good and bad can be seen from the development and true understanding of the dynamics of collaboration by the actors and individuals of collaboration. Then, the results of these actions directly bring temporary impacts that lead back to the dynamics of collaboration, and long-term impacts.

3. *Impact and Adaptation*

The impact in question is a temporary impact that occurs during the collaboration process. The characteristics of the impact are expected, unexpected, and unexpected. The expected impact is "small-wins" which are positive results that continue and provide enthusiasm for the actors. While unexpected impacts are such as obstacles in implementing collaboration. Unexpected impacts can also appear directly or indirectly in the collaboration process.

The Success of Collaborative Governance

Goldsmith and Kettl (2004) stated that there are important things that can be used as criteria for the success of a network or collaboration in governance, namely networked structure, commitment to a common purpose, trust among the participants, governance, access to authority, distributive accountability/responsibility, information sharing, access to resources (Goldsmith and Donald, 2009:135-136). The success of collaborative governance according to Goldsmith and Kettl (2004) needs to meet several criteria, the first is that the networked structure in the organizational structure in collaborative governance does not form a hierarchy, meaning that each party is considered equal without one party having more power. Commitment to a common purpose means that success is assessed from the commitment that is established, not justifying the goals of one party as the most correct or right among the other parties, but must hold fast to the commitment to common goals. Trust among the participants shows mutual trust and professionalism as a benchmark for the success of collaborative governance. Governance shows the opportunity for anyone to play a role as a member in carrying out collaborative governance.

METHODOLOGY

This study uses a descriptive research type with a qualitative approach. The selection of the use of a descriptive research type with a qualitative approach is considered most appropriate by the researcher for this study, because the researcher wants to provide an in-depth description and analysis of the phenomena that occur in the collaborative governance process of road

infrastructure maintenance in Berau Regency. The focus of this study is to explain and analyze the collaboration process between stakeholders in collaborative governance of road infrastructure maintenance in Berau Regency. The collaboration process that occurs, the researcher analyzes using the collaborative governance model by Kirk Emerson, Tina Nabatchi, and Stephen Balogh (2002) where collaboration begins with the dynamics of collaboration, collaborative actions, and impacts and adaptations in the collaboration process. In addition to explaining and analyzing the collaboration process, this study also explains and analyzes the success of collaboration. The success of collaboration researchers analyzes with the approach by Goldsmith and Kettl (2004) which states that the success of collaboration has indicators of networked structure, commitment to a common purpose, trust among the participants, governance, access to authority, distributive accountability, information sharing, access to resources. The focus of the research is also to develop a collaborative governance model for road infrastructure maintenance in Berau Regency by developing a participatory collaborative model from hexa helix actors, namely government, business, society (NGO), academics, media, and indigenous communities. Researchers will also construct a collaborative governance model from previously existing collaborative governance models referring to the results of research on the collaboration process and the success of collaboration.

The use of research data sources, namely primary data, is data from the direct object being studied, such as interview and observation data, and also uses secondary data, namely data that is not from direct sources but has been processed and comes from other parties, such as documentation data. (Sugiyono 2013). The data collection techniques used are interview, observation and documentation techniques. In conducting data validity tests, researchers use triangulation of data sources. (Hasibuan et al. 2022). By using source triangulation, researchers conducted interviews, observations and documentation that were carried out directly on the collaborative governance process of road infrastructure maintenance in Berau Regency. For data analysis in this study, the author used data analysis techniques from Miles, Huberman and Saldana which are known as interactive models. According to Miles & Huberman (2016), activities in qualitative data analysis are carried out interactively and continue continuously until complete, so that the data is saturated. Activities in data analysis, namely Data Condensation, Data Presentation, and Conclusion Drawing and Verification (Fadli 2021).

RESEARCH RESULT AND DISCUSSION

Collaborative Governance of Road Infrastructure Maintenance in Berau Regency

1. Dynamics of Collaboration

In the dynamics of collaboration there is a process of Joint Principle Movement (Disclosure, Deliberation), Joint Motivation (Shared Belief, Shared Understanding, Internal Legitimacy, Commitment), Capacity to Take Joint Action (Shared Procedures and Agreements, Leadership, Resources).

a. Common Principle Movement

The Shared Principles Movement is the foundation of collaboration, emphasizing the establishment and maintenance of shared values and goals. This process involves:

a) Disclosure

This is the initial stage where relevant information is shared among all stakeholders. In the context of road maintenance in Berau Regency, disclosure involves transparency in sharing data on road conditions, budgets, and maintenance plans. The goal is to ensure that all parties have the same understanding and can participate effectively. The Berau Regency Government, through the PUPR Office, openly provides data and information related to road conditions and maintenance needs to all stakeholders, including the private sector and the community. This transparency facilitates a shared understanding of the problems faced and the objectives of collaboration, thus creating a strong foundation for further steps.

b) Deliberation

After the information is disclosed, the deliberation stage involves discussion and dialogue among stakeholders. In this context, deliberation is a forum to exchange views, discuss challenges, and reach agreement on road maintenance strategies. The goal is to produce decisions that are inclusive and supported by all parties. Deliberation is carried out routinely through discussion forums involving various actors, such as the Head of the Road Maintenance UPT Region III and the Head of Spatial Planning. This process allows for the exchange of views, clarification of objectives, and resolution of differences of opinion collectively. However, the study found that budget constraints and the condition of roads that are still damaged are the main challenges that must be faced in this deliberation, so a more effective strategy is needed to overcome these obstacles.

b. *Shared Motivation*

Shared Motivation is the driving force that fosters collaboration and encourages stakeholders to work together. It consists of:

a) Shared Trust

Shared trust is formed through consistent interactions between government, private companies, and communities. This trust enables effective communication and close cooperation, so that each party feels valued and heard. Shared trust is formed between the main actors, namely local government, private companies (contractors), and local communities. This trust arises from consistent interactions and open communication between parties, which allows for effective coordination and inclusive decision-making. Empirical data shows that this trust reduces conflict and increases support for the implementation of road maintenance projects. For example, the government and contractors trust each other in the division of tasks

and supervision, while the community feels involved in the process, thus supporting the sustainability of the project.

b) Shared Understanding

A shared understanding of the goals and benefits of collaboration is the basis for aligning the actions of all parties. In the context of Berau Regency, stakeholders have the same vision, namely improving the quality of road infrastructure. This is reflected in the agreements built in joint meetings and discussions, which clarify the roles and responsibilities of each party. This shared understanding also encourages openness of information and inclusive decision-making.

c) Internal Legitimacy

Internal legitimacy is obtained through the support of clear policies, regulations, and legal frameworks. In Berau Regency, this legitimacy is manifested in the formation of a project monitoring team and mutually agreed rules of the game. This legitimacy ensures that each party can be trusted to carry out their duties professionally and responsibly. Empirical facts show that this internal legitimacy strengthens the sense of responsibility and trust between parties, thereby increasing the effectiveness of the implementation of collaboration. Internal legitimacy is obtained through the support of clear policies and regulations, as well as the formation of an effective monitoring structure. The local government sets the rules of the game and forms a project monitoring team involving representatives of the community and contractors, thus ensuring transparency and accountability. Empirical data shows that this legitimacy strengthens the sense of responsibility and trust between actors, so that project implementation runs according to standards and professionally

d) Commitment

Strong commitment from all stakeholders is the foundation of successful collaboration. This commitment is not only formal through written agreements, but also includes moral and social commitments that encourage active participation. Data shows that this commitment is reflected in the consistent allocation of resources, time, and energy for road maintenance. This commitment maintains the continuity of collaboration despite facing challenges and dynamics during project implementation.

c. *Capacity to Take Collective Action*

Capacity to Take Collective Action refers to the collective ability of stakeholders to implement solutions and achieve shared goals. It involves:

a. Procedures and Mutual Agreements

Procedures and mutual agreements serve as a framework that regulates the implementation of collaboration. In the context of Berau Regency, this is realized through the Draft Regent Regulation which is prepared collaboratively between the government, private sector, and community. This procedure ensures that each party understands

their limitations and obligations, thereby reducing the potential for conflict and increasing the efficiency of road maintenance implementation. The process of drafting this regulation involves intensive discussion and consultation between parties, which strengthens legitimacy and mutual commitment. Empirical data shows that with clear procedures, coordination between actors runs smoothly and in a structured manner, and facilitates periodic evaluation and adjustment of policies.

b. Leadership

Effective leadership from the Berau Regency government acts as a facilitator and mediator in collaboration. This leadership not only manages communication between parties, but also resolves conflicts that arise, keeps projects on track, and ensures that common goals are achieved. This inclusive leadership is key to the success of cross-sector collaboration in Berau Regency. Strong leadership from the local government, especially from the Head of the PUPR Office of Berau Regency, plays an important role in directing and facilitating collaboration. This leadership creates a conducive environment for open dialogue and collective decision-making. The Head of PUPR actively leads coordination meetings, ensures the involvement of all parties, and overcomes obstacles that arise during project implementation.

c. Resource

Collaboration requires adequate resources, including financial, human, material, and information. Effective and efficient resource management is essential for successful collaboration. Available resources, whether in the form of funds, skilled labor, or technology, are important factors in supporting the capacity for collective action. Private companies such as PT. KLK Group and PT. Sumalindo Lestari Jaya Tbk provide significant contributions in the form of technical and financial resources. This support greatly assists the government in overcoming budget constraints and improving the quality of road maintenance.

2. *Collaborative Action*

Collaborative Action in road maintenance in Berau Regency involves a series of structured and coordinated processes to achieve common goals. This process consists of three main stages: Strategy Development, Plan Implementation, and Action Adjustment.

a. *Strategy Development*

Strategy development is a crucial foundation for collaborative road maintenance in Berau Regency, a process that goes far beyond just drafting a plan. It is an intensive process that involves in-depth identification of pressing issues and setting measurable and realistic goals that will guide the entire collaborative initiative. The process begins with the collection of comprehensive and systematic data on the actual condition of the roads and the real needs of the communities served by the

infrastructure. The Berau Regency Government plays a central role in orchestrating this effort, working closely with private parties who have a direct interest in smooth transportation, and involving the active participation of the communities who are the main users of the roads.

b. Implementation of the Plan

Operational steps in the Plan Implementation phase include a series of structured and coordinated activities. Scheduling of maintenance work is carried out in detail, taking into account priorities, resource availability, and field conditions. For example, in a road repair project in Tanjung Redeb District, scheduling was carried out for six different locations, reflecting the need to adapt the plan to the local context. Efficient resource allocation is a key focus, ensuring that labor, equipment, and materials are distributed effectively to support the implementation of the work. The Berau Regency Government provides regulatory and coordination support, while private companies contribute funds, equipment, and technical expertise.

c. Action Adjustment

Action adjustment is a dynamic and adaptive phase in road maintenance collaboration in Berau District, emphasizing continuous learning and improving effectiveness. This process begins with periodic evaluation of the strategies and actions taken, using relevant data and information on the progress of the collaboration. This evaluation involves gathering feedback from various stakeholders through surveys and focus groups, which is then analyzed to identify areas that need improvement. For example, in several locations in Tanjung Redeb District, the project team collaboratively discussed different repair methods according to the severity of the road, such as the use of asphalt or concrete. Changes made may include adjusting resource allocation, modifying work methods, or even changing project scheduling. For example, by reallocating resources to areas that need it most, project completion times can be accelerated by up to 15%. In addition, modifications to work methods, such as the use of new technology or more efficient construction approaches, have enabled budget savings of up to 10%. Feedback from the community also plays an important role in action adjustment. In several locations, the community participates in monitoring and reporting road conditions, which helps the project team identify areas that need immediate improvement. Thus, the adjustment of collaborative actions helps ensure that all parties remain aligned with common goals, improves implementation efficiency, and strengthens relationships between parties, which ultimately contributes to achieving the goal of sustainable road infrastructure improvement in Berau Regency.

3. Impact on Collaboration Process

Analysis of research results on the impact on the collaboration process shows that collaboration between stakeholders provides increased efficiency

and effectiveness in project implementation. In the context of road maintenance in Berau Regency, collaboration has succeeded in saving the budget by 10% and accelerating project completion by 15%. This finding confirms that synergy between parties is able to optimize the use of resources so that the results achieved are more optimal than if they were worked on separately.

Success of Collaboration in Road Infrastructure Maintenance in Berau Regency

The success of collaborative governance in the context of road maintenance in Berau Regency is analyzed through several criteria outlined by Goldsmith and Kettl (2004). In collaborative road infrastructure maintenance in Berau Regency, networked structure is a concept that emphasizes the interconnectedness and equality of relationships between the various elements involved. This structure does not form a hierarchy of power, but rather a relationship that is interconnected and equal, where each element has an equally important role, rights, obligations, and responsibilities. In the context of Berau Regency, networked structure is reflected in the collaboration between the Berau Regency Government (through the Public Works and Spatial Planning Agency/DPUPR), private companies (such as PT. Hutan Hijau Mas, PT. Satu Sembilan Delapan, PT. Sumalindo Lestari Jaya), and the local community. The local government does not act as the sole authority, but interacts and negotiates with the private sector and the community in the planning, implementation, and supervision of road maintenance. The private sector contributes funds, equipment, and materials, while the community is involved in the decision-making and supervision process. Efforts to build a networked structure in Berau Regency involve various coordination and socialization activities involving various stakeholders, such as coordination meetings with Muspika, village heads, and private companies. This collaboration is based on the principles of equality, transparency, and accountability to achieve common goals in maintaining sustainable and inclusive road infrastructure.

Table 1 Analysis of Collaboration Success Criteria in Road Infrastructure Maintenance in Berau Regency

Collaboration Success Criteria	Analysis in the Context of Berau Regency	Field Facts
Networked Structure	Collaboration involves various parties (government, private sector, community) in decision making and action. There is no dominant hierarchy, but equality of roles and interdependence.	The local government (DPUPR), private companies (PT. Hutan Hijau Mas), and local communities are involved in coordination meetings, outreach, and joint road repair projects.
Commitment to a Common Purpose	There is a clear common goal, namely improving road infrastructure for community welfare and regional economic growth. This commitment is maintained through effective communication, active	The government, private sector and community have an understanding to address damaged road conditions and collaborate in road repair programs.

	participation, and constructive negotiation.	
Trust Among the Participants	Trust between stakeholders is built through transparency, accountability, and professionalism. This enables effective and efficient collaboration.	Local governments seek to build trust by involving communities and the private sector in project planning and implementation. Private companies demonstrate commitment through resource contributions.
Governance	Good governance is characterized by clear rules (Perbup), accountability, transparency, and participation. This framework regulates interactions between stakeholders and ensures the legitimacy of each action.	Berau Regency has a Regent Regulation that regulates road maintenance. The local government, private sector, and community have defined roles and responsibilities.
Access to Authority	Each stakeholder has access to relevant authority (formal, informal, resources) to contribute to decision-making and program implementation.	Local governments have regulatory and budgetary authority, the private sector has financial and technical resources, communities have local knowledge and social legitimacy.
Distributive Accountability/Responsibility	Responsibility and accountability are shared among stakeholders. Each party is responsible for their role and contribution in the collaboration.	Local governments are responsible for planning and supervision, the private sector for resource contributions, and the community for supervision and active participation.
Information Sharing	Relevant information is shared openly and is easily accessible to all stakeholders. This supports transparency, coordination and effective decision-making.	Local governments use websites and social media to share information, hold coordination meetings, and receive feedback from the public.
Access to Resources	Availability of adequate resources (financial, technical, human, material) from each stakeholder to support the implementation of collaboration.	Local governments provide budget and technical personnel, the private sector provides funds, equipment and materials, and communities provide labor and local knowledge.

Source: Author's analysis, 2024

The success of collaborative governance according to Goldsmith needs to meet several criteria, the first is Networked Structure in the organizational structure in collaborative governance does not form a hierarchy, meaning that each party is considered equal without one party having more power. Commitment to a Common Purpose means that success is assessed from the commitment that is established, not justifying the goals of one party as the most correct or right among the other parties, but must hold fast to the commitment to

common goals. Trust Among the Participants shows mutual trust and professionalism as a benchmark for the success of collaborative governance. Governance shows an agreement on who plays a role as a member in carrying out collaborative governance. Access to Authority means that there is an agreement according to the rules and makes the authority of each party to carry out their duties clearly. Distributive Accountability or Responsibility which is another success of collaborative governance is that each party has known how to organize, manage a clear division of tasks, Information Sharing, namely there is a really clear distribution of information so that there is no miscoordination between one party and another. Access to Resources which contains capital in carrying out collaborative governance such as the availability of financial resources, technical, human resources and other resources from each party.

Collaborative Model Design for Road Infrastructure Maintenance in Berau Regency



Figure 3 Existing conditions of road maintenance collaboration in Berau Regency

Source: Author's analysis, 2024

From Figure 3, it can be explained that the collaboration scheme between the Government The current collaborative approach to road maintenance in Berau Regency can be analyzed through a triple helix framework, which involves three main actors: the government, the private sector, and the community. The Berau Regency Government acts as a regulator of regulations and policies, and is responsible for coordinating and supervising the implementation of road maintenance. The private sector, on the other hand, contributes by providing resources such as funds, equipment, and labor, and is involved in the planning and implementation of road maintenance activities. The community acts as a supervisor and provider of feedback on road conditions, and is involved in the decision-making process. Although this triple helix approach has been implemented, the results have not been optimal in overcoming road infrastructure problems in Berau Regency. One of the main obstacles is the limited budget for road maintenance, which results in many district roads still being in damaged conditions. In addition, traffic loads that exceed the road's carrying capacity and high rainfall also accelerate road damage. This shows that the existing collaboration has not been able to overcome these challenges effectively.

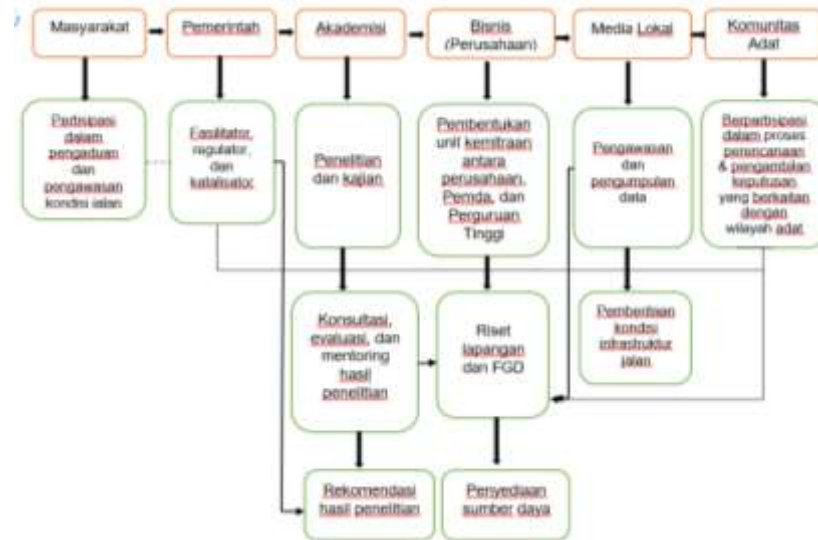


Figure 4 Design of hexa helix collaboration model for road maintenance in Berau Regency

Source: Author's analysis, 2025

The hexa helix model in road infrastructure maintenance collaboration in Berau Regency, involving six main actors: Government, Business, Society, Media/Press, Academics, and Indigenous Communities. This model illustrates cross-sector synergy that plays an important role in the success of effective and sustainable road maintenance. The following are the roles of each hexa helix actor in road infrastructure maintenance collaboration in Berau Regency

- a) The Berau Regency Government and the DPRD act as the main policy director and regulator in this collaboration. The Regency Government through the Public Works and Spatial Planning Agency (PUPR) is responsible for planning, budgeting, and supervising the implementation of road maintenance. The DPRD functions as a legislative body that oversees budget use and ensures policies that support project sustainability. The government also initiated a communication forum between stakeholders to align visions and missions in road maintenance.
- b) Private businesses or companies operating in Berau, such as PT. KLK Group and PT. Sumalindo Lestari Jaya Tbk, provide significant contributions in the form of funding, provision of heavy equipment, and technical experts. These companies not only act as resource providers, but are also active in dialogue and coordination meetings to ensure that project implementation is carried out according to standards and on time. Their involvement strengthens the technical and financial aspects of road maintenance.
- c) The community as the main user of road infrastructure has a strategic role in providing input and monitoring implementation in the field. Community participation in discussion forums and public consultations helps ensure that local needs and aspirations of residents are accommodated in the planning and implementation of maintenance. This involvement also increases project transparency and accountability.
- d) The media/press serves as an important external information channel and monitor. The media disseminates project progress information to the public,

thereby increasing transparency and encouraging accountability of all parties involved. In addition, the media also plays a role in building public opinion that supports collaboration and sustainability of road maintenance.

- e) Academics provide support in the form of scientific studies, technical evaluations, and data-based recommendations that can improve the effectiveness and efficiency of road maintenance. Academics also play a role in training and capacity building of collaborators, so that the quality of project implementation can continue to be improved through a science-based approach.
- f) Indigenous communities in Berau Regency have an important role in maintaining local social and cultural values that must be respected in project implementation. Indigenous communities function as social mediators who help resolve potential conflicts and ensure that infrastructure development does not harm indigenous interests and the surrounding environment. Their involvement also strengthens the social sustainability aspect of road maintenance projects.

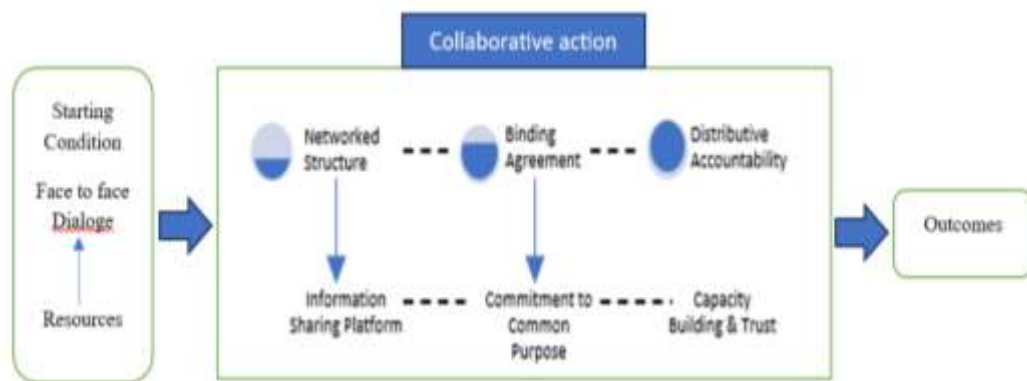


Figure 5 Integrated Accountability Collaborative Governance Model

Source: Author's analysis, 2025

The integrated accountability collaborative governance model identifies six core elements that make up an effective collaborative process. The first element is an Open and Equal Networked Structure. This structure emphasizes an organization without a rigid hierarchy, where all parties involved have equal standing and clear roles. This equality is essential to creating an environment where all voices are valued and considered, and to prevent domination by one party. Clear roles are also important to avoid confusion and overlapping responsibilities. Regular coordination forums are an integral part of this network structure, serving as a space for collective decision-making and two-way communication. These forums serve not only as a place to share information, but also to solve problems, plan actions, and evaluate progress. The two-way communication that occurs in these forums ensures that all parties have the opportunity to provide input and feedback, thereby improving the quality of decisions and strengthening ownership.

The second element is a Binding Collaborative Agreement. This agreement is a written document that details shared goals, roles, responsibilities, and conflict resolution mechanisms. The existence of this formal agreement is

very important because it provides a clear and structured foundation for collaboration. This agreement not only serves as an operational guide, but also as a moral and legal commitment that binds all parties involved. With an agreement, expectations are clear, potential conflicts can be anticipated and managed, and accountability can be enforced. This agreement creates stability and predictability in the collaborative relationship, which is essential for building trust and long-term commitment.

The third element is distributed accountability. Distributed accountability means that tasks and responsibilities are clearly and measurably divided among all parties involved in the collaboration. This division should be reflected in the collaboration agreement, so that everyone understands what is expected of them and how their performance will be evaluated. Transparent, regular reporting and evaluation mechanisms are an essential component of distributed accountability. They ensure that all parties are held accountable for their actions and that the progress of the collaboration can be monitored and assessed objectively. Transparency in reporting and evaluation builds trust and encourages continuous improvement.

The fourth element is an open and integrated information sharing system. In effective collaboration, information must flow freely and efficiently between all parties involved. This model emphasizes the importance of a shared digital platform that is accessible to all parties to share data and updates in real time. This platform facilitates fast and accurate communication, reducing the risk of miscommunication and ensuring that everyone has access to the same information. In addition to the digital platform, clear communication standards and information protocols are also important. These standards ensure that information is delivered in a consistent and easy-to-understand manner, reducing the potential for confusion and error.

The fifth element is commitment to a common purpose. Successful collaboration requires a strong commitment from all parties to the common purpose that has been agreed upon in the agreement. This common purpose becomes the main focus, setting aside narrow individual or group interests. To strengthen this commitment, this model suggests holding regular workshops and socializations. These activities help stakeholders to understand and internalize the common purpose, as well as to build a sense of togetherness and mutual support. A strong commitment to a common purpose creates the motivation and energy needed to overcome challenges and achieve desired results.

The sixth and final element is capacity building & trust. Effective collaboration requires stakeholders who have relevant skills and knowledge, and relationships based on trust. This model emphasizes the importance of training and facilitation to enhance professionalism and build trust among stakeholders. Training can cover a variety of areas, such as communication skills, conflict management, decision-making, and problem-solving. In addition, building a culture of collaboration that values differences and prioritizes the public interest is also very important. This culture creates an inclusive and supportive environment, where everyone feels valued and motivated to contribute.

Table 2 Analysis of Integrated Accountability Collaborative Governance Model in Collaborative Road Infrastructure Maintenance in Berau Regency

Model Stages	Model Elements	Description	Application in the Context of Berau Regency	Correlation Between Elements
1. Starting Condition	Resources	Resources owned by the parties involved in the collaboration, both tangible (eg, funds, materials) and intangible (eg, knowledge, networks).	Local governments have budgetary and personnel resources. Private companies have financial, equipment, and material resources. Communities have local knowledge and volunteer labor.	The availability of diverse resources is a key driver for initiating dialogue and collaboration.
	Face to face dialogue	Direct interaction between parties to build shared understanding, identify goals, and build trust.	Coordination meeting between Regional Government, private companies, and community representatives. Public consultation meeting to discuss road maintenance plans.	Face-to-face dialogue allows the parties to understand each other's needs and expectations, which forms the basis for building an effective network structure.
2. Collaborative Action	Networked Structure	A collaborative organizational structure that emphasizes equality and horizontal relationships between parties, rather than hierarchy.	Collaborative team consisting of representatives of the Regional Government (DPUPR), private companies, and the community. Each party has an equal opportunity to participate in decision making.	An equal network structure is facilitated by an open information sharing platform, where all parties have equal access to project data and updates.
	Binding Agreement	A formal agreement that documents the goals of the collaboration, the roles and responsibilities of each party, and conflict resolution mechanisms.	Regent Regulation (Perbup) which regulates the procedures for road maintenance. Cooperation agreement between the Regional Government and private companies regarding the contributions and obligations of each party.	A good network structure is the basis for the formation of binding collaboration agreements, because equality and shared understanding facilitate the drafting of agreements.
	Distributive Accountability	Clear and measurable	DPUPR is responsible for	A clear collaboration

Model Stages	Model Elements	Description	Application in the Context of Berau Regency	Correlation Between Elements
		division of responsibilities among the parties. Transparent reporting and evaluation mechanisms to ensure accountability.	planning and technical supervision. Private companies are responsible for providing resources and implementing physical work. Communities are responsible for participatory supervision and reporting on road conditions.	agreement results in distributed accountability, as the roles and obligations of each party are formally defined.
	Information Sharing Platform	Systems and mechanisms for sharing relevant and timely information between parties.	Digital platform for sharing road condition data, maintenance schedules, and project progress reports. Regular meetings to discuss important issues and latest developments.	Information sharing platforms support an equal network structure by ensuring all parties have equal access to relevant information.
	Commitment to a Common Purpose	Focus on shared goals that transcend individual or organizational interests. Efforts to build shared understanding and strengthen commitment.	All parties are committed to improving the quality and accessibility of road infrastructure in Berau Regency for the benefit of the community and the regional economy.	A strong collaboration agreement builds commitment to shared goals, as a formal agreement creates a strong foundation for cooperation.
	Capacity Building & Trust	Efforts to improve the ability of parties to collaborate and build relationships of mutual trust.	Technical training for road maintenance workers. Discussion and mediation forums to resolve conflicts and build trust between parties.	Good accountability drives capacity building and trust, as transparency and accountability build confidence between parties.
3. Outcomes	Outcomes	Results achieved through collaboration, both measurable (eg, length of road repaired)	Improving road quality, reducing travel time, increasing road user safety, increasing community participation in road maintenance.	The success of collaboration in achieving positive results strengthens the relationships between elements and encourages

Model Stages	Model Elements	Description	Application in the Context of Berau Regency	Correlation Between Elements
		and immeasurable (eg, increased public satisfaction).		the sustainability of collaboration.

Source: Author's analysis, 2025

Analysis of table 2 integrated accountability collaborative governance model in the context of road infrastructure maintenance collaboration in Berau Regency shows how the elements of the model are interrelated and strengthen each other. An equal network structure between the Regional Government, private companies, and the community is the main foundation of collaboration. This structure allows each party to have equal access to information and the opportunity to participate in decision-making, thus creating equality and strong shared understanding.

CONCLUSIONS AND RECOMMENDATIONS

From the description and analysis of the research results, it can be concluded that the research results show;

- a) The collaborative process of road maintenance in Berau successfully implemented the principles of collaborative governance as proposed by Kirk Emerson, Tina Nabatchi, and Stephen Balogh (2012). The dynamics of collaboration demonstrate strong shared principles and motivations among stakeholders, as well as adequate capacity for joint action.
- b) The success of road maintenance collaboration in Berau Regency can be concluded as quite successful with a networked structure involving various stakeholders, commitment to a common purpose seen in the existence of shared goals and communication efforts between stakeholders, Trust among the participants built through transparency and accountability, strong governance with regent regulations, Access to authority involving various parties with their respective influences is also a characteristic of collaboration in Berau, and access to resources shown by direct contributions from the government, private sector, and the community.
- c) The Hexa Helix model design is used as a more comprehensive framework for road maintenance collaboration in Berau Regency. The Hexa Helix model expands the traditional collaboration model by adding important actors such as academics, media, and indigenous communities, in addition to government, business, and society.

From the analysis of research results and drawing conclusions, the author has prepared the following recommendations;

- a) The study recommends that the Berau District Government optimize the role of companies in road maintenance through specific strategic MOUs (contribution, area of responsibility, supervision). MoU priority is given to companies with significant impacts. The Berau District Government needs to

- facilitate a structured multi-stakeholder communication forum for planning, decision-making, monitoring, and conflict resolution.
- b) To address the challenges of collaborative governance of road maintenance, the Berau District Government needs targeted policies to strengthen accountability and improve information sharing. Accountability policies include revisions to regional/regent regulations by clarifying roles, specific cooperation agreements, and structured CSR accountability guidelines.
 - c) Based on an in-depth analysis of the challenges and complexities of collaboration in road infrastructure maintenance in Berau Regency, this study recommends the implementation of a collaborative approach involving Hexa Helix actors and the use of the Integrated Accountability Collaborative Governance model.

ADVANCED RESEARCH

Based on an in-depth analysis of the dynamics of collaboration in road infrastructure maintenance in Berau Regency, this study recommends an advanced approach through the implementation of the *Integrated Accountability Collaborative Governance* model involving actors within the *Hexa Helix* framework. This model not only broadens the scope of collaboration by including the crucial roles of academics, media, and indigenous communities alongside government, business, and society but also places integrated accountability as a central element at every stage of the collaborative process, from planning and implementation to evaluation. It is specifically designed to address the limitations of previous collaborative governance models, particularly in terms of accountability mechanisms, network structures, formal agreements, and information-sharing systems. The implementation of this model is expected to foster a more adaptive, transparent, and sustainable form of collaborative governance, significantly improving the quality of road infrastructure through a well-structured and accountable multi-actor synergy.

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