

# Governance of Village Boundary Segment Affirmation: A Qualitative Study of Sea and East Koha Villages in Minahasa Regency

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## ABSTRACT

This article analyzes the governance of village boundary segment affirmation between Sea Village and East Koha Village in Minahasa Regency. The study is situated within public administration, public management, territorial administration, and boundary governance. The case is important because village boundaries are not merely cartographic lines; they define administrative authority, public service jurisdiction, planning responsibility, asset management, and community access to government protection. Although formal procedures for village boundary determination and affirmation are provided by the Indonesian regulatory framework, the boundary segment between the two villages has not reached a final agreement. This article uses a qualitative descriptive approach based on in-depth interviews, document analysis, and limited administrative observation. The findings show that the boundary affirmation process has already passed several formal stages, including team formation, data and document collection, facilitation, cartometric tracing, and preparation of maps and coordinates. Nevertheless, the process remains unresolved because socio-historical interpretations, institutional governance limitations, inter-actor coordination, local leadership dynamics, and the low level of social pressure have prevented the transformation of technical outputs into a binding administrative decision. The study concludes that unresolved village boundary affirmation is less a purely technical mapping problem than a governance problem that requires stronger coordination, shared interpretation of evidence, community legitimacy, and decisive administrative follow-up. The article recommends an integrated boundary governance model that combines legal certainty, geospatial evidence, participatory mediation, and final decision-making by authorized local government institutions.

**Keywords:** boundary affirmation, cartometric mapping, local government, public governance, territorial administration, village boundary.

## INTRODUCTION

Clear territorial boundaries are a fundamental requirement for orderly public administration. In a decentralized governmental system, the boundary of a village is not only a geographic marker but also a legal-administrative instrument that determines jurisdiction, service responsibility, development planning, fiscal allocation, asset administration, and social recognition. A village without a clearly affirmed boundary risks experiencing overlapping authority, unclear public service delivery, uncertainty in land administration, and prolonged socio-political tension. This makes boundary governance a critical issue in public administration, especially in regions where village formation, expansion, settlement growth, and historical claims intersect.

The issue becomes more complicated when formal regulations already exist but local practice remains unresolved. Normatively, village boundaries should be defined at the time of village establishment and supported by maps, legal documents, and official descriptions. In practice, however, many villages continue to experience boundary ambiguity. The problem can arise from incomplete historical documents, different interpretations of old maps, limited technical capacity at the village level, weak integration of spatial data, inconsistent facilitation, and the emergence of new economic interests in border areas. Such factors demonstrate that boundary affirmation is not only a matter of mapping but also a matter of public governance, institutional coordination, and social legitimacy.

In Minahasa Regency, the case of the boundary segment between Sea Village and East Koha Village illustrates the complexity of this issue. Government facilitation has been carried out, technical data from geospatial institutions has been used, and a regional team for village boundary determination and affirmation has been formed. However, the disputed segment has not produced a final mutually accepted agreement. The unresolved status creates a governance dilemma. On one side, the regulatory framework provides procedures and authority for boundary affirmation. On the other side, the actual process is shaped by historical memory, village perceptions, administrative hesitation, and local political dynamics.

The case is relevant for the wider study of public management because it shows the gap between procedural compliance and substantive resolution. A government can form a team, hold meetings, use maps, and produce technical descriptions, yet still fail to settle the dispute when coordination, legitimacy, and decision authority are not translated into a final act. This gap is important for public administration scholarship because it reveals that the success of local governance depends not only on the existence of rules but also on the capacity of institutions to align legal documents, technical data, actor participation, and administrative decisions.

This article therefore examines two main questions. First, how has the process and condition of the boundary segment affirmation between Sea Village and East Koha Village been implemented? Second, what determinant factors have influenced the unresolved condition of the boundary segment? By answering these questions, the article contributes to the literature on territorial administration, public management, and local governance. It also provides practical recommendations for local governments dealing with boundary disputes that are technically documented but administratively unresolved.

## LITERATURE REVIEW

### **Public Administration and Territorial Governance**

Public administration concerns the organization and coordination of public resources, personnel, and authority to implement decisions that serve the public interest (Chandler & Plano,

1988). In contemporary understanding, public administration is not limited to bureaucratic routines; it also includes the governance of relationships among institutions, communities, and regulatory systems. Denhardt and Denhardt (2003) argue that public administration should place citizens at the center of public service rather than treating them as passive recipients of bureaucratic output. This perspective is highly relevant to boundary governance because village boundaries directly affect citizens' access to services, recognition, and administrative rights.

Public administration also has a spatial dimension. Government authority is exercised within a defined territory. When administrative territory is unclear, the government's capacity to plan, regulate, and deliver services becomes uncertain. Territorial governance therefore refers to the way public institutions define, manage, and coordinate the spatial boundaries of authority. It involves legal certainty, map-based evidence, administrative documents, community participation, and dispute resolution mechanisms. In this sense, village boundary affirmation is a public administration process that connects law, spatial information, community history, and government decision-making.

The principle of orderly territorial administration is central to local governance. Administrative order requires valid data, legal documentation, and clear jurisdiction. Hadi Sabari Yunus (2000) emphasizes that territorial administration is the basis for decision-making in spatial planning, regional development, and public service management. Bintarto (1984) similarly views territory as a geographic unit with physical and social characteristics that require clear delimitation. In the village context, unclear boundaries may affect population administration, infrastructure planning, land use, village fund allocation, and local development accountability.

### **Public Management and Inter-Actor Coordination**

Public management focuses on the effective, efficient, and accountable management of public resources to achieve collective goals (Hughes, 2012). Unlike private management, public management must operate within legal mandates, political accountability, citizen expectations, and intergovernmental coordination. The management of village boundary affirmation requires planning, organizing, facilitation, decision control, and evaluation. Each stage depends on the ability of local government actors to coordinate with village governments, districts, technical agencies, and communities.

Terry (in Effendi, 2011) defines management as a process consisting of planning, organizing, directing, and controlling resources to achieve predetermined objectives. This classical function is visible in the boundary affirmation process. Planning is needed to identify unresolved segments and prepare documents. Organizing is needed to form a boundary team and clarify roles. Direction is needed to facilitate meetings and guide technical tracing. Control is needed to ensure that the process results in a final legal output. Failure in any of these functions may prevent the process from achieving the intended outcome.

Osborne and Gaebler (1992) argue that public organizations must be result-oriented, innovative, and responsive. In boundary governance, responsiveness means that government should not allow a technically documented dispute to remain indefinitely unresolved. A final administrative decision is necessary to protect citizens and prevent future conflict. Therefore, public management provides an analytical lens to examine whether the boundary affirmation process merely follows procedure or actually produces governance certainty.

### **Village Boundaries and Legal Certainty**

A village boundary is the administrative line that separates one village jurisdiction from another. The boundary may follow natural markers such as rivers, watersheds, ridges, or artificial

features such as roads, irrigation channels, and canals. The legal function of the boundary is to determine the territorial scope of governmental authority and public service delivery. Under the Indonesian village governance framework, villages are legal community units with defined territorial boundaries and authority to manage local interests according to law.

The determination and affirmation of village boundaries involve two related processes. Boundary determination refers to the establishment of a boundary on a base map through a cartometric process agreed upon by adjacent villages. Boundary affirmation refers to the determination of boundary coordinates through cartometric methods and, when needed, field surveys, resulting in a boundary map and a list of coordinates. These processes reflect the integration of legal, technical, and social dimensions of governance.

Legal certainty is essential because the boundary becomes the basis for government action. Without legal certainty, villages may claim the same land, communities may be confused about service authority, and government agencies may hesitate to allocate development responsibility. In this case, the unresolved segment between Sea Village and East Koha Village shows that the presence of a regulatory framework does not automatically produce certainty. Legal rules require institutional follow-through and social acceptance.

### **Governance of Boundary Affirmation**

Governance refers to the arrangement of authority, coordination, and accountability among actors involved in public decision-making (Keban, 2014). Boundary affirmation is a governance process because it involves multiple actors: village governments, district governments, regency government units, geospatial technical agencies, and community representatives. Each actor brings different knowledge, interests, and authority. The process must therefore manage not only maps and coordinates but also perceptions, claims, trust, and legitimacy.

Dwiyanto (2011) notes that a persistent gap between regulation and practice is a classic problem in governance. In boundary affirmation, this gap emerges when procedures are formally available but the process does not produce a final agreement or administrative decision. A regulation may define stages, but the success of implementation depends on the quality of coordination, the credibility of evidence, the clarity of roles, and the willingness of authorized institutions to make decisions when consensus cannot be achieved.

Boundary governance also requires a balance between participation and authority. Participation is needed to ensure that the affected villages understand and accept the process. Authority is needed because disputes cannot remain open forever. If deliberation fails, the authorized local government must use evidence, regulation, and procedural fairness to issue a decision. This balance becomes a central theme in the case analyzed in this article.

### **Previous Studies and Research Gap**

Previous studies on village boundary disputes show recurring patterns. Hasim et al. (2025) found that differences in community perception, limited human resources, and local political dynamics often hinder boundary dispute resolution. Wirayudha (2023) showed that regional strategies may be implemented but remain constrained by limited facilities and weak management information systems. Sitanggang (2023) emphasized structural factors, differences of interest, community relationships, and data conflict as causes of unresolved boundary disputes.

Thahir and Reski (2023) found that different perceptions and inconsistent boundary maps require mediation involving villages, districts, and local government. Rossi (2021) highlighted that communication, human resources, authentic documents, and overlapping boundaries determine the

success or failure of village boundary settlement. Dewi (2021) showed that mediation and shared agreement are important instruments in boundary disputes involving customary communities.

The research gap lies in the need to examine boundary affirmation as a governance problem rather than merely a legal or technical process. Many studies discuss conflict settlement, but fewer analyze how a boundary process can be administratively implemented, technically facilitated, and yet remain unresolved because of institutional hesitation and socio-historical interpretation. This article addresses that gap through a governance analysis of the Sea and East Koha boundary segment.

## METHOD

This article uses a qualitative descriptive approach. The approach is appropriate because boundary governance is a social-administrative phenomenon shaped by perceptions, documents, institutional interaction, and decision-making processes. Qualitative inquiry allows the researcher to understand the meanings and interpretations held by actors involved in the boundary affirmation process. The study does not seek to test a statistical hypothesis; instead, it describes and interprets the process by which a boundary segment remains unresolved despite the existence of technical facilitation and regulatory procedures.

The research location is the disputed boundary segment between Sea Village in Pineleng District and East Koha Village in Mandolang District, Minahasa Regency. This location was selected because the segment represents a case of prolonged boundary ambiguity involving historical claims, technical mapping, and local government facilitation. The focus of the study is the process and condition of boundary affirmation and the determinant factors influencing the unresolved status of the segment.

Data were collected through in-depth interviews, document study, and limited administrative observation. Interviews were conducted with actors involved in the boundary process, including local government officials, district representatives, village officials, and technical staff. Document study examined boundary-related documents, maps, facilitation records, cartometric outputs, and regulatory references. Limited observation was used to understand the administrative situation rather than to physically survey the entire boundary because the study focuses on governance dynamics rather than technical measurement.

The analysis follows the interactive model of Miles, Huberman, and Saldana (2014), consisting of data condensation, data display, and conclusion drawing or verification. Data condensation involved selecting and organizing relevant information from interviews and documents. Data display was carried out through matrices, thematic tables, and reconstructed process diagrams. Conclusions were drawn through repeated comparison between interview statements, documentary evidence, and governance theory. Trustworthiness was maintained through source triangulation, method triangulation, and confirmability checks based on documentary support. See table 1.

**Table 1.** Research method

<b>Methodological Component</b>	<b>Description</b>
Research approach	Qualitative descriptive study focusing on process, meaning, interpretation, and governance dynamics.
Research focus	Boundary segment affirmation between Sea Village and East Koha Village in Minahasa Regency.
Data sources	In-depth interviews, official documents, boundary maps, cartometric descriptions, and administrative records.

Data analysis	Data condensation, data display, conclusion drawing, and verification using the Miles, Huberman, and Saldana interactive model.
Validity strategy	Triangulation of sources and methods, comparison between interviews and documents, and repeated verification of thematic findings.

## RESULTS AND DISCUSSION

The findings are organized according to the stages of village boundary affirmation and the determinant factors that influenced the unresolved condition of the disputed segment. The evidence shows that the process was not absent. Instead, several procedural stages were carried out, but the process failed to move from facilitation and technical documentation to final agreement and administrative certainty. See figure 1.



Figure 1. Boundary affirmation process reconstructed

### Preparation and Team Formation

The first major finding is that the boundary affirmation process began through the formation of a regency-level team for village and subdistrict boundary determination and affirmation. The team was established by a regent decree and involved regional government units, district actors, and technical institutions. Its duties included reviewing legal bases, coordinating the implementation of boundary affirmation, providing assistance and socialization, and preparing local regulatory outputs related to boundary maps.

This stage shows that the local government formally recognized the importance of boundary affirmation. The process was not informal or spontaneous; it was embedded in an institutional mechanism. The involvement of geospatial facilitation also indicates that the government attempted to ground the process in technical data. However, the evidence also shows that the preparation stage had weaknesses. Documentation of preparatory meetings was limited, and village-level representatives and community figures were not clearly embedded in the formal team structure. This limited representation may have reduced the sense of shared ownership of the process.

The regional team facilitated many boundary segments in Minahasa Regency. However, some segments remained unresolved, including the Sea-East Koha segment. The existence of unresolved segments demonstrates that team formation alone is not enough. A team can provide a procedural platform, but it requires active coordination, transparent communication, and decisive follow-up to produce final certainty. See table 2.

Table 2. Preparation

Sub-focus	Translated Finding
Preparation and team formation	A regency team was formed and facilitation was conducted, but documentation of preparatory meetings was not sufficiently found. The formal team composition was dominated by government and

Governance implication	technical actors, while direct representation of village governments and community figures was not clearly visible in the team structure. Institutional formation showed procedural compliance, but limited participatory representation weakened social legitimacy and ownership of the boundary process.
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### Data and Boundary Document Collection

The second finding concerns the collection of boundary data and documents. The process used data from geospatial authorities, including cartometric delineation, topographic and toponymic references, high-resolution satellite imagery, and village-level information. This indicates that the technical side of the process was supported by modern spatial data. From a purely mapping perspective, the process had sufficient resources to identify and describe the disputed segment.

Nevertheless, technical data did not eliminate the dispute because the two villages relied on different historical understandings of their boundary. Sea Village referred to historical memory that its area extended toward a specific natural reference, while East Koha Village relied on a different memory of the old Koha area and its relationship to the contested location. These interpretations were not merely factual differences; they were socially embedded narratives passed through local memory. As a result, the same technical map could be interpreted differently by each side.

The study also found no single boundary document that was jointly recognized by both villages as the ultimate reference. Spatial data existed, but there was no shared documentary authority strong enough to settle the interpretive disagreement. This gap between technical availability and social acceptance is a central finding. Boundary affirmation requires not only maps but also agreed evidence and legitimate interpretation. See table 3.

**Table 3.** Document Collection

Sub-focus	Translated Finding
Data and document collection	Spatial data were available, but the study did not find complete formation documents for both villages that could be used to compare the historical development of village boundaries over time.
Boundary knowledge	Knowledge of the boundary was more strongly based on collective memory and local historical narratives than on a jointly recognized formal document.
Documentary legitimacy	No single document was found to be accepted by both villages as the main basis for determining the boundary segment. Each village used different references to understand its territorial boundary.

### Deliberation and Boundary Affirmation

The third finding is that deliberation had been conducted, but it did not achieve the principal objective of an agreed boundary. The meetings and facilitation processes brought the relevant actors together, but the different interpretations of history and territorial identity remained unresolved. Deliberation functioned as a procedural requirement, yet it did not become a transformative mechanism capable of producing shared understanding.

The role of facilitation is important in boundary governance because it can reduce misunderstanding, clarify evidence, and create a forum for negotiated settlement. However, facilitation will not succeed if the parties continue to frame the boundary through competing historical claims and if the facilitator does not move the process toward either consensus or a legitimate administrative decision. In this case, the process remained within the space of disagreement.

The deliberation stage demonstrates that participation alone does not guarantee resolution. A participatory process must be designed with clear rules for evidence assessment, dispute narrowing, and decision escalation. When deliberation fails, the authorized government must have a clear mechanism for issuing a final determination based on regulation, technical evidence, and procedural fairness. See table 4.

**Table 4.** Affirmation

<b>Sub-focus</b>	<b>Translated Finding</b>
Deliberation and affirmation	Deliberation was carried out according to the stages, but it did not achieve the main goal of boundary agreement because each village maintained a different understanding of its territorial boundary.
Governance implication	The process remained at the level of facilitation and did not progress toward a binding settlement mechanism.

### **Cartometric Tracing and Field Verification**

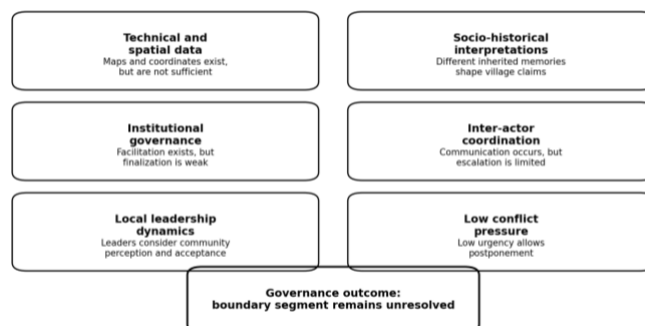
The fourth finding concerns cartometric tracing and limited field verification. The process produced a map of the disputed segment and a list of cartometric coordinate points. Technical actors described the boundary line based on geospatial data and information submitted by both villages. The disputed area was documented in the boundary affirmation record, showing that the technical process was able to visualize the disagreement.

However, the availability of coordinates did not automatically create agreement. This is a key lesson from the case. Technical instruments are powerful for identifying, describing, and displaying a boundary, but they cannot replace governance. A coordinate list may show where a line can be drawn, but social and administrative actors must agree on what that line means, why it is legitimate, and how it will be enforced. Without that interpretive and institutional acceptance, the line remains a technical product rather than a governing boundary.

The finding also shows that village-level technical capacity matters. When maps, coordinates, and cartometric descriptions are produced by external or higher-level technical actors, village officials and communities may receive the result without fully understanding the methodological basis. This can deepen suspicion or resistance. Therefore, technical tracing should be accompanied by translation of spatial data into accessible explanations for local stakeholders. See table 5, and figure 2.

**Table 5.** Verification

<b>Sub-focus</b>	<b>Translated Finding</b>
Cartometric tracing and field survey	Boundary affirmation was conducted through a cartometric process and resulted in map visualization and coordinate points, but the final segment remained disputed.
Technical limitation	Spatial evidence was available, yet it did not become a jointly accepted basis for settlement because the conflict involved competing interpretations, not only map accuracy.
Governance implication	Technical outputs need to be connected with participatory explanation and authoritative decision-making.



**Figure 2.** Determinants of the unresolved boundary segment

### Final Result of Boundary Affirmation

The fifth finding is that the boundary affirmation process did not produce a final agreement or binding administrative decision for the disputed segment. Years after facilitation and documentation, the disagreement remained. This finding is important because it shows a gap between administrative procedure and administrative certainty. The process produced records, maps, and coordinate descriptions, but not a final settlement.

The unresolved condition creates practical risks. Public service boundaries can become unclear, village development planning may overlap, land administration may be contested, and future conflict can re-emerge when the disputed area gains economic value. Although the current social pressure may be low, the absence of a final boundary leaves a latent governance risk. A low conflict level should not be interpreted as problem resolution. It may simply mean that the dispute is dormant.

The final result therefore indicates that the main weakness lies in decision finalization. The case requires a stronger mechanism for moving from facilitation to resolution. If agreement cannot be reached, the local government must use its authority to issue a decision supported by geospatial evidence, legal references, and transparent procedural records. See table 6.

**Table 6.** Final Result of Boundary

<b>Sub-focus</b>	<b>Translated Finding</b>
Final result	The study found that boundary disagreement remained several years after the facilitation record was issued. Boundary certainty expected under the regulatory mechanism had not been achieved.
Administrative implication	The absence of a final decision created a continuing gap between normative procedure and practical territorial governance.

### Determinant Factors

The determinant factors can be grouped into five main categories: technical factors, socio-historical factors, institutional governance factors, local leadership factors, and the low level of conflict pressure. These factors interact with each other. Technical data may be available, but socio-historical claims can prevent acceptance. Institutional authority may exist, but leadership hesitation can delay decision-making. Low conflict pressure can reduce urgency, allowing the dispute to remain unresolved.

The technical factor refers to the availability and use of spatial data, maps, coordinates, and cartometric methods. The technical dimension was relatively present in the case, but it was insufficient to produce settlement. The socio-historical factor was stronger. Each village maintained its own memory and understanding of territorial extent. These memories shaped local claims and influenced village positions during deliberation.

The institutional governance factor concerns how the regional team, districts, villages, and technical agencies coordinate and make decisions. The process showed coordination but not finalization. Local leadership dynamics also affected the process because leaders may hesitate to accept or reject boundary options when community perceptions remain divided. Finally, the low level of conflict pressure reduced the urgency of settlement. Because the dispute did not escalate into serious open conflict, institutions could postpone a final decision without immediate social cost. See table 7.

**Table 7.** Determinant Factors

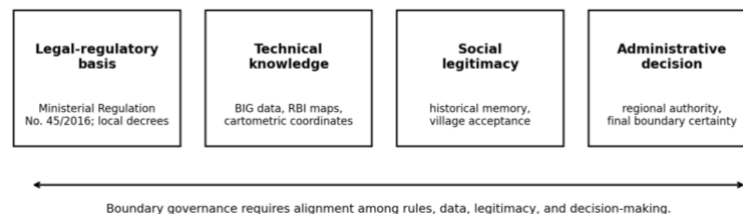
<b>Determinant Factor</b>	<b>Explanation</b>	<b>Effect on Boundary Affirmation</b>
Technical and spatial data	Maps, cartometric points, satellite imagery, and boundary descriptions were available.	Supported visualization of the disputed segment but did not guarantee agreement.
Socio-historical interpretation	Each village relied on different historical memories and inherited territorial narratives.	Produced competing claims and prevented shared interpretation.
Institutional governance	The regional team and facilitation mechanisms existed, but decision follow-up was weak.	Created a gap between process implementation and final settlement.
Inter-actor coordination	Coordination occurred among government levels, but roles and escalation were not fully decisive.	Maintained communication but did not produce binding resolution.
Local leadership dynamics	Village and local actors had to consider community perceptions and potential reaction.	Encouraged caution and slowed agreement.
Low conflict pressure	The dispute did not develop into high-intensity open conflict.	Reduced urgency for immediate administrative decision.

The findings confirm that the unresolved boundary segment between Sea Village and East Koha Village is fundamentally a governance problem. A purely technical explanation would be insufficient because the process had already used spatial data and cartometric outputs. Similarly, a purely legal explanation would be incomplete because regulation already provides a procedure for village boundary determination and affirmation. The main problem lies in the inability to align regulation, technical evidence, social legitimacy, and administrative decision-making.

From the perspective of public administration, the case shows the importance of territorial clarity as a basis for government authority. Chandler and Plano (1988) emphasize that public resources and personnel must be organized and coordinated to implement public decisions. In this case, the organization of actors existed, but the coordination did not culminate in a final decision. The public administration function therefore remained incomplete. A process that stops at facilitation does not fully serve the public interest when the territorial uncertainty continues.

The New Public Service perspective is also relevant. Denhardt and Denhardt (2003) argue that government should serve citizens and democratic values rather than merely steer administrative outputs. Boundary affirmation affects citizens directly because it determines which village government serves them, which development plan includes their area, and which administrative authority recognizes their claims. Therefore, citizen-oriented governance requires not only technical accuracy but also transparency, explanation, and legitimacy in the eyes of affected communities.

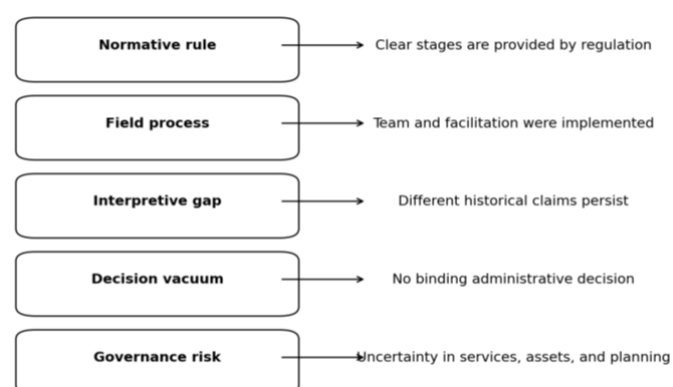
The public management perspective highlights the weakness of result orientation. The process had inputs and activities: a team, meetings, data collection, facilitation, and maps. However, the outcome remained incomplete. Hughes (2012) emphasizes effectiveness and responsiveness in public management. A responsive boundary governance system should be able to move from activity completion to outcome achievement. In this case, activity completion did not equal governance success. See figure 3.



**Figure 3.** Governance alignment framework for village boundary affirmation

The case also illustrates a classic gap between regulation and practice. Dwiyanto (2011) notes that such gaps occur when formal rules are not supported by adequate governance capacity. The boundary regulation provides stages, but the implementation requires the capacity to reconcile evidence, mediate disagreement, document decisions, and enforce final outcomes. When any of these capacities is weak, the process can become repetitive and unresolved.

The role of socio-historical interpretation is particularly significant. Boundary claims are not always derived from formal documents. In many local contexts, territorial memory is transmitted through elders, customary narratives, settlement history, and land use experience. These forms of knowledge may not be legally conclusive, but they are socially powerful. Ignoring them can reduce legitimacy; treating them as the only basis can undermine legal certainty. Effective boundary governance must therefore translate historical narratives into a structured evidentiary process that can be compared with maps and legal documents. See figure 4.



**Figure 4.** From normative procedure to governance risk no final decision is issued

Technical geospatial data should be seen as an instrument of governance, not a substitute for governance. The maps and coordinates produced in the process were necessary because they made the disputed segment visible. However, map visibility does not guarantee political or social acceptance. Technical data must be explained, debated, and linked to a legitimate decision. This requires technical literacy at the village level and transparent communication by government facilitators.

The absence of a final decision reflects institutional caution. Local governments may hesitate to issue binding decisions when village claims remain contested because they fear social reaction or political consequences. However, postponement also has costs. It creates uncertainty and may allow the dispute to become more complex over time. If economic value increases in the disputed area, latent disagreement can become active conflict. Therefore, risk-sensitive governance should treat unresolved boundaries as potential future governance risks, not as harmless administrative leftovers.

The low level of conflict pressure is a double-edged factor. On one hand, it prevents escalation and provides space for calm deliberation. On the other hand, it reduces urgency. When there is no immediate conflict, institutions may delay difficult decisions. Public governance should not wait for conflict escalation before acting. Preventive administration requires settling uncertainty before it becomes a crisis.

The case also suggests that boundary governance requires a staged escalation mechanism. The first stage should prioritize data collection and shared understanding. The second stage should facilitate village deliberation. The third stage should narrow disputed alternatives using technical evidence. The fourth stage should issue a binding decision if deliberation fails. The fifth stage should socialize and integrate the decision into village planning, population administration, and development documents. Without this escalation, the process risks repeating facilitation without settlement.

Another important discussion point is the relationship between authority and legitimacy. Authority without legitimacy can produce resistance; legitimacy without authority can produce endless negotiation. The best governance approach combines both. The local government must use its legal authority, but it must do so after a transparent process that gives the villages opportunity to submit evidence and understand the technical basis. This combination can strengthen acceptance even when one party does not fully agree with the outcome.

The findings therefore support an integrated model of boundary governance. The model consists of legal-regulatory basis, technical-spatial evidence, participatory deliberation, institutional decision-making, and post-decision integration. Legal basis provides authority; technical evidence provides accuracy; participation provides legitimacy; decision-making provides certainty; and integration ensures that the boundary is reflected in public service and planning systems. Such a model can be applied to other unresolved village boundary segments in Minahasa Regency and similar regions.

### **Proposed Integrated Boundary Governance Model**

Based on the findings and discussion, this article proposes an integrated boundary governance model for unresolved village boundary segments. The model begins with documentary consolidation. All historical documents, formation decrees, old maps, cartometric outputs, satellite imagery, and village-submitted claims should be compiled in a single evidence register. The register must distinguish between legal documents, technical maps, local narratives, and administrative practices. This avoids treating all evidence as equal while still recognizing the social relevance of local memory.

The second component is participatory technical explanation. Maps and coordinates should not only be presented to village actors; they must be explained in accessible language. Technical staff should clarify what cartometric tracing means, how points are generated, what uncertainty exists, and how natural markers are interpreted. This process can reduce suspicion and help local actors understand the difference between technical evidence and historical claims.

The third component is structured deliberation. Deliberation should not be an open-ended meeting. It should have clear objectives, documented positions, evidence submission deadlines, and

a mechanism for narrowing disagreements. Each village should be asked to state its claim, supporting evidence, and acceptable alternatives. The facilitator should then identify which points are agreed and which remain disputed.

The fourth component is administrative escalation. When deliberation fails after reasonable facilitation, the authorized local government should issue a decision based on law, evidence, and procedural fairness. This decision should be accompanied by a written explanation that shows how evidence was assessed. Such explanation is important to reduce perceptions of arbitrariness.

The fifth component is post-decision integration. A boundary decision must be integrated into village maps, development planning, population administration, public service jurisdiction, and asset records. Without integration, even a formal decision may remain symbolic. Post-decision socialization should also be conducted so that communities understand the implications of the boundary.

The model emphasizes that boundary affirmation is not finished when a map is produced. It is finished when the map becomes a legitimate, legally recognized, socially communicated, and administratively used boundary. This shift from technical output to governance outcome is essential for territorial administration. See table 8.

**Table 8.** Integrated Boundary Governance

<b>Model Component</b>	<b>Main Activity</b>	<b>Expected Governance Output</b>
Evidence register	Compile legal documents, old maps, satellite data, cartometric outputs, and village claims.	A transparent evidence base for decision-making.
Participatory technical explanation	Translate spatial data and coordinates into accessible explanations for village actors.	Improved technical understanding and reduced suspicion.
Structured deliberation	Document claims, evidence, alternatives, and points of disagreement.	A narrowed dispute and clearer record of each position.
Administrative escalation	Issue a binding decision when agreement cannot be achieved after fair facilitation.	Legal certainty and closure of the unresolved segment.
Post-decision integration	Update maps, planning documents, public service records, and administrative systems.	Operational territorial order and reduced future conflict risk.

### **Theoretical and Practical Implications**

Theoretically, the case strengthens the argument that public administration is spatially embedded. Administrative authority is not abstract; it is exercised in a bounded territory. When a boundary is uncertain, the authority of government becomes uncertain as well. This means that territorial administration should be treated as a core dimension of local governance rather than a peripheral technical matter. The boundary segment between Sea and East Koha shows that an unresolved line can affect institutional roles, planning responsibility, land-related expectations, and the confidence of citizens in the administrative system.

The study also contributes to the theory of public management by differentiating between procedural outputs and governance outcomes. Procedural outputs include decrees, meetings, maps, minutes, and coordinate lists. Governance outcomes include agreement, certainty, implementation, and the use of the boundary in daily administration. The case demonstrates that a public organization may produce many outputs without achieving the expected outcome. This distinction

is important for evaluating public programs because government performance should not be assessed only by the number of activities completed but also by whether the activities resolve the public problem.

For boundary governance theory, the case shows that technical rationality and social rationality must be connected. Technical rationality relies on maps, coordinates, satellite imagery, and cartometric methods. Social rationality relies on historical memory, local identity, acceptance, and trust. If technical rationality dominates without explanation, local actors may reject the result. If social rationality dominates without legal and technical control, the process may never produce certainty. A strong governance model should therefore place technical evidence and community legitimacy in a structured relationship.

Practically, the findings suggest that local governments should develop a boundary dispute management protocol. The protocol should define the maximum number of facilitation rounds, the types of evidence that may be submitted, the role of each actor, the documentation format, and the escalation mechanism when agreement is not achieved. This would prevent an unresolved segment from remaining indefinitely open. It would also protect facilitators from accusations of partiality because each step would follow a transparent standard.

Local governments should also invest in boundary literacy at the village level. Village officials and community representatives often receive maps and coordinate data without sufficient technical explanation. Training on how to read maps, understand coordinates, interpret natural markers, and compare documentary evidence would improve the quality of deliberation. Boundary literacy should not make village actors technical experts, but it can help them participate more meaningfully and reduce misunderstanding during facilitation.

Another practical implication is the need for an integrated boundary archive. Many disputes become difficult because documents are scattered, incomplete, or interpreted differently. A digital and physical archive should contain formation documents, old maps, facilitation minutes, boundary descriptions, coordinates, and any community submissions. The archive should be managed by the regional government and made accessible to relevant village and district actors. Such an archive would strengthen institutional memory and prevent future officials from restarting the process from the beginning.

The case also suggests that local government should not wait for open conflict before finalizing boundary decisions. Low conflict pressure can be misleading. A quiet dispute can become problematic when development projects, land values, infrastructure, or village funds increase the stakes of the boundary area. Preventive governance requires administrative clarity before escalation. Therefore, unresolved segments should be prioritized not only based on conflict intensity but also based on future administrative and economic risk.

Finally, the results are relevant for other boundary segments in Minahasa Regency and other local governments facing similar cases. The same pattern may occur elsewhere: a formal team is formed, technical facilitation is conducted, maps are produced, but no final decision follows because historical interpretation and institutional caution persist. The proposed model can help convert boundary affirmation from a repetitive facilitation process into a structured governance cycle that ends in territorial certainty.

### **Limitations and Future Research**

This article has several limitations. First, the study focuses on one boundary segment, so the findings should be interpreted as an in-depth case analysis rather than a statistical generalization. Nevertheless, the case provides analytical insight into governance patterns that may appear in similar boundary disputes. Second, the study emphasizes administrative and governance dimensions

rather than conducting a new technical survey of the boundary. Therefore, the analysis does not replace professional geospatial measurement. Instead, it explains why available technical data may still fail to produce a final boundary settlement.

Future research could compare multiple unresolved boundary segments to identify whether similar determinant factors appear across villages. Comparative research could also examine how different local governments use their authority when deliberation fails. Another important direction is to study community perceptions after a boundary decision has been issued, because post-decision acceptance is crucial for the operational success of territorial administration. Finally, research on digital boundary archives and village-level geospatial literacy could provide practical innovations for preventing future disputes.

### CONCLUSION

This article concludes that the boundary segment affirmation between Sea Village and East Koha Village has followed several formal stages, including team formation, data and document collection, deliberation, cartometric tracing, and preparation of technical outputs. However, these stages have not produced a final agreement or binding administrative decision. The unresolved condition reveals a gap between normative procedures and actual governance outcomes. The determinant factors include technical and spatial data issues, socio-historical interpretations, institutional governance limitations, inter-actor coordination, local leadership dynamics, and the low level of conflict pressure. Among these, socio-historical interpretation and governance finalization are the most influential. The dispute persists not because there is no technical data, but because the technical data has not been transformed into shared legitimacy and administrative certainty.

Theoretically, the study contributes to public administration by showing that territorial administration requires integration between legal authority, spatial evidence, community legitimacy, and public management capacity. Practically, it recommends that local government strengthen documentation, technical explanation, structured deliberation, and decision escalation. If village agreement cannot be reached, the authorized local government should issue a transparent and evidence-based administrative decision to protect public interest and prevent future governance risks. The broader implication is that unresolved village boundaries should be treated as a governance priority. They influence public services, development planning, land administration, village assets, and community trust. Therefore, boundary affirmation must not stop at facilitation and mapping. It must end in clear, legitimate, and operational territorial certainty.

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