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Policy Implementation of Village Boundary Confirmation and Determination: A Qualitative Study of Administrative Boundary Governance in Two Adjacent Villages

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ABSTRACT

This article analyzes the implementation of village boundary confirmation and determination policy in two adjacent villages that experienced a prolonged administrative boundary dispute. The study is positioned within public administration because village boundaries are not merely cartographic lines; they define legal authority, service coverage, development planning, asset governance, and social harmony. A qualitative descriptive design was used, supported by interviews, observation, and documentation. The analysis applied the policy implementation perspective of George C. Edward III, especially communication, resources, disposition, and bureaucratic structure. The findings show that the implementation process has formally followed the logic of the Minister of Home Affairs Regulation Number 45 of 2016, including document inventory, technical tracing, kartometric analysis, mapping, facilitation, and deliberation. However, the process has not yet produced a final and binding boundary decision. The main obstacles include different interpretations of the same legal basis, fragmented historical and spatial data, limited technical mapping capacity at the village level, inadequate integration of geospatial information, strong community attachment to historical claims, and coordination that has not yet generated a mutually accepted agreement. The article argues that boundary policy implementation requires not only procedural compliance but also an integrated governance mechanism that combines legal validation, geospatial data management, participatory deliberation, and authoritative decision-making. The study contributes to public administration by showing that effective boundary governance depends on the interaction between policy clarity, technical capacity, collaborative communication, and institutional authority.

Keywords: administrative certainty, Edward III, geospatial data, public administration, policy implementation, territorial governance, village boundary.

INTRODUCTION

Administrative boundaries are among the most fundamental instruments of local governance. A boundary determines where authority begins and ends, which government unit is responsible for public services, how development programs are planned, how population administration is organized, and how public assets are recorded. In village government, boundary clarity becomes even more important because villages are the closest public institutions to citizens. When a village boundary is unclear, the problem is rarely limited to maps. It can affect land administration, infrastructure planning, citizen identity, local taxation, village assets, community relations, and the legitimacy of decisions made by village governments.

The policy problem examined in this article concerns the implementation of a national guideline for village boundary confirmation and determination. The regulatory framework provides a technical and legal pathway for confirming village borders, yet implementation in the field remains complex. In the two adjacent villages examined in this study, both sides recognize the need for a clear boundary, but the process has not produced a final and binding decision. The problem is rooted in the interaction of old legal documents, different interpretations of historical records, incomplete spatial data, changing settlement patterns, and community perceptions that continue to shape local claims.

From a public administration perspective, village boundary confirmation is a policy implementation issue. It is not enough for the government to issue a guideline. The guideline must be translated into operational steps, communicated to local actors, supported by adequate resources, accepted by implementers and communities, and coordinated through a bureaucratic structure that has sufficient authority to finalize the decision. This is why the implementation framework of Edward III is useful. It directs attention to four variables that influence policy performance: communication, resources, disposition, and bureaucratic structure (Edward III, 1980). These variables are particularly relevant when a policy requires both technical mapping and social agreement.

The case also reflects a broader challenge in Indonesian village governance. Village boundaries are often inherited from older administrative arrangements, while contemporary development has altered land use, roads, settlement areas, and economic value. Historical documents may still exist, but they may not be integrated with modern geospatial systems. As a result, a document that was once considered sufficient can become a source of contestation because actors interpret it differently. A boundary policy therefore requires a bridge between legal history and present spatial reality.

The urgency of the issue is strengthened by the fact that unresolved village boundaries can weaken good governance. Good governance requires legal certainty, transparency, participation, effectiveness, and accountability (UNDP, 1997; OECD, 2017). Unclear boundaries create uncertainty in service delivery, weaken the precision of development planning, and may produce social tension among residents who feel that their identity or rights are being threatened. In this sense, boundary governance is both an administrative and a social governance matter.

This article aims to transform the research findings into an academic journal format. It analyzes how the policy guideline for village boundary confirmation and determination was implemented, why the process has not yet resulted in a final agreement, and what governance improvements are required. The article deliberately avoids presenting the work as a thesis-based report and instead frames it as an independent scholarly analysis of local policy implementation. The central argument is that village boundary policy implementation succeeds only when legal

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documents, technical mapping, community deliberation, and bureaucratic authority are managed as an integrated system.

LITERATURE REVIEW

Public policy can be understood as what government chooses to do or not to do in response to public problems (Dye, 2017). In a more purposive sense, policy is a course of action followed by public actors to address a matter of concern (Anderson, 2015). Boundary confirmation is a public policy because it is designed to resolve uncertainty in territorial administration and to produce public value through legal certainty, order, and stable service delivery. The policy is not merely declarative; it requires implementation through specific administrative, technical, and social processes.

Policy implementation refers to the process of translating formal decisions into real action. Hill and Hupe (2022) explain that implementation involves the interaction between policy design, administrative actors, resources, institutional arrangements, and target groups. Sabatier and Mazmanian (1980) emphasize that implementation success depends on the tractability of the problem, the ability of the statute to structure implementation, and non-statutory variables such as political support and socioeconomic conditions. In boundary cases, these factors are visible because the problem involves both technical complexity and community sensitivity.

Edward III (1980) identifies four key variables in policy implementation. Communication concerns the clarity, consistency, and transmission of policy messages. In boundary confirmation, communication is needed so that all actors understand the legal basis, technical stages, and expected outputs. Resources include human resources, information, authority, facilities, and financial support. A boundary policy requires competent technical staff, valid documents, accurate maps, geospatial tools, and sufficient budget. Disposition refers to the commitment and attitude of implementers and stakeholders. Strong commitment helps actors continue the process even when conflict emerges. Bureaucratic structure refers to procedures, division of authority, coordination mechanisms, and organizational routines.

Other implementation models also support the analysis. Van Meter and Van Horn (1975) highlight policy standards, resources, interorganizational communication, implementing agency characteristics, disposition, and socioeconomic environment. Grindle (1980) emphasizes the content of policy and the context of implementation. In village boundary governance, the content of policy includes the technical and legal requirements for boundary confirmation, while the implementation context includes village histories, social claims, local politics, land value, administrative capacity, and intergovernmental coordination.

The concept of territorial governance helps explain why boundary policies are sensitive. A boundary is a legal, administrative, and symbolic marker. It defines the jurisdiction of government and the territorial identity of a community. Fisher, Ury, and Patton (2019) argue that conflicts are often sustained when actors focus on positions rather than underlying interests. In boundary disputes, each village may defend a particular line or map, but the underlying interests may include administrative recognition, protection of land, development benefits, and community identity. Policy implementation must therefore combine legal clarity with negotiation and trust-building.

Geospatial governance is also relevant. Modern boundary demarcation increasingly depends on geographic information systems, kartometric methods, coordinates, and standardized maps. The availability of geospatial data improves precision and reduces subjective interpretation, but it does not automatically resolve conflict if stakeholders do not trust the data or if legal documents are interpreted differently. Therefore, technical mapping must be accompanied by transparent communication and participatory validation (OECD, 2017). In the Indonesian context, the Minister of Home Affairs Regulation Number 45 of 2016 provides stages for village boundary determination and confirmation, including document research, boundary tracing, coordinate determination, mapping, and formal decision-making.

Good governance theory strengthens the normative basis of the study. A boundary process should be transparent, accountable, participatory, effective, and legally certain (UNDP, 1997). Transparency requires that legal documents, maps, and meeting results be accessible to relevant parties. Accountability requires clear responsibility for each stage. Participation requires meaningful involvement of village governments, community representatives, and technical authorities. Effectiveness requires that the process move beyond repeated facilitation toward a final decision. Legal certainty requires that the final boundary be formally recognized and usable in administration, planning, and public services.

METHOD

This article uses a qualitative descriptive approach. The qualitative design is appropriate because the issue involves perceptions, institutional interaction, interpretation of documents, and local governance processes. The purpose is not to test statistical relationships but to understand how the boundary confirmation policy was implemented, how actors interpreted the process, and why the implementation has not yet produced a final and binding decision.

The study focused on two adjacent villages whose boundary confirmation process remains contested. Data were obtained from interviews, observation, and documentation. Informants represented district government, subdistrict government, village governments, village consultative bodies, community leaders, and residents. Documentation included legal documents, old village maps, administrative archives, meeting records, facilitation documents, and visual materials related to mapping and mediation activities.

Data analysis followed the logic of qualitative data reduction, data display, and conclusion drawing. First, interview and documentary data were organized according to the research focus: the process of boundary confirmation and the determinant factors that influence implementation. Second, the data were grouped into subthemes: availability and validity of boundary documents, implementation of technical stages, deliberation and final determination, regulatory and coordination factors, resources and technical capacity, and social perceptions. Third, the findings were interpreted using Edward III's framework of communication, resources, disposition, and bureaucratic structure (Edward III, 1980).

The credibility of the analysis was strengthened through triangulation. Statements from different actors were compared with documentary evidence and visual materials. For example, claims regarding old legal documents were compared with the existence of historical maps and official decision documents. Claims regarding technical stages were compared with evidence of facilitation and mapping activities. This triangulation was important because boundary disputes are often shaped by competing narratives; therefore, conclusions must be based on converging evidence rather than a single source. See table 1.

Table 1. Operationalization of analytical focus.

Analytical focus	Operational meaning	Main evidence	Interpretive lens
Boundary document validity	Availability, legal authority, and	Provincial decision, old maps, subdistrict	Resources and communication

	consistency of old documents and maps	archives, community narratives	
Technical implementation	Field tracing, coordinate use, kartometric analysis, and map production	Maps, facilitation documentation, interview statements	Resources and bureaucratic structure
Deliberation and final determination	Meetings, negotiation, agreement, and formal decision-making	Meeting records and stakeholder interviews	Communication and disposition
Determinant factors	Regulation, coordination, technical capacity, and social perception	Interview synthesis and triangulated observations	Edward III implementation framework

RESULTS AND DISCUSSION

The findings show that the boundary confirmation process has been implemented through several formal stages, but the implementation remains incomplete. The process has included the collection of legal and historical documents, technical tracing, use of maps, facilitation by government actors, and repeated deliberation. However, the outcome has not reached the level of a final and binding boundary decision. This means that the policy has moved procedurally but has not yet achieved its substantive objective.

The first finding concerns the availability and validity of boundary documents. Legal documents and historical maps exist, including a 1996 provincial decision, old village maps, subdistrict archives, and community-based historical information. These documents provide an initial basis for boundary discussion. However, they are not integrated into a single geospatial database. They are distributed across different institutions and interpreted differently by stakeholders. Some documents are treated as authoritative by one party but considered incomplete or technically outdated by another. This fragmentation weakens their function as a shared reference.

The second finding concerns technical implementation. The process has involved field tracing, discussion of coordinate data, attempts to use GIS-based references, and review of old and new maps. Nevertheless, several technical weaknesses remain. Old coordinate data are incomplete, some physical boundary markers are no longer identifiable, and changes in settlement, roads, and land use have altered the practical meaning of earlier maps. Technical activities therefore produced information, but not enough shared certainty to resolve the dispute.

The third finding concerns deliberation and final determination. Deliberations have been conducted repeatedly at village, subdistrict, and district levels. Government actors have facilitated communication and encouraged settlement through discussion. However, deliberation has not resulted in a mutually accepted agreement. Each village continues to defend its interpretation of historical and legal documents. Community confidence in the process is not yet strong enough to transform facilitation into agreement. This finding indicates that deliberation without an authoritative and trusted evidentiary base may produce repeated meetings rather than resolution.

The fourth finding concerns determinant factors. Regulatory and coordination factors show that all actors recognize the existence of the national guideline, but the depth of understanding differs. District and subdistrict actors tend to understand the technical and procedural aspects, while village actors often understand the policy through the lens of historical claims and local administrative interests. Resource and technical factors include limited technical mapping competence at the village level, dependence on district technical teams, lack of integrated spatial data, and budget limitations. Social and perception factors include strong community attachment to historical narratives, low participation in technical processes, and concern that boundary decisions may affect village identity or access to resources.

These findings confirm that the implementation problem is not caused by the absence of policy. The policy exists, and the actors have attempted to implement it. The main problem lies in the gap between procedural implementation and substantive resolution. The process has produced meetings, documents, maps, and facilitation, but has not produced a final legal boundary. This gap is the core empirical contribution of the study. See table 2, and figure 2.

Table 2. Summary of key findings

Sub-focus	Empirical findings	Implementation meaning
Document availability and validity	Legal and historical documents exist, but they are scattered across institutions and not integrated into a single geospatial database. Old documents are still dominant references, while GIS updating remains incomplete.	The resource base exists but is not sufficiently consolidated to support a shared decision.
Technical stages	Joint surveys, boundary tracing, coordinate discussion, and map review have been conducted. However, some old markers are unidentifiable and current land use has changed.	Technical work has produced evidence but not yet enough common certainty.
Deliberation and final boundary decision	Meetings have been repeated at village, subdistrict, and district levels, but no final mutually accepted decision has emerged.	Participation exists, but agreement and formal closure remain weak.
Determinant factors	Different interpretations, limited mapping competence, budget constraints, strong historical claims, and coordination gaps shape the implementation process.	The policy gap is multidimensional and cannot be solved only by another meeting.

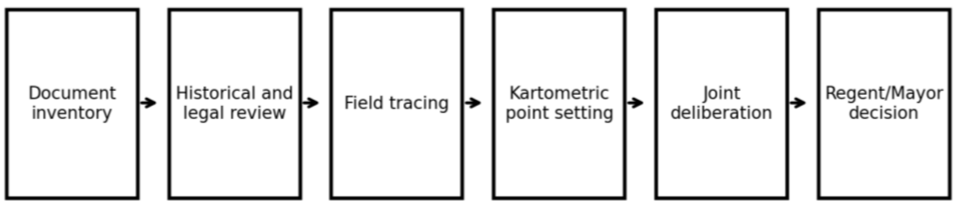

Figure 2. Converted conceptual

The findings can be understood through Edward III's four implementation variables. Communication is the first critical factor. Policy communication has occurred through meetings, facilitation, and administrative coordination, but it has not created a shared interpretation. The same legal document is read differently by the two villages. This indicates that communication is not only about transmitting information; it is also about producing common meaning. In boundary policy, unclear communication may turn documents into sources of dispute rather than instruments of settlement.

The communication problem is closely related to the technical nature of boundary confirmation. Legal text, historical memory, and geospatial evidence must be translated into a boundary line that all parties can understand. If maps are not explained clearly, if coordinates are not connected to field reality, or if the legal basis is not interpreted through a transparent procedure, stakeholders may continue to rely on their own narratives. Therefore, communication should include visual explanation, public clarification, joint reading of documents, and accessible presentation of maps and coordinates.

Resources are the second critical factor. Edward III (1980) argues that implementation cannot succeed without adequate resources. In this case, the resource issue is not only financial. It includes technical expertise, geospatial data, updated maps, administrative archives, and human capacity at the village level. The villages rely heavily on district technical facilitation because they do not have sufficient independent mapping capacity. This dependency is understandable, but it slows the process when district-level coordination is not accompanied by a structured database and a clear timetable for decision-making. See table 3, and figure 2.

Table 3. Boundary document and technical evidence assessment

Evidence type	Current condition	Risk created	Needed improvement
Provincial decision and historical documents	Available and still used as primary references	Different interpretation of the same document	Joint legal reading and official interpretation note
Old village maps	Available but not always aligned with current physical conditions	Boundary points become contested when field conditions have changed	Digitization and overlay with updated spatial data
Subdistrict and village archives	Exist but are dispersed	Slow verification and incomplete administrative traceability	Integrated archive and standardized document register
GIS and coordinate data	Partly used but not fully integrated	Technical evidence lacks shared legitimacy	Jointly validated geospatial database
Meeting and facilitation records	Available from repeated deliberations	Process may repeat without closure	Decision roadmap and escalation mechanism

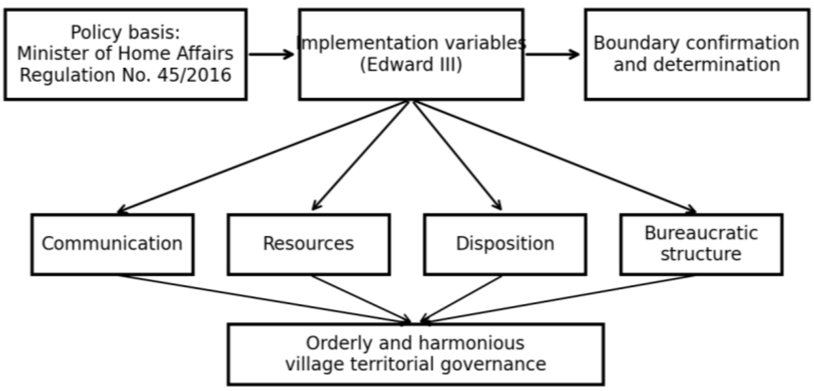

Figure 2. conceptual framework

The absence of an integrated geospatial database is particularly important. Old legal documents and maps are valuable, but they need to be digitized, verified, and linked to current spatial conditions. Without such integration, each discussion may return to the same question: which document should be followed and how should it be interpreted? A GIS-supported boundary database could help reduce ambiguity by combining legal documents, historical maps, field coordinates, and current land use into one reference system. However, the system must be transparent and jointly validated to gain legitimacy.

Disposition is the third factor. The study shows that government actors express commitment to resolving the dispute, and both village governments recognize the importance of boundary certainty. However, disposition is mixed because each side also maintains strong claims. Commitment to resolution does not automatically mean willingness to compromise. In contested boundaries, disposition includes not only the attitude of implementers but also the readiness of communities to accept evidence-based outcomes. If community identity and historical claims are strongly attached to territory, implementers must manage emotion and trust as part of policy implementation.

Bureaucratic structure is the fourth factor. The process involves village governments, subdistrict government, district government, and technical teams. This multi-level structure is necessary, but it can also create diffusion of responsibility. Facilitation has occurred, but coordination has not produced a final binding decision. This suggests that the structure is capable of convening actors but not yet strong enough to close the policy cycle. A more effective structure would define clear stages, deadlines, responsible institutions, documentation standards, dispute escalation mechanisms, and final decision authority.

The discussion also shows the limits of purely procedural compliance. The process has followed many required stages, but the expected output has not been achieved. This illustrates a common problem in public administration: implementation may be active but not effective. Meetings, surveys, and document collection are necessary outputs, but the policy objective is legal certainty of the boundary. Therefore, effectiveness should be measured not only by the number of activities conducted but by whether the boundary becomes formally determined, socially accepted, and administratively usable. See figure 3.

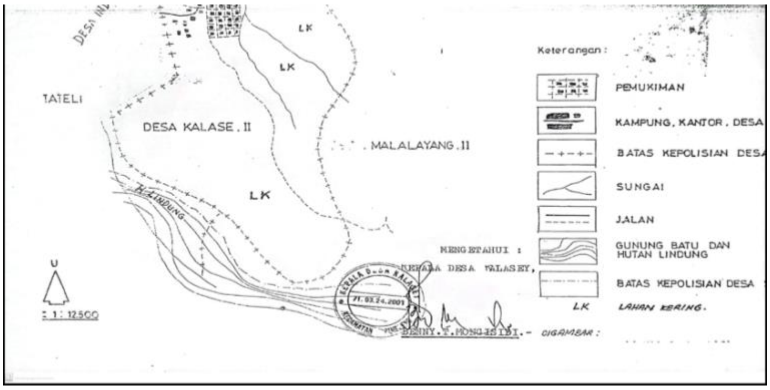

Figure 3. Labelled historical map used in boundary interpretation

The findings also reinforce the relevance of good governance. Transparency is needed because stakeholders must know what documents and maps are being used. Participation is needed because community members are directly affected. Accountability is needed because each government level must be responsible for specific tasks. Effectiveness is needed because repeated facilitation without resolution can reduce public trust. Legal certainty is needed because the final boundary must be recognized in administrative systems. These principles are mutually reinforcing and should be embedded in boundary governance. See table 4.

Table 4. Interpretation using Edward III implementation variables

Variable	Observed strength	Observed weakness	Implication
Communication	Meetings and facilitation have been conducted among actors.	The same legal basis produces different interpretations among stakeholders.	Communication must move from information transfer to shared interpretation.
Resources	Legal documents and maps are available as starting evidence.	Geospatial database, technical skills, and integrated archives remain limited.	Technical certainty requires data integration and capacity building.
Disposition	Actors generally support boundary certainty and conflict prevention.	Village and community claims remain strong and reduce compromise readiness.	Trust-building and interest-based negotiation are needed.
Bureaucratic structure	District and subdistrict governments facilitate the process.	Coordination has not yet produced final and binding decision-making.	A stronger settlement roadmap and final authority mechanism are required.

In terms of conflict management, the case shows that the dispute is not only about the physical line but about competing claims of legitimacy. Fisher et al. (2019) argue that conflict resolution improves when actors move from positions to interests. In this case, positions are expressed as territorial claims. Underlying interests may include service certainty, protection of community identity, development access, and recognition of historical narratives. A solution should therefore clarify not only the line but also the administrative consequences of the line, including service arrangements and community communication after the decision.

The practical implication is that government should move from facilitation-based management to evidence-based settlement management. Facilitation remains important, but it should be supported by a structured technical package: digitized documents, verified coordinates, agreed map layers, public explanation sessions, and a decision schedule. The process should also include a communication strategy to reduce misinformation. Community members need to understand that boundary confirmation aims to improve governance, not to erase identity or reduce social relations between villages.

A further implication concerns capacity building. Village officials should receive basic training in boundary administration, map reading, and document management. They do not need to become geospatial experts, but they need enough literacy to understand technical outputs and explain them to residents. District technical teams should also prepare simplified visual materials so that technical results can be understood by non-specialists. Without this translation, technical evidence may fail to persuade the community even when it is accurate.

Finally, the case suggests that a sustainable model of village boundary governance should combine five elements: an authoritative legal basis, an integrated geospatial database, participatory deliberation, clear bureaucratic authority, and post-decision social communication. The first element provides legality. The second provides technical certainty. The third provides legitimacy. The fourth provides decisiveness. The fifth provides social acceptance. Without all five elements, boundary policy may remain trapped between administrative procedure and unresolved local contestation. see table 5, and figure 4.

Table 5. Proposed governance improvement model

Governance component	Action	Expected output	Risk reduced
Legal validation	Conduct joint interpretation of historical and legal documents with district legal and technical units.	A shared legal reference note.	Multi-interpretation of documents.
Geospatial integration	Digitize old maps, overlay current satellite data, and verify coordinates in the field.	An integrated boundary database.	Fragmented data and weak technical basis.
Participatory validation	Hold map-reading sessions with village representatives and community leaders.	Publicly understood boundary evidence.	Low trust and misinformation.
Institutional closure	Set deadlines, responsible units, escalation mechanism, and final decision procedure.	Final and binding administrative decision.	Repeated meetings without resolution.
Post-decision communication	Explain administrative implications after the boundary is determined.	Community acceptance and service adjustment.	Social tension after decision.

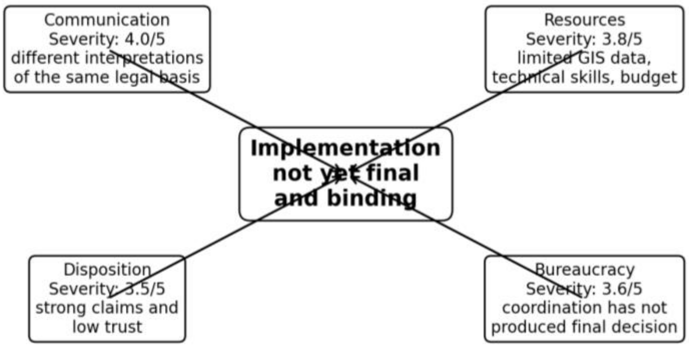

Figure 4. Determinant map

Practical Recommendations

First, district government should establish a unified boundary documentation system containing legal decisions, old maps, village archives, field coordinates, meeting minutes, and updated geospatial layers. This system should be accessible to relevant actors and used as the official basis for deliberation.

Second, technical teams should conduct joint map validation with village representatives and community leaders. The purpose is to ensure that geospatial outputs are understood and that objections are recorded before the final decision is made. This step can reduce the perception that maps are imposed from above.

Third, village governments should be supported through training in boundary administration, basic GIS literacy, document archiving, and public communication. Such capacity building will reduce dependence on district teams and improve the ability of village officials to explain boundary decisions to residents.

Fourth, the bureaucratic structure should define a clear settlement pathway. Repeated deliberation without a timeline can reduce trust. A decision-making roadmap should specify stages, responsible institutions, required documents, deadlines, and the legal mechanism for final determination.

Fifth, post-decision communication should be planned carefully. Even after a boundary is legally determined, communities need explanation about the implications for services, land administration, and inter-village relations. Good implementation does not end with a decree; it continues through socialization and administrative adjustment.

Extended Analysis: From Boundary Procedure to Boundary Governance

The case demonstrates that village boundary determination should be understood as boundary governance rather than a narrow administrative procedure. A procedure describes the sequence of required steps, whereas governance explains how actors, evidence, institutions, and social expectations are coordinated to produce a legitimate outcome. The difference is important. The formal stages of document collection, field tracing, mapping, deliberation, and decision-making may be followed, but the policy can still fail to achieve certainty when the actors do not share the same interpretation of evidence or when the bureaucratic structure cannot transform facilitation into a binding decision.

A governance perspective also reveals why the dispute persists even though a regulatory guideline exists. The regulation provides the general method, but the local context creates interpretive complexity. Historical documents are not neutral in the eyes of stakeholders. A map may be viewed as technical evidence by one actor and as an incomplete record by another. A decree may be treated as final by one village but as open to correction by another. The policy challenge is therefore not only to collect documents but also to establish an agreed hierarchy of evidence. Without an agreed hierarchy, every new meeting can reproduce the same debate.

The first governance lesson is that legal certainty requires documentary discipline. Documentary discipline means that every legal document, map, meeting note, field measurement, and community statement must be catalogued, dated, verified, and linked to a specific stage of the process. In the observed case, documents are available but scattered. This creates room for selective use of evidence. One party may emphasize the old provincial decision, another may emphasize field reality, while another may refer to community memory. Documentary discipline would not eliminate disagreement, but it would make disagreement more structured and easier to resolve.

The second lesson is that geospatial evidence must be socially explained. Technical maps can improve accuracy, but they do not persuade automatically. Many community members are not trained to interpret coordinates, GIS overlays, or kartometric methods. If technical evidence is presented only to officials, the wider community may continue to rely on oral history or informal claims. A participatory map-reading forum is therefore necessary. In such a forum, technical teams can explain what each map layer means, how old documents were digitized, which points are certain, which points are uncertain, and what assumptions are used in drawing the proposed boundary.

The third lesson is that boundary policy requires conflict-sensitive communication. Administrative language often focuses on compliance, but conflict-sensitive communication focuses on reducing fear, rumor, and identity-based resistance. Residents may worry that a boundary decision will affect land rights, access to services, or village belonging. Even when those fears are legally unfounded, they can influence acceptance. Communication should therefore explain the administrative meaning of the boundary, the rights that remain protected, and the services that will continue after determination. This approach can reduce resistance before the decision is finalized.

The fourth lesson is that facilitation must be connected to decision authority. The study shows that facilitation has been conducted by government actors, and this is positive. However, facilitation alone is not enough if no mechanism specifies when deliberation ends and when formal decision-making begins. In public administration, endless facilitation may become a substitute for decision. A clear institutional roadmap is needed so that actors know the sequence: evidence consolidation, joint validation, objection period, mediation, final technical recommendation, and formal decision. Each stage should have responsible institutions and time limits.

The fifth lesson is that local government capacity must be strengthened at the village and district levels simultaneously. Village officials need basic literacy in boundary administration, while district officials need stronger capacity to coordinate legal, technical, and social dimensions. If only village capacity is strengthened, final authority may still be weak. If only district capacity is strengthened, community acceptance may remain low. Capacity building should therefore operate across levels of government and include technical, legal, archival, and communication skills.

This extended analysis also clarifies the relationship between the case and policy implementation theory. Edward III's variables are not separate boxes; they interact. Weak resources affect communication because unclear or fragmented data make it difficult to communicate a single message. Weak communication affects disposition because actors become more defensive when they do not trust the evidence. Weak disposition affects bureaucratic structure because coordination meetings become arenas of claim defense rather than problem solving. Weak structure affects resources because no institution takes full responsibility for integrating data. The implementation problem is therefore systemic.

A systemic problem requires a systemic response. The government should not treat the unresolved boundary only as a village-level disagreement. It should be treated as a policy implementation gap that requires legal interpretation, spatial data integration, institutional coordination, and community engagement. The goal is not simply to decide which village is correct; the goal is to create a process that is credible enough for the decision to be accepted and administratively useful. The legitimacy of the decision depends on the legitimacy of the process.

In practical terms, the boundary process should generate three products: a legal product, a technical product, and a social product. The legal product is the formal decision that establishes the boundary. The technical product is a verified map with coordinates and supporting evidence. The social product is stakeholder understanding and acceptance. Many boundary processes fail because they focus only on the legal product. Others fail because they focus only on technical mapping. Sustainable boundary governance requires the three products to be developed together.

Implementation Design for an Integrated Boundary Settlement Model

An integrated boundary settlement model can be designed in eight operational stages. The first stage is preparation and mandate clarification. District government should issue a clear assignment letter that identifies the responsible team, legal basis, technical standards, expected outputs, and timeline. This stage is important because implementation often becomes weak when responsibility is dispersed. A clear mandate creates institutional focus and gives the technical team legitimacy to request documents and coordinate actors.

The second stage is documentary inventory. All relevant documents should be collected from village governments, subdistrict offices, district archives, provincial records, and community sources. The inventory should include decrees, old maps, village formation documents, meeting records, land-related documents, and previous facilitation notes. Each document should be recorded in a document register that includes source, date, type, legal status, and relevance to the boundary. This step reduces the possibility that important evidence appears late in the process and disrupts agreement.

The third stage is legal and historical interpretation. A legal team should review the documents and classify them according to their authority. Not all documents have the same legal weight. A decree, an administrative archive, a community sketch map, and oral history all provide information, but they do not have equal legal force. The purpose of this stage is not to dismiss local memory but to place each evidence type in its proper function. The result should be a written legal interpretation note that is shared with stakeholders before technical mapping is finalized.

The fourth stage is geospatial integration. Old maps should be digitized and overlaid with recent satellite imagery, existing administrative maps, road networks, rivers, settlement patterns, and field observations. Coordinates should be checked and uncertainty should be documented. If there are points where old maps cannot be matched with current conditions, those points should be marked as contested segments. This makes the technical process transparent because stakeholders can see which parts are clear and which parts require deliberation.

The fifth stage is joint field validation. Representatives from both villages, subdistrict officials, district technical teams, and community leaders should join field visits to examine boundary points. The purpose is to connect map-based evidence with physical reality. Joint field validation helps prevent accusations that the map was produced unilaterally. It also allows stakeholders to identify changes in land use that may explain why historical documents no longer match current conditions.

The sixth stage is deliberation based on structured evidence. Deliberation should not begin with general claims; it should begin with the verified evidence package. The facilitator should present the legal interpretation, the geospatial overlay, the field validation report, and the list of contested segments. Each party should be asked to respond to the evidence rather than repeat broad positions. This structure moves the conversation from identity-based claims to evidence-based problem solving.

The seventh stage is decision and formalization. When agreement is reached, the boundary should be formalized through the appropriate legal mechanism. If agreement is not reached after the prescribed deliberation period, the regulation should allow escalation to the authorized government level for a final decision based on evidence. This is necessary because public administration cannot allow uncertainty to continue indefinitely. A fair process should provide opportunity for participation, but it must also lead to closure.

The eighth stage is post-decision adjustment. After formal determination, the government should update administrative maps, service records, development planning documents, asset data, and community information. Residents should receive clear explanation regarding the implications of the decision. If the boundary affects service delivery, transitional arrangements should be made. This stage is often neglected, yet it is essential for preventing new conflict after formal decision-making.

The proposed model strengthens each of Edward III's implementation variables. It improves communication by providing structured evidence and public explanation. It improves resources by integrating documents and geospatial data. It improves disposition by building trust through joint validation and participatory deliberation. It improves bureaucratic structure by defining responsibility, timeline, escalation, and finalization. The model therefore transforms implementation from a sequence of meetings into a managed settlement system.

The model is also consistent with good governance. Transparency is reflected in open document registers and shared maps. Accountability is reflected in clear assignment of responsibility. Participation is reflected in joint validation and deliberation. Effectiveness is reflected in the timeline and decision mechanism. Rule of law is reflected in legal interpretation and formalization. Responsiveness is reflected in post-decision communication and adjustment. Thus, boundary settlement becomes part of democratic local governance rather than only technical administration.

The model may be used not only in the two villages studied but also in other regions facing similar boundary uncertainty. However, adaptation is necessary. Some cases may involve natural boundaries such as rivers; others may involve roads, settlement expansion, or land with economic value. The model should be flexible enough to accommodate local conditions while maintaining the core requirements of legal validity, technical accuracy, participation, and authoritative finalization.

Theoretical Contribution and Limitations

The theoretical contribution of this article lies in its use of policy implementation theory to explain why a technically regulated boundary process can remain unresolved. Much of the discussion on boundary confirmation tends to emphasize mapping and legal documents. This article shows that mapping and documents are necessary but insufficient. The implementation process also depends on shared communication, integrated resources, stakeholder disposition, and bureaucratic structure. By applying Edward III's framework, the article demonstrates that unresolved boundaries are often symptoms of implementation gaps rather than merely technical errors.

The article also contributes to the literature on local governance by showing that territorial certainty is a foundation of administrative effectiveness. Village boundaries influence service delivery, development planning, and institutional legitimacy. When boundaries are unclear, governance becomes uncertain. This insight expands the relevance of boundary studies beyond cartography and legal administration. It places boundary policy within the broader field of public administration, good governance, and conflict-sensitive local management.

Another contribution is the distinction between procedural movement and substantive completion. The case shows that implementation activity can be extensive without producing the intended result. Documents may be collected, meetings may be held, and surveys may be conducted, but the policy remains incomplete when no final and accepted decision emerges. This distinction is useful for evaluating other public policies as well. Implementation should be assessed not only by activity output but also by whether the policy objective is achieved in a form that is usable by citizens and institutions.

The study has limitations. It is based on a qualitative case and therefore does not claim statistical generalization. The findings are context-specific, shaped by the history of the two villages, the available documents, and the local governance environment. However, the analytical logic can inform similar cases in which administrative boundaries remain contested. Future research can compare multiple boundary disputes, examine the role of geospatial technology in public trust, or evaluate how formal boundary decisions affect service delivery after implementation.

Future studies may also examine community perception more deeply. Boundary disputes are often sustained by memory, identity, and local narratives. A sociological or anthropological approach could complement the public administration perspective by explaining how residents understand territory and belonging. Another useful direction would be action research, in which researchers support participatory mapping and observe how structured evidence changes the quality of deliberation. Such research could help transform theory into practical settlement tools.

Policy Roadmap for Replication in Similar Boundary Cases

The replication of this model in other boundary cases should begin with a diagnostic classification of the dispute. Not all boundary problems are the same. Some are caused mainly by missing documents, some by conflicting maps, some by settlement expansion, and others by political or economic interests. A diagnostic classification helps government choose the right intervention. If the problem is documentary, the first priority is archive recovery. If the problem is technical, the priority is mapping and coordinate validation. If the problem is social, the priority is mediation and public communication. If the problem is institutional, the priority is clarifying authority and decision rules.

The roadmap should also include a minimum evidence standard. Before a boundary meeting is conducted, the responsible team should prepare a complete evidence package consisting of legal references, historical documents, current spatial data, field photos, and a summary of previous meetings. This package should be distributed to the parties before deliberation. When participants receive evidence only during the meeting, they may react defensively and ask for more time. Early distribution allows each party to study the materials and prepare evidence-based responses.

Another element of the roadmap is the use of a boundary issue log. The issue log records each disputed segment, the claim of each party, the supporting evidence, the technical assessment, the proposed option, and the status of discussion. This simple management tool can prevent the discussion from becoming repetitive. It also allows decision-makers to see which segments are already agreed and which remain unresolved. In complex boundary cases, partial agreement should be documented so that the entire process does not return to the beginning.

The roadmap should include communication products for different audiences. Technical reports are needed for government and legal decision-making, but communities need simpler explanations. These may include simplified maps, frequently asked questions, village meeting slides, and short explanations of the administrative consequences of boundary determination. Public communication should avoid language that suggests one village wins and the other loses. Instead, it should emphasize legal certainty, service improvement, and conflict prevention as shared benefits.

The roadmap should also anticipate post-decision grievances. Even a legally valid decision may be questioned if affected residents feel excluded. Therefore, after the boundary is determined, the government should provide a limited grievance mechanism for administrative clarification, not for reopening the entire decision. This mechanism can address questions about documents, services, and administrative status. It protects the legitimacy of the decision while showing that government remains responsive to citizens.

Finally, boundary settlement should be linked to broader village development governance. Once the boundary is confirmed, the result should be used in village planning, population administration, asset inventory, spatial planning, and public service mapping. This integration is important because a boundary that exists only as a decree but is not used in administrative systems will have limited practical value. The success of the policy should therefore be measured by whether the determined boundary improves the everyday governance functions of the villages.

Indicators for Monitoring Implementation Performance

A useful monitoring system should distinguish between process indicators, output indicators, and outcome indicators. Process indicators include the number of documents inventoried, the number of joint meetings held, the number of field validation visits, and the number of stakeholders receiving information. Output indicators include the completion of a verified document register, production of a geospatial boundary map, preparation of a legal interpretation note, and signing of meeting minutes for agreed segments. Outcome indicators include issuance of a final boundary decision, integration of the boundary into administrative records, reduction of complaints, and improved clarity in service delivery. This indicator structure helps government avoid the mistake of equating activity with success.

Monitoring should also include qualitative indicators of trust and understanding. Boundary settlement is unlikely to be sustainable if residents do not understand why a particular line was chosen. Short community feedback forms, structured village discussions, and documentation of objections can help measure whether communication is effective. When misunderstanding remains high, the government should not assume that the decision is socially secure. Instead, additional explanation and post-decision facilitation may be needed to prevent renewed conflict.

The final monitoring indicator is institutional learning. Every boundary case should produce lessons for future cases, including what documents were most useful, what technical problems appeared, what communication methods worked, and what coordination bottlenecks delayed the process. These lessons should be stored in a district-level boundary governance knowledge base. In this way, each settlement process strengthens the capacity of local government to handle future cases more efficiently and fairly.

For journal presentation, these indicators also make the findings more operational. They translate the qualitative analysis into a practical evaluation framework that can be used by district governments, village administrations, and researchers. The framework does not replace legal procedures; it strengthens them by ensuring that each stage is measurable, documented, and connected to the final goal of territorial certainty. It also helps future reviewers see whether the boundary policy has moved from discussion, to evidence validation, to formal administrative use.

CONCLUSION

This article concludes that the implementation of the village boundary confirmation and determination policy has progressed procedurally but has not yet achieved substantive completion. The process has included document collection, technical tracing, mapping activities, facilitation, and deliberation. However, it has not produced a final and binding boundary decision between the two villages. The main causes of incomplete implementation are fragmented and differently interpreted legal documents, insufficient integration of spatial data, limited technical capacity at the village level, strong community perceptions and historical claims, and bureaucratic coordination that has not yet produced an authoritative final decision. Viewed through Edward III's framework, communication has not generated shared meaning, resources have not fully supported geospatial certainty, disposition is constrained by competing claims, and bureaucratic structure has not closed the decision-making cycle.

The study recommends strengthening boundary governance through an integrated geospatial database, standardized document verification, participatory map validation, technical assistance for village officials, clear dispute escalation mechanisms, and a definitive decision schedule. Boundary confirmation should be treated not only as a technical mapping activity but as an integrated public administration process that combines law, data, deliberation, authority, and social trust.

REFERENCES

Anderson, J. E. (2015). Public policymaking: An introduction. Cengage Learning.
Badan Informasi Geospasial. (2021). Principles of geospatial information management for administrative boundaries. BIG.
BPKP. (2022). Village fund governance and administrative accountability. BPKP.
Dye, T. R. (2017). Understanding public policy. Pearson.
Edward III, G. C. (1980). Implementing public policy. Congressional Quarterly Press.
Fisher, R., Ury, W., & Patton, B. (2019). Getting to yes: Negotiating agreement without giving in. Penguin Books.
Grindle, M. S. (1980). Politics and policy implementation in the Third World. Princeton University Press.
Hill, M., & Hupe, P. (2022). Implementing public policy. Sage.
Kementerian Dalam Negeri Republik Indonesia. (2016). Minister of Home Affairs Regulation Number 45 of 2016 concerning guidelines for village boundary determination and confirmation.
Kementerian Dalam Negeri Republik Indonesia. (2023). Administrative boundary governance report. Ministry of Home Affairs.
OECD. (2017). Recommendation of the Council on open government. OECD Publishing.
Sabatier, P. A., & Mazmanian, D. A. (1980). The implementation of public policy: A framework of analysis. Policy Studies Journal, 8(4), 538-560.
UNDP. (1997). Governance for sustainable human development. United Nations Development Programme.
Van Meter, D. S., & Van Horn, C. E. (1975). The policy implementation process: A conceptual framework. Administration & Society, 6(4), 445-488.
Widjaja, H. A. W. (2014). Otonomi desa merupakan otonomi yang asli, bulat dan utuh. Rajawali Pers.
Winarno, B. (2012). Kebijakan publik: Teori, proses, dan studi kasus. CAPS.