

How participatory is participatory? Evaluating stakeholder participation in village land use conflict resolution. A case of Fukayosi village, Tanzania

Beatrice A. Kaijage^{a,*}, Oswald Devisch^b, Regina J. Lyakurwa^c, Fredrick B. Magina^c, Liesbeth Huybrechts^b

^a Department of Geospatial Sciences and Technology, Ardhi University, P. O. Box 35176, Observation Hill, University Road, Dar es Salaam, Tanzania

^b Faculty of Architecture & Arts, Hasselt University (UHasselt), 3500 Hasselt, Belgium

^c Department of Urban and Regional Planning, Ardhi University, P. O. Box 35176, Observation Hill, University Road, Dar es Salaam, Tanzania

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ABSTRACT

Land use conflicts are widespread globally because land underpins livelihoods and development. Their resolution varies with tenure security and governance structures. In East Africa, fragmented governance, marked by overlapping mandates, weak coordination, and inconsistent enforcement, shapes how such conflicts unfold. Tanzania exemplifies this challenge, as farmer–pastoralist disputes intensify despite policies promoting participatory approaches. This study examines two conflict cases in Fukayosi Village to analyse how participation evolves within these fragmented systems. It conceptualizes participation as a dynamic and processual trajectory shaped by institutional transitions rather than a fixed level of inclusion. Using semi-structured interviews, participant observation, informal conversations, and document analysis, Arnstein's Ladder is applied to track shifts from early community-led action to later administrative and statutory intervention. The Split Ladder complements this by capturing how trust, governance modes, and knowledge uncertainty influence participation as disputes move between community forums, village offices, police, and courts. The findings show that participation expands during early, community-based stages, where actors engage in evidence gathering and local mediation, but declines sharply as disputes enter administrative and statutory arenas, where procedural requirements and evidentiary standards restrict local influence. The study contributes to debates on participatory governance by demonstrating that participation must be understood as a dynamic process shaped by transitions between relational and procedural governance systems. It concludes that participation is constrained not by community reluctance but by structural shifts across governance arenas, highlighting the need for improved coordination, feedback mechanisms, and trust-building to support inclusive land-use conflict resolution.

1. Introduction

Competition over land has intensified globally as populations grow and land becomes increasingly scarce [1] especially in regions where tenure systems are weak or inconsistently enforced [2]. Such pressures frequently manifest as conflicts over ownership, access, and land-use rights, particularly between farmers and pastoralists whose livelihoods rely on overlapping territories and seasonal mobility [3]. Recent literature shows that such farmer–pastoralist land conflicts are not unique to Africa; similar patterns are documented in Asia, where weak tenure enforcement and competing land-use claims heighten tensions between mobile pastoralists and agricultural communities [4], in Latin America

[5], and in parts of the Middle East [6]. Such conflicts are therefore not solely ecological or economic; they are fundamentally shaped by governance structures, institutional authority, and the politics of participation [7,8].

Participatory approaches are widely promoted as equitable mechanisms for managing land conflicts, intended to enhance accountability, legitimacy, and sustainable resource stewardship [9–11]. Yet scholarship increasingly questions the assumption that participation is inherently inclusive or uniformly empowering [12]. In practice, participation varies substantially in depth, continuity, and influence, ranging from symbolic consultation to meaningful co-decision-making. A central gap in this literature concerns how participation unfolds within fragmented

* Corresponding author.

E-mail addresses: beatrice.kaijage@uhasselt.be (B.A. Kaijage), oswald.devisch@uhasselt.be (O. Devisch), reginajohn2000@gmail.com (R.J. Lyakurwa), maginafredrick@gmail.com (F.B. Magina), liesbeth.huybrechts@uhasselt.be (L. Huybrechts).

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governance landscapes, settings characterized by overlapping mandates, inconsistent coordination, and institutional ambiguity, where actors navigate multiple, and sometimes competing, arenas of authority [13, 14].

This study positions participation not as a stable location on a ladder but as a dynamic, negotiated, and contested trajectory shaped by the interplay of power, institutional logics, and trust relations. This perspective constitutes the study's core theoretical lens, which guides both the analytical framework and methodological design. In Tanzania's farmer–pastoralist conflicts, actors move between community-based, relational governance processes, rooted in social networks, customary norms, and trust, and state-based, procedural systems emphasizing documentation, legality, and bureaucratic authority [15,16]. These movements reflect broader debates in political ecology and governance scholarship, which highlight how power, knowledge, and institutional fragmentation shape who is able, or willing, to participate in decision-making. Understanding participation through this relational and processual lens is therefore essential for analyzing land conflict dynamics in pluralistic governance contexts. Global South [14].

Empirically, this study traces how actors' participation shifts across community, administrative, and statutory arenas during conflict resolution. Methodologically, it combines Arnstein's Ladder with the Split Ladder to analyze participation as a shifting trajectory rather than a fixed procedural level. This perspective moves beyond static and normative interpretations of participation by emphasizing its dynamic, relational, and context-dependent nature within fragmented governance systems [17]. These competing logics shape who participates, when, and with what influence. Using Fukayosi Village in Tanzania as a case study, this research examines how stakeholder participation changes across different stages of land use conflict resolution. Drawing on semi-structured interviews, participant observation, and document analysis, the study analyzes two conflict scenarios, one initiated by farmers and the other by pastoralists, to show how actors navigate, resist, or comply with community, administrative, and statutory arenas.

This study employs a dual analytical framework combining Arnstein's Ladder of Citizen Participation [18], which maps formal shifts in participation and levels of influence, and the Split Ladder of Participation [19], which captures relational dimensions, such as trust, governance modes, and knowledge uncertainty, that shape why participation expands, contracts, or fractures across governance arenas. Together, these tools allow participation to be assessed not only in terms of who is present and at what level, but also how influence is gained, lost, or strategically exercised as disputes move from community forums to village offices, police structures, and courts. This constitutes the study's methodological contribution: a way to analyze participation as a trajectory across fragmented governance interfaces, rather than a fixed procedural state. The study contributes to debates in political ecology and sustainability governance by showing that discontinuities in participation arise not from community reluctance, but from structural transitions between relational and procedural modes of governance. It also aligns with Sustainable Development Goal (SDG) 16.7 on inclusive decision-making and SDG 11.3 on participatory rural–urban planning.

The remainder of the paper is organized as follows. Section 2 reviews the literature on land-use conflict management, farmer–pastoralist conflicts, participatory governance, and the concept of inclusivity. Section 3 outlines the research methodology. Section 4 presents the empirical findings, while Section 5 provides the analysis of these findings. Section 6 offers a broader discussion, and Section 7 concludes the study.

2. Literature review

2.1. Farmer-pastoralist tensions: global, regional, and Tanzanian perspectives

Farmer–pastoralist conflicts are widespread across the Global South

and often emerge where mobile pastoral systems intersect with expanding agriculture under weak tenure enforcement and institutional ambiguity [20–22]. In Sub-Saharan Africa, including Tanzania, Kenya, Nigeria, and Burkina Faso, research shows that demographic pressures, land scarcity, and political marginalization intensify competition over space [20,15]. In Tanzania, farmer–pastoralist tensions are longstanding and widespread, driven by competition over grazing land and water, climate variability, insecure land tenure, and weak land-use planning [23–25]. Some of the consequences of these tensions have been severe, with multiple instances of violence reported across the country. Notably, the Kilosa conflict in 2000 resulted in the deaths of 36 farmers, injuries, and loss of properties, including livestock, crops, and houses [15], and similar deadly clashes have occurred in districts like Mvomero [26]. In addition, other areas like Kilindini, Kiteto, Kilombero, Manyara, Mbarali, Rufiji, Mkuranga, and Handeni have traditionally received the majority of scholarly attention [26–28].

Despite repeated policy reforms and periodic government interventions, these tensions persist, suggesting that the problem extends beyond resource scarcity [26]. Scholars and policy practitioners increasingly argue that durable solutions in Tanzania require inclusive and participatory governance approaches that meaningfully involve stakeholders, particularly at the village and sub-village levels, to address the structural drivers of conflict [1,29]. Similar recommendations have been made in other East African countries, such as Ethiopia [30] and Kenya [31]. Recent studies further highlight that institutional fragmentation, manifested in overlapping mandates, inconsistent enforcement, and uneven authority across statutory and customary systems, shapes both the emergence of conflicts and the possibilities for their resolution. This underscores the need to examine not only the drivers of conflict but also how actors navigate the complex governance environments through which disputes move.

2.2. Policy and legal frameworks shaping land use conflict resolution in a fragmented governance system

Land governance in Tanzania is characterized by tenure pluralism, where statutory law, customary institutions, and administrative authorities coexist with limited coordination [32,33]. Before 1994, land disputes were resolved through a combination of statutory and customary systems, with traditional authorities playing a central role [34]. Nevertheless, there were a number of shortcomings regarding inclusivity in the conflict resolution process. The National Land Policy (NLP) of 1995 addressed them by incorporating customary mechanisms to enhance accessibility, fairness, and responsive conflict resolution mechanisms. Therefore, the policy serves as a foundational document advocating for equitable land distribution and access while recognizing the customary rights of small-scale landholders and emphasizing the need for inclusive land management mechanisms. One of the recommendations from the National Land Policy of 1995 was “*There is a need to have a well-established land dispute settlement machinery. Therefore, existing quasi-judicial bodies should be strengthened to deal with such disputes. Such bodies shall start from Mabaraza ya Wazee ya Ardhi to quasi-judicial bodies at the district, regional, and national levels, with appeals to the High Court on points of law.*”

In response to growing land disputes and tenure insecurity, the government introduced two landmark reforms in 1999: the Land Act and the Village Land Act, which started to operate in 2001 (GN. No 486, 2001), providing legal frameworks for resolving land disputes. Specifically, the Land Act No 4 defines the structure of the national land dispute resolution system, formally recognizing customary land rights and establishing structures for community involvement in land governance. Although the guidance is somewhat limited, Section 167 of the Act marks the first formal identification of the categories of courts authorized to hear and decide on land-related cases [35]. The Land Act No.5 (Village Land Act), in particular, promotes grassroots participation by empowering Village Councils to manage land and mediate

land-related conflicts.

In the same line of thought, the Courts (Land Disputes Settlements) Act (2002), [36] establishes a multi-tiered system of land dispute resolution bodies that are intended to be both accessible and participatory, allowing local communities to engage directly in conflict resolution. This Act replaced the lower courts with tribunals that are not real courts but rather operate using both Alternative Dispute Resolution (ADR) and statutory laws (URT, 1995). This was done to capture wider audiences and prevent the accumulation of unresolved land use conflicts in courts. The outlined authorities responsible for conflict resolution are the Village Land Council, Ward Tribunal (WT), District Land and Housing Tribunal (DLHT), High Court (HC), and Court of Appeal (COA) of Tanzania. Through the tribunal system, Land Use Conflicts (LUC) were resolved starting from the Village Land Councils (VLC) through the WT until the COA. There is no requirement for lawyers until one reaches the DLHT, as outlined in the Land Disputes Settlement Act of 2002.

Despite these progressive legal frameworks, implementation has produced a fragmented governance landscape. Land dispute institutions fall under multiple ministries, including the Ministry of Constitutional and Legal Affairs, the Ministry of Lands, Housing and Human Settlements Development, and the President's Office, Regional Administration and Local Government [37]. For instance, the Land Disputes Courts Act of 2002 outlines a multi-tiered conflict resolution mechanism, from the VLC and WT to the DLHT, the HC, and the COA. However, these bodies fall under three separate ministries: the HC and COA are managed by the Ministry of Constitutional and Legal Affairs; DLHTs fall under the Ministry of Lands, Housing, and Human Settlements Development; and VLC and WT are overseen by the President's Office, Regional Administration, and Local Government [37]. While these grassroots mechanisms are intended to enhance participation [38], they operate in isolation from the formal judicial system and lack strong integration. Notably, although DLHTs were recommended for all districts, some areas still lack them [37]. Additionally, the coexistence of statutory, customary, and ADR mechanisms has created a complex and often confusing system with varying procedures and accountability standards [39]. This disconnect between legal ambition and institutional practice constrains meaningful participation, particularly for marginalised groups such as pastoralists and youth, and helps explain why conflicts frequently escalate beyond village-level structures despite the availability of multiple mechanisms.

2.3. Alternative dispute resolution and hybrid conflict pathways

In Tanzania, ADR was introduced in 1994 through Government Notice No 422, amending the First Schedule to the Civil Procedure Code Act (1966). ADR refers to structured processes, such as conciliation, negotiation, mediation, and arbitration, that resolve disputes outside the formal court system, offering less adversarial and often more collaborative approaches to conflict settlement [40,41]. In Tanzania, ADR has been applied in the tribunal system beginning with the VLC, WT, and DLHT [42].

ADR approaches have been adopted for their flexibility, meaning that procedures can be adapted to local circumstances rather than following rigid statutory rules, transparency, in the sense that disputants directly observe deliberations and decision rationales cost-effectiveness, because hearings typically do not require legal representation and rely on community venues rather than formal courts, and ability to provide culturally relevant and community-driven solutions and align closely with traditional African methods of conflict resolution, which emphasize consensus-building, communal harmony, and restorative justice [38].

However, despite the cultural relevance and adaptability of ADR, particularly mediation, its effectiveness is often constrained by several challenges [43]. These include unclear boundary demarcations, bureaucratic delays, weak institutional capacity, resistance from disputing parties, and the absence of clear rules and procedures for

implementing ADR [44]. A recent study by Kamoleka & Lucian [45] highlights that since ADR operates alongside statutory and customary systems, but without strong integration, its outcomes vary widely and sometimes conflict with those of other institutions. Consequently, disputants often navigate between informal, ADR-based, and formal systems in search of legitimacy, influence, or favourable outcomes, illustrating hybrid and fragmented conflict pathways that strongly shape who can participate and at what stage. Building on this governance context, this paper examines how stakeholder participation actually unfolds within village-level land use conflict resolution in Tanzania, where statutory, customary, and ADR mechanisms intersect but rarely operate in a coordinated way.

2.4. Reconceptualizing participation in fragmented governance

In this study, participation is conceptualized as a dynamic trajectory rather than a fixed position, defined as the shifting degree of influence, inclusion, and agency that actors experience as conflicts move across communal, administrative, and statutory governance arenas. Fragmented governance is understood as a system characterized by overlapping institutional mandates, weak coordination, and competing procedural logics. Given this conceptualization, the study employs a dual analytical framework. Arnstein's Ladder is used to map formal levels of participation and shifts in the influence of actors. At the same time, the Split Ladder explains why these shifts occur by incorporating trust, governance modes, and knowledge uncertainty.

Across the literature, substantial work addresses land conflict drivers, institutional fragmentation, and normative claims about participation. However, fewer studies systematically analyze how participation actually shifts across stages of conflict resolution or how actors strategically navigate between governance arenas with differing authority, procedures, and expectations. Political ecology highlights how power and knowledge shape environmental decision-making [20, 33], while governance scholarship emphasizes hybridity and plural authority in the Global South [14]. Building on these debates, this study reconceptualizes participation not as a fixed position on a ladder but as a dynamic trajectory embedded within fragmented governance systems, where actors' influence expands or contracts as disputes move across institutional arenas. This conceptual gap motivates the study's research question: How does stakeholder participation shift across the stages of village-level land use conflict resolution, and how do actors navigate competing governance logics as disputes move between customary, administrative, and statutory arenas? To address this gap, the study employs a dual framework that uses Arnstein's Ladder to map formal participation levels and the Split Ladder of Participation to explain the relational, institutional, and epistemic dynamics that drive shifts across arenas.

3. Methodology

3.1. Overview of methodological approach

This study employed a qualitative case-study design to examine how stakeholder participation unfolds across different stages of land-use conflict resolution in a fragmented governance context. The methodological process followed four sequential steps: Selection of the study area, identification of cases, qualitative data collection, and analytical mapping of participation using Arnstein's Ladder and the Split Ladder of Participation. This approach enables a process-tracing analysis of participation, capturing how actors' roles, influence, and engagement shift as disputes move between informal and formal governance arenas.

3.2. Study area description

This study was conducted in Bagamoyo District, Pwani Region, an area experiencing escalating farmer-pastoralist tensions [46,47]. The

focus is Fukayosi Ward in western Bagamoyo, situated along the rapidly developing Bunju–Bagamoyo–Msata corridor, where urban growth and changing land-use intensify competition between indigenous farmers and migrant pastoralist groups (e.g., Maasai, Sukuma, Barabaig). It is a major region of pastoral activity due to its size. According to the Bagamoyo Master Plan (2021–2041), Fukayosi village contains 3580.88 hectares that are officially authorized for grazing. Furthermore, Fukayosi's mountainous terrain and ample rainfall make it one of the few wards that encourage both intensive crop cultivation and free-range indigenous animal grazing, which intensifies land rivalry. This mix of ecological suitability and expanding settlement patterns intensifies land competition, making Fukayosi a representative case of the tensions observed across many Tanzanian peri-urban areas experiencing weak enforcement capacity, plural tenure practices, and overlapping governance mandates.

3.3. Case selection and data collection

Two cases of farmer-pastoralist land use conflicts, namely Case 1 and Case 2, were purposively selected based on three criteria: their progression through both informal and formal resolution steps, involvement of multiple governance actors (farmers, pastoralists, village leaders, police, youth), and their value in illustrating shifts in participation across phases of the conflict. Qualitative data were collected between July and December 2024 using 16 semi-structured interviews involving 4 farmers, 5 pastoralists, 4 Village Office representatives, and

3 district-level officials (planning and surveying). Of the 16 interviewees, 4 were women, and 12 were men. Additional data were gathered through direct observations, informal conversations with pastoralists (4), attendance at a village meeting, and document analysis. Key stakeholders interviewed included farmers, pastoralists, village leaders, sub-village chairpersons, local government officials, and youth involved in community response efforts. Participant observation enabled the researcher to witness conflict resolution efforts as they unfolded, offering real-time insights into community responses, power dynamics, and institutional roles Fig. 1.

To avoid any risk of influencing the conflict-resolution process, the researcher maintained a strictly non-interventionist stance during fieldwork. Photographs taken during the incident formed part of routine observational documentation and were shared with the Village Executive Officer only upon explicit request, consistent with local administrative procedures. The researcher did not initiate or direct evidence collection, nor did they participate in decision-making. This clarification reflects the researcher's positionality as an external observer and reinforces the ethical commitment to minimize influence on the ongoing processes under study."

3.4. Analytical framework: tracing participation across governance arenas

3.4.1. Justification for using Arnstein's Ladder

Arnstein's Ladder [18] remains one of the most widely used

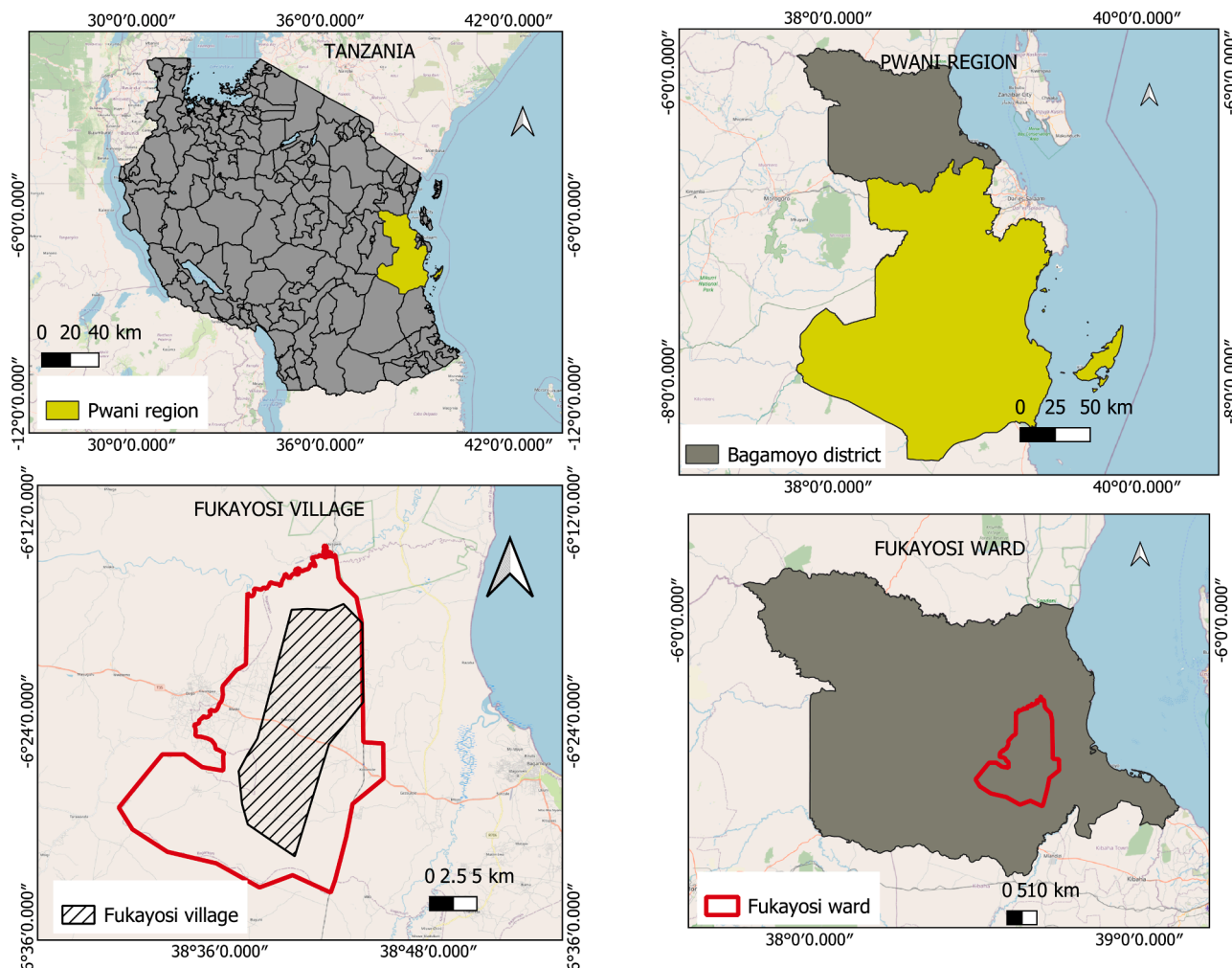


Fig. 1. Location of study area showing Tanzania, Pwani Region, and Fukayosi Ward, highlighting Fukayosi Village. The map provides the geographic context for understanding where the study site is situated.

frameworks for evaluating participation, offering clear categories for assessing levels of influence and a common language for comparing actors' roles. However, the model is often applied statically, positioning participants at a single rung, such as consultation or partnership, without accounting for the fluidity of participation in real-world governance settings [48]. In fragmented institutional contexts such as Tanzania's land governance system, participation is not static; actors may begin at a lower rung and subsequently gain or lose influence as disputes move through different arenas, including Village Offices, Ward Tribunals, and district authorities. For this reason, the present study employs Arnstein's Ladder dynamically, tracing how farmers, pastoralists, and institutional actors shift upward or downward across conflict-resolution stages. While Arnstein's Ladder provides a valuable baseline for identifying these shifts, it also has notable limitations: it assumes linear progression and fails to incorporate relational factors such as trust and knowledge uncertainty, and does not adequately capture the complexity of fragmented governance systems [49–51]. These constraints necessitate the integration of a second, more nuanced analytical framework. Fig. 2 below illustrates Arnstein's ladder of citizen participation.

3.4.2. Problem structure, uncertainty, and participation dynamics: A Split Ladder Perspective

One nuanced analytical framework extension that is particularly meaningful in the context of a fragmented governance landscape is the Split Ladder of Participation [19]. It conceptualizes participation as the outcome of interacting relational and institutional conditions rather than a linear progression of influence [51]. The Split Ladder explicitly integrates three dimensions that are critical in land conflict resolution: trust between actors, governance mode (collaborative versus technocratic), and knowledge uncertainty (clarity or ambiguity of facts such as boundaries, damage, or responsibility). These dimensions allow participation to be assessed not only in terms of formal inclusion but also in relation to the conditions that enable or constrain meaningful engagement.

In the Tanzanian context, where disputes unfold across overlapping customary, administrative, and statutory arenas, participation is often shaped by trust deficits, procedural dominance, and contested evidence. The Split Ladder is especially vital in contexts such as the ones discussed in this paper regarding multiple institutions with overlapping mandates and varying legitimacy that shape land use conflict resolution. It acknowledges that the participatory quality of a process is not only about power or access, but also about the level of trust between actors, the

governance aspects, and the extent of shared knowledge, all of which are often uneven in fragmented governance environments [52]. By applying the Split Ladder alongside Arnstein's Ladder, the study moves beyond static participation typologies and offers a more context-sensitive, process-oriented analysis of participation within fragmented governance systems. Fig. 3 illustrates the Split Ladder of Participation.

The four quadrants describe different types of problems based on levels of structure, trust, and engagement. Quadrant 1 involves moderately structured issues with technical clarity but value conflicts, low trust, and tokenistic participation, leading to zero-loop learning. Quadrant 2 covers well-structured problems with aligned knowledge and values, handled by experts through single-loop learning, with limited stakeholder consultation. Quadrant 3 features moderately structured, high-trust, and value or knowledge disagreements, requiring double-loop learning and strong citizen engagement. Quadrant 4 represents wicked, unstructured problems with high uncertainty, low trust, and complex politics, needing triple-loop learning, deep dialogue, and trust-building. This complexity reinforces the need for a dynamic analytical approach, and the Split Ladder of Participation provides exactly that by moving beyond Arnstein's linear model to capture how participation fluctuates across quadrants as trust, knowledge uncertainty, and institutional authority shift over time.

The combined use of Arnstein's Ladder and the Split Ladder reflects the study's theoretical position that participation is not a fixed level but a dynamic and context-dependent process shaped by institutional transitions and relational conditions. While Arnstein's Ladder captures observable shifts in levels of participation, the Split Ladder explains the underlying drivers of these shifts, making the integrated framework particularly suitable for analyzing participation in fragmented governance systems.

4. Findings

This section presents the empirical results of the study in a strictly descriptive manner, without theoretical interpretation. It reconstructs the conflict-resolution pathways for Case 1 (livestock killing) and Case 2 (cattle destroying pineapple fields) and identifies participation patterns across different stages of each conflict. Each case is presented chronologically, beginning with the incident and ending with the final resolution step. The section concludes with a cross-case comparison highlighting participation continuity, actor roles, and institutional pathways. The following section presents two conflict-resolution cases, one led by farmers and the other by pastoralists, illustrating how each group navigates disputes within the village's fragmented governance system.

4.1. Case 1: killing the herd: A form of retaliation—livestock slaughter as a conflict tactic

4.1.1. Incident description

A conflict arose in a peri-urban pastoralist community when a man in his thirties noticed that his donkey had gone missing under suspicious circumstances. After the animal failed to return, he informed fellow herders, who joined him in a multi-day search. Their efforts led to a crucial discovery: one of the youth spotted four men gathered at a remote site where donkey remains were visible. As he approached, the group fled, leaving one man behind. Acknowledging the risk of confronting them alone, he retreated and alerted the donkey's owner and other community members. When they returned together, they confirmed the remains. "They just left the intestines and heads for us to see," the owner recounted.

Lacking smartphones, the group used a basic mobile phone to take photographs. Though grainy, these images served as grassroots evidence intended to support future reporting. When asked whether such incidents were new, the pastoralist replied, "This behavior of animals being slaughtered has been happening for a long time now," indicating a

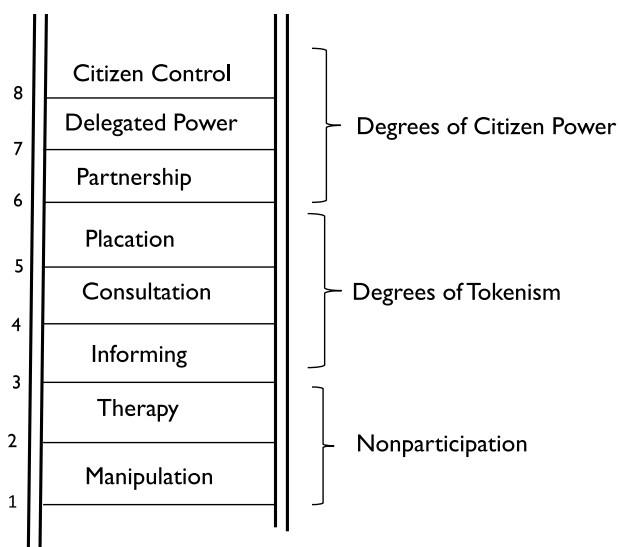


Fig. 2. Arnstein's ladder of citizen participation (Source:(S. R [18])).

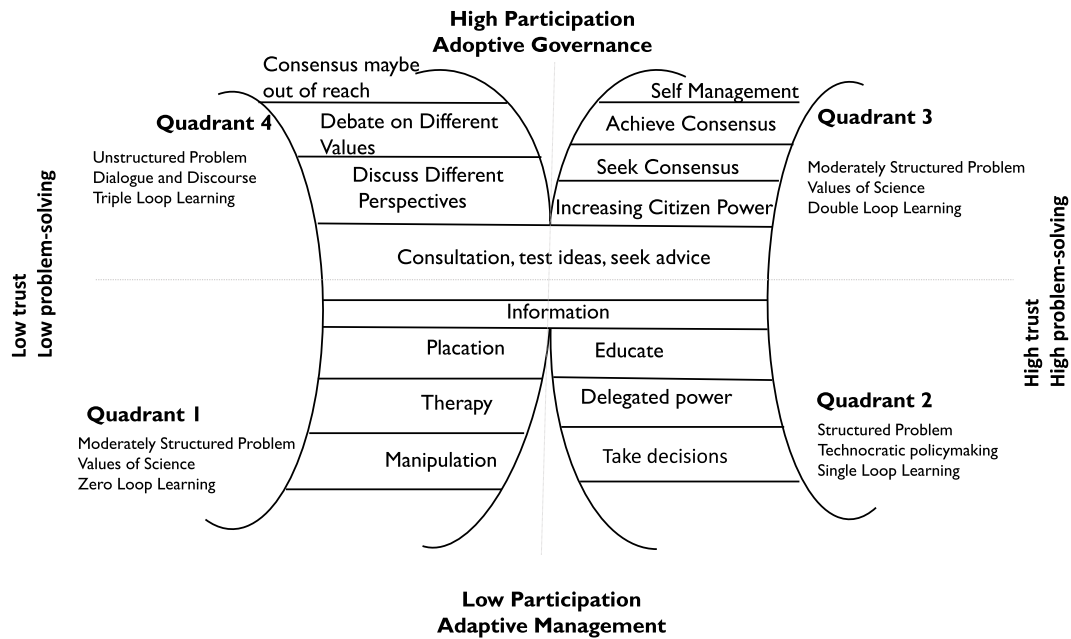


Fig. 3. Ladder of Participation (Source: [19]).

longstanding pattern of unresolved livestock violence. This case demonstrates how pastoralists use informal evidence-gathering to assert their claims in the early stages of conflict, particularly where formal institutions are slow or inaccessible. It reflects the paper’s argument that participation is negotiated across shifting governance arenas, with community-driven efforts filling participation gaps left by formal processes.

4.1.2. Conflict resolution pathway of case 1

“With the hope that this animal might be found alive, my first instinct was to consult my fellow youth, who were also pastoralists,” the donkey owner explained. He and the youth searched the surrounding communities and grazing areas for several days before finally locating the animal’s footprints. The owner then reported the incident to the sub-village chairperson, who advised him to take the matter to the police. He followed this guidance, formally reporting the case at the local station and

receiving a Report Book (RB) number to confirm official registration. During the initial investigation, the police and the pastoralist worked together to identify a suspect, the man who had been present when the donkey’s remains were first found. The suspect denied involvement, and the case proceeded to court. However, as the pastoralist noted, “That is the challenge. The remains are here, but we do not have any evidence that this person did it,” since only grainy mobile-phone photos were available.

A village office official later revealed that the administrative authorities had not been involved at any stage of the case, stating, “We have not heard about this conflict.” This absence underscores a critical feature of the village’s fragmented governance system: community actors engaged intensively in the early stages, but the process bypassed the village office entirely as it moved quickly into statutory domains. The lack of coordination between communal and administrative arenas illustrates the discontinuous, uneven nature of participation within the

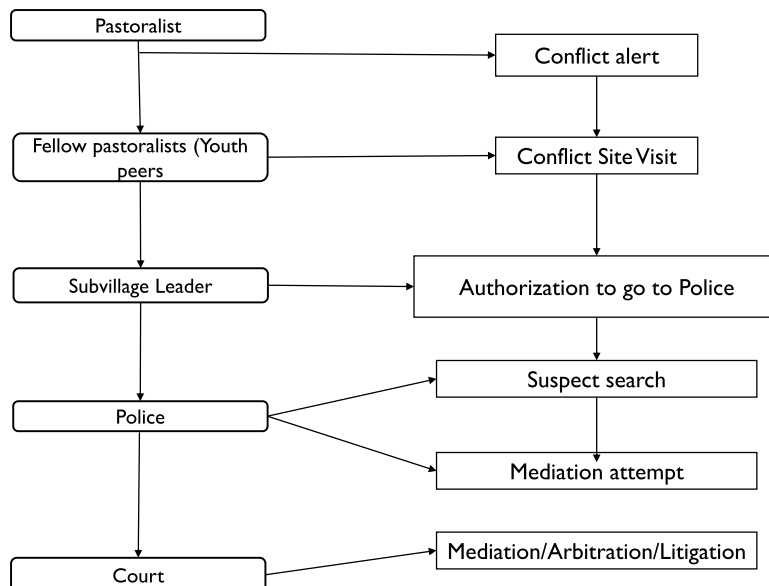


Fig. 4. Pastoralist Conflict Resolution Trajectory.

conflict-resolution pathway. Fig. 4 summarizes the sequence of steps followed in this case.

4.2. Case 2: when livestock crosses the line: A story of crop destruction, pineapple farm incident

4.2.1. Incident description

A conflict arose when a farmer discovered that 23 cows had been grazing on his pineapple farm. These cows, abandoned by their pastoralist owners, had been left to roam and graze freely for some time, causing considerable damage to the farmer's pineapple plants. Seeking assistance, the farmer went to the VO. In response, the village official instructed the village security personnel to accompany the farmer to the farm and assess the situation. A researcher, observing the events as part of a study on land use conflicts, captured photographic evidence of the damage, which was later shared with the village official. At the farm, the youth farmers present explained that they had been called to the farm by their fellow farmer after seeing the cows grazing on his crops. When the farmer was asked why he had involved his peers, he replied: "I called my fellows first because the pastoralists have a habit of assaulting farmers when they confront them about their animals grazing on farms. Having them around was a way to protect myself in case the pastoralists showed up." He also described the tactics of the pastoralists: "They usually leave their cows to graze and then hide in nearby bushes. When confronted, they emerge from the bushes and assault whoever tries to intervene. Sometimes, they even physically torture passersby, thinking they are the farm owners, or to erase evidence."

4.2.2. Conflict resolution pathway for the farmer

The farmer physically reported the incident to the Village Executive Officer (VEO), who sent the village office guard, along with fellow farmers at the scene, to escort the cows to the VO for owner identification. Acknowledging past retaliation from pastoralists, the guard's presence ensured the farmers' safety. Photographs of the site were taken during ongoing documentation activities led by local actors and, at the request of village officials, were subsequently shared with the Village Executive Officer as part of existing administrative procedures. Upon arriving at the village office, the VEO contacted the pastoralist sub-village chairperson, who confirmed ownership via livestock markings.

After waiting hours without the owner's appearance, the VEO issued a formal document enabling the farmer to file a police report. The parties later negotiated at the police station, and when unresolved, the case advanced to court, resulting in a compensation agreement. However, neither party returned to the VO to formalize or file the resolution, according to the village office official when questioned about the opinions of the parties to the dispute. Fig. 5 above illustrates the procedures followed in the conflict resolution process.

4.3. Formal farmer-pastoralist conflict resolution procedures in fukayosi village

According to interviews with a Village Council member, farmer-pastoralist disputes follow a multi-tiered resolution pathway, illustrating a fragmented governance landscape. The process begins at the sub-village level, where either party notifies the sub-village chairperson, who attempts mediation, often involving livestock or agriculture officers to assess damages. If unresolved, the issue escalates to the Village Council, which arranges formal mediation with council members (such as the village chairperson or executive officer) and may seek technical advice. Should mediation fail, especially in cases involving violence, the council permits escalation to the police. Persistent disputes then proceed to land courts for legal resolution. After a court verdict, parties return to the VO to report outcomes and close the case. This stepwise progression shows how conflict resolution moves from community-based mediation to administrative decision-making and, finally, statutory adjudication, involving multiple actors across overlapping institutional arenas. Fig. 6 above shows the flow of the formal conflict resolution pathway in Fukayosi Village.

5. Analysis

5.1. Comparison of the cases with the 'formal' mediation procedure

While Fukayosi Village has a well-defined local procedure for resolving farmer-pastoralist disputes, beginning with sub-village mediation, followed by referral to the Village Office, and only then escalating to the police and courts, the two cases show notable deviations from this sequence. Both cases started in the communal arena,

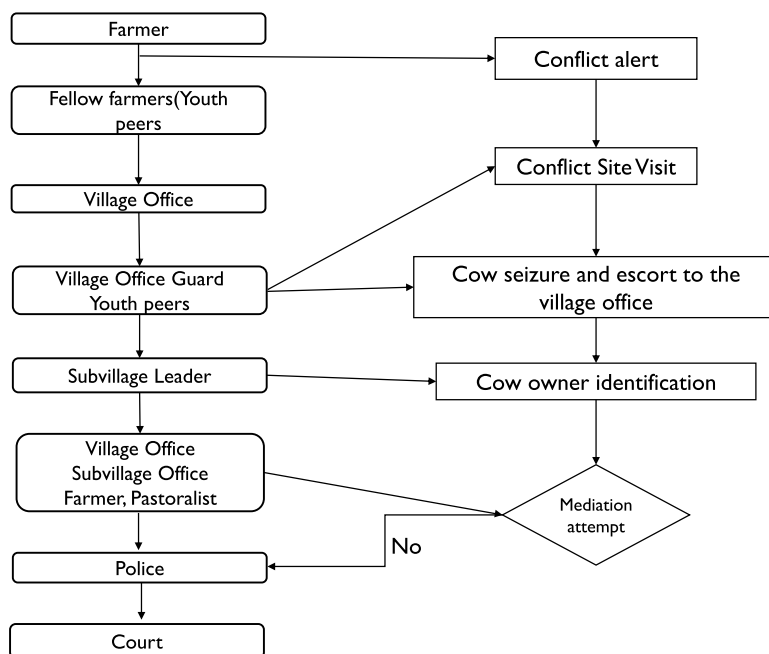


Fig. 5. Farmer Conflict Resolution Pathway.

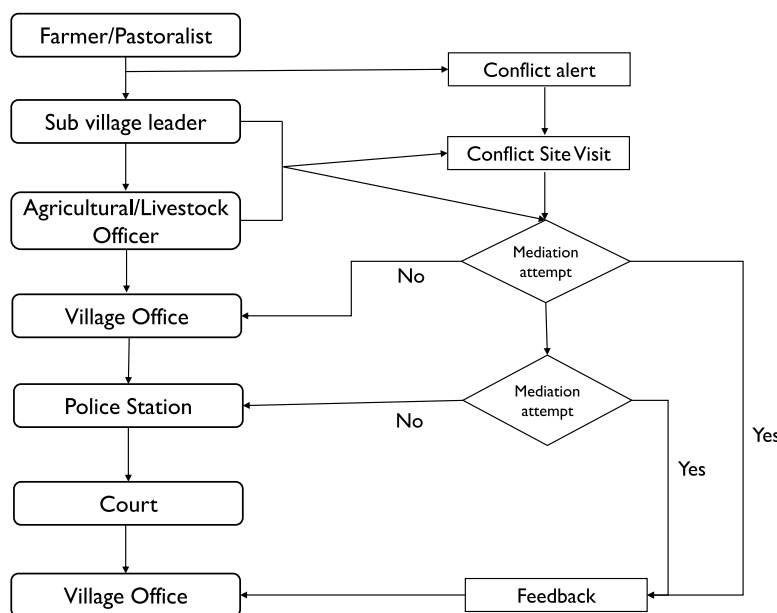


Fig. 6. Formal Farmer-Pastoralist Conflict Resolution Pathway in Fukayosi Village.

with peers (pastoralist youth in Case 1 and fellow farmers in Case 2) taking early action, which is consistent with the village’s expectation that disputes begin at the lowest social level. However, beyond this starting point, the two cases diverged sharply from the village’s locally recognized procedure.

In Case 1, the sequence broke down almost immediately. Although the donkey owner reported the incident to the sub-village chairperson, the chairperson bypassed the required mediation and referred the matter directly to the police. The Village Office, expected to conduct formal mediation before any police involvement, was never informed and played no role in the entire process, as officials later confirmed: “We have not heard about this conflict.” The case moved abruptly from the communal arena to the statutory arena, contradicting the village’s formal steps and demonstrating fragmented institutional coordination.

In Case 2, the process adhered more closely to the expected structure but still displayed inconsistencies. The farmer first approached the Village Office rather than the sub-village chairperson, reversing the prescribed entry point. The Village Office then initiated verification and contacted the sub-village chairperson from the pastoralist community, who successfully identified the livestock owner. While this reflects partial compliance, the failure of the livestock owner to appear and the eventual shift to the police and then the court show how participation narrows as the process moves from communal to administrative to statutory arenas. Finally, neither party returned to the Village Office with the outcome, violating the expected reporting-back requirement for closure and record-keeping.

Overall, neither case followed the village’s formal procedure linearly or completely. Case 1 bypassed administrative steps entirely, while Case 2 partially aligned but still diverged at critical points. These irregular transitions between communal, administrative, and statutory authorities reveal the fragmented governance landscape shaping conflict-resolution trajectories in Fukayosi Village. These inconsistencies make it clear that participation is neither linear nor stable across the resolution process. Accordingly, Arnstein’s Ladder is applied to capture how actors’ influence expands or contracts as they navigate shifting communal, administrative, and statutory arenas, revealing the uneven participatory trajectories characteristic of fragmented governance settings.

5.2. Arnstein’s Ladder as a tool for assessing the participation level

This study employs Arnstein’s Ladder of Citizen Participation as an analytical tool to evaluate how inclusive and participatory the conflict resolution procedures were in the two land use conflict instances by classifying participation levels, from non-participation (Manipulation, Therapy) to tokenism (Informing, Consultation, Placation) to full citizen power (Partnership, Delegated Power, Citizen Control). It performs a critical evaluation of the degree of actor engagement in the land use dispute resolution process by determining if impacted stakeholders were only informed, symbolically consulted, or empowered to influence decisions. In doing so, the ladder provides an initial benchmark for evaluating the inclusiveness and depth of participation within Fukayosi village’s conflict-resolution trajectories.

Case 1: Livestock Slaughter—Uneven movement across Arnstein’s ladder

Fig. 7 illustrates the levels of citizen participation in the first case by plotting the steps of the land use conflict resolution process along the X-axis and Arnstein’s Ladder of Participation levels along the Y-axis. Each actor identified in Fig. 7 was examined in detail to assess their role and level of engagement at each step of the resolution process. For every step, the actor’s participation was analyzed to determine whether it aligned with a specific rung on Arnstein’s ladder. These positions were then marked accordingly on Fig. 7 for each actor. This visual mapping traces how each actor ascended or descended the ladder throughout the process, highlighting variations in both the degree and consistency of their involvement through various levels of participation.

5.2.1. Actor-level participation trajectories for Case 1 (livestock slaughter)

At the onset, grassroots actors, particularly youth and the pastoralist victim, demonstrate strong engagement at the “partnership” level, suggesting strong agency in initiating action and seeking resolution. However, youth involvement rapidly declines over time to lower rungs, increasingly sidelined, indicative of manipulation and tokenism. A similar pattern is observed with the VO, which is largely absent from the process and thus aligns with the “manipulation” level, reflecting a lack of meaningful engagement despite its formal authority. The sub-village chairperson begins with a rise to consultation level and later falls to the informing stage, indicating provision of procedural guidance rather than actively participating in decision-making, reflecting passive engagement. In contrast, formal legal institutions such as the police and the

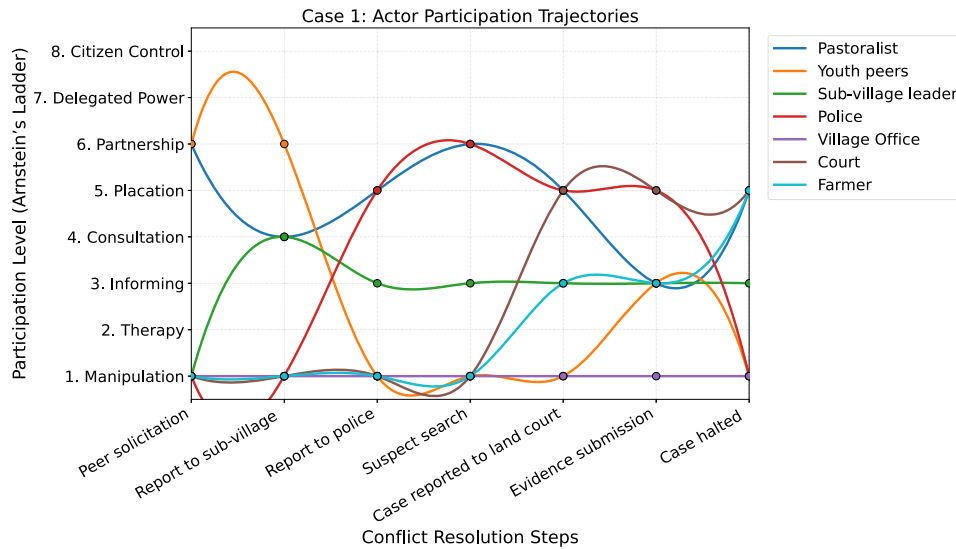


Fig. 7. Actor participation levels based on Arnstein's Ladder for Case 1.

court only enter the process at a later stage, taking on decisive roles; their initial absence highlights a reactive rather than proactive approach to engagement. Consequently, the pastoralist's role at this stage corresponds to the "placation" level, where they are informed of institutional decisions but have little influence over them. Similarly, the suspect enters the process only after police intervention, indicating exclusion from the early stages of resolution.

A critical observation from Fig. 7 is the uneven movement of actors along Arnstein's Ladder of Participation throughout the land use conflict resolution process. When actors are viewed through governance groupings, communal (blue), administrative (orange), and statutory (green), clear structural patterns emerge as seen in Fig. 8 above. Communal actors (pastoralists, youth peers) dominate the early stages, occupying higher rungs of Arnstein's Ladder as they mobilise peers, search for evidence, and initiate reporting. However, once the conflict moves beyond community-led action, their influence declines sharply, and they experience fluctuating participation or passive roles. The farmer (suspect), although also a communal actor, is absent during the early phases and only enters the process after police involvement, appearing briefly at low participatory levels that reflect limited agency and late-stage inclusion. Administrative actors (sub-village leader and

village office) show fragmented and inconsistent engagement: for instance, the sub-village leader was "consulted" and then remained in a passive "informing" role throughout, while youth initially engaged actively but quickly dropped to rungs such as "informing" and "placation," remaining symbolically involved thereafter, indicating minimal influence despite its formal mandate. By contrast, statutory actors (police and court) join only in the later stages but immediately occupy the highest levels of authority, shaping outcomes and closing the case. Together, these patterns show a clear upward shift in institutional control, from strong community initiative to weak and uneven administrative involvement, and finally to concentrated statutory authority, highlighting discontinuities and the absence of sustained participation across governance layers. The suspect only entered the process once the conflict reached the court, bypassing earlier mediation stages outlined in Fig. 7, possibly reflecting a lack of trust in local dispute resolution mechanisms.

Case 2: Crop Destruction—Uneven movement of the actors along Arnstein's ladder

Fig. 9 was constructed using the same format as Fig. 7. Each actor identified in Fig. 9 was analyzed in detail to assess their role and level of engagement at each stage of the resolution process. For every step, the

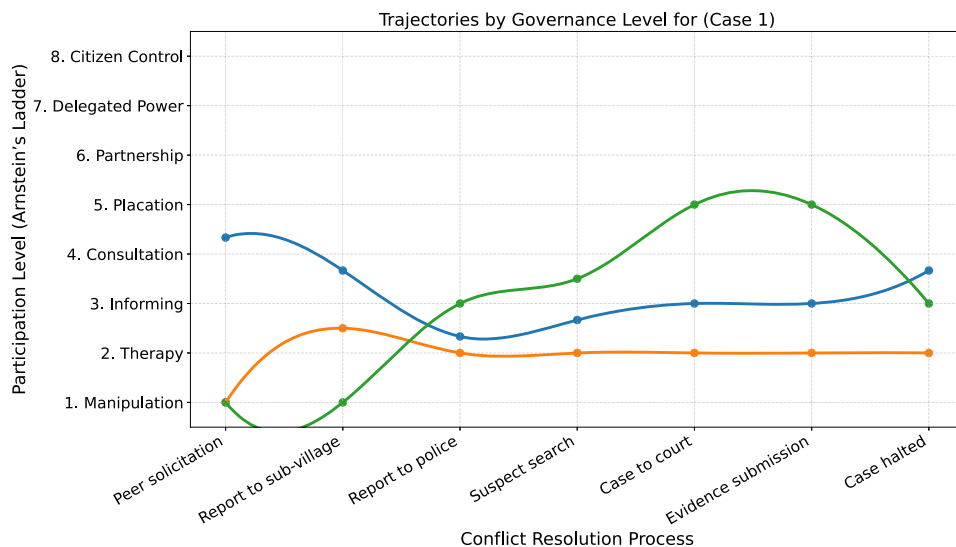


Fig. 8. Trajectory of actors based on Governance arenas; communal (blue), administrative (orange), and statutory (green)-Case 1.

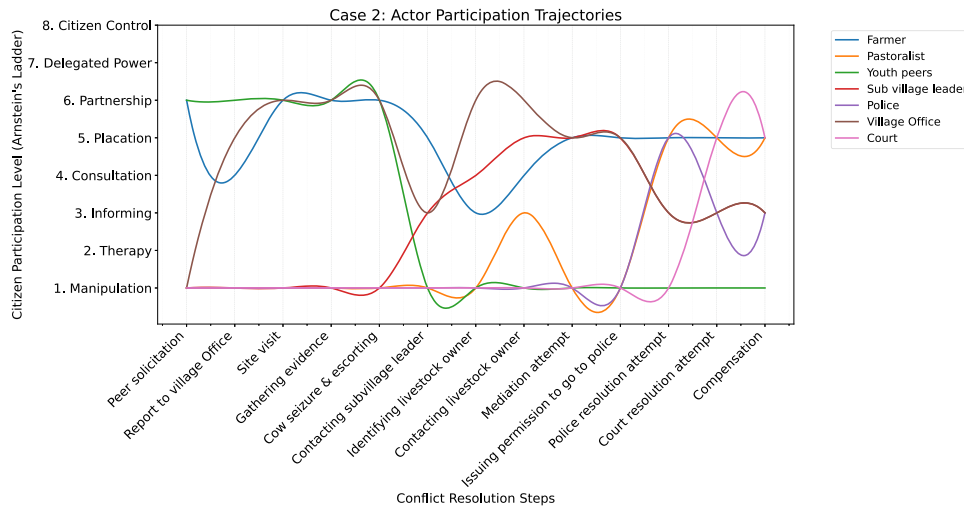


Fig. 9. Actor participation levels based on Arnstein's Ladder for Case 2.

actor's involvement was evaluated to determine its alignment with a specific rung on Arnstein's ladder. These levels were then marked accordingly and visually mapped for each actor.

5.2.2. Actor-level participation trajectories for Case 2

At the early stages of the conflict resolution process, there is notable engagement between the farmer and the youth, who were actively involved in efforts to secure livestock, aligning with the "partnership" rung of Arnstein's Ladder of Citizen Participation, indicating meaningful collaboration and shared decision-making. However, as the process progresses, the inclusivity of youth peers declines sharply, limited to receiving information or being used symbolically, which corresponds to the lower rungs of the ladder, namely, "informing" and "manipulation". Similarly, formal institutions such as the police and the court are absent in the early stages and only engage once the conflict escalates to their level of jurisdiction. Local government authorities, particularly the VO, were likewise not involved at the beginning. Once the case was reported to them, they assumed a more directive role, consistent with the "placation" level of participation, where decisions are made primarily by authorities while community members, such as the farmer, serve mainly to provide information. In the subsequent stages involving police and court proceedings, the role of local government actors becomes

passive. This inconsistent participation across stages reveals a broader issue of fragmentation in the conflict resolution process, where actors appear and disappear without continuity or coordination.

During fieldwork, the researcher observed and documented aspects of the conflict resolution process as they unfolded within existing village-level procedures. In Case 2, photographs of crop damage were taken as part of routine documentation already being conducted by local authorities and community members. The researcher did not initiate evidence collection, influence decision-making, or participate in negotiations or enforcement actions. All interactions remained observational, and any documentation was aligned with ongoing administrative practices. This positioning reflects the practical realities of qualitative fieldwork in active land conflict settings, where researchers may be present during moments of documentation without assuming an interventionist role. Acknowledging this positionality enhances transparency while maintaining the analytical focus on how participation and authority operate within fragmented governance systems.

A closer examination of Fig. 9 further illustrates how specific actors navigate the land use conflict resolution process in uneven and fragmented ways. When actors are viewed through governance groupings, communal (blue), administrative (orange), and statutory (green), as seen in Fig. 10 above, the trajectories reveal a patterned and uneven

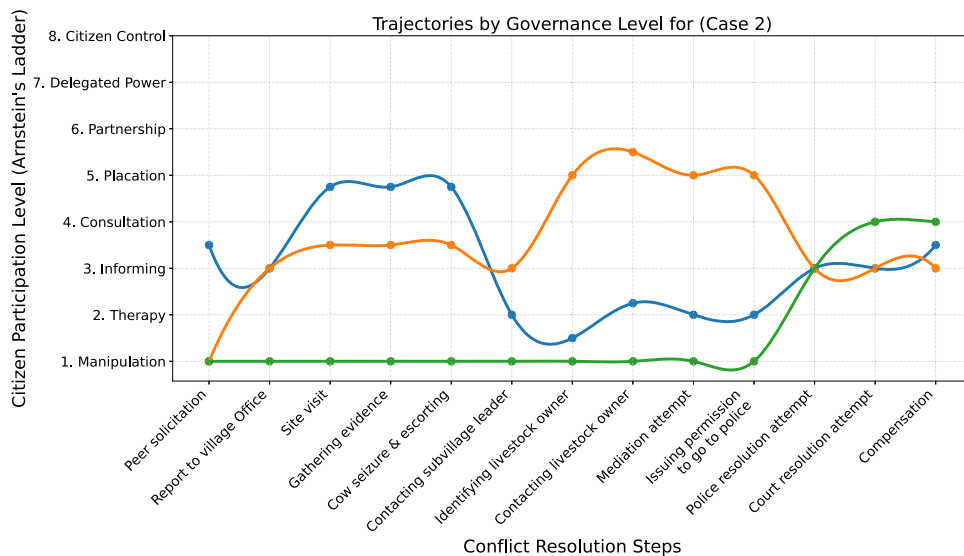


Fig. 10. Trajectory of actors based on Governance arenas; communal (blue), administrative (orange), and statutory (green)- Case 2.

shift in influence. Communal actors (farmers, youth, pastoralists) dominate the early stages with high, partnership-level engagement but lose influence once responsibility shifts beyond the community. The pastoralist, like the suspect in the previous case, is absent early on and only enters after statutory actors intervene, reflecting a limited and belated role. Administrative actors (sub-village leader, Village Office) show inconsistent and fragmented participation: the sub-village leader appears only briefly to identify the livestock owner, while the Village Office jumps in mid-process and then recedes once police involvement begins. Statutory actors (police, court) do not appear until the conflict escalates, but once involved, they assume near-total control over decisions. This governance-based grouping reveals a clear vertical transfer of authority, strong community initiative followed by weak administrative continuity, and ending with concentrated statutory control, highlighting fragmentation and the lack of a coherent participatory pathway.

5.2.3. Limitations of using Arnstein's ladder to assess the participation levels

A comparative analysis of Figs. 7–10, all based on Arnstein's Ladder of Participation, highlights divergent participation dynamics in the two land use conflict resolution cases. The initial analysis assessed participation against fixed procedural steps, but this approach risked overlooking the fragmented governance context and local adaptations shaping how conflict resolution unfolded. Applying Arnstein's Ladder of Participation dynamically helped show how actors moved between participation levels, yet the model cannot explain why these shifts occurred or how trust, power relations, and institutional constraints shaped them [53]. Since meaningful participation depends on what is appropriate for the specific context and problem type, not on all actors reaching the highest rung, the study incorporates the Split Ladder of Participation. As Hurlbert & Gupta [19] argue, this framework addresses the relational and governance dynamics that Arnstein's model misses, offering a clearer understanding of when, why, and how participation

varies across actors and stages.

5.3. Beyond Arnstein: the split ladder as a contextual participation tool

The split ladder has been utilized in this study to address Arnstein's limitations, particularly its assumption of linear progression and its inability to account for shifts across multiple, overlapping governance arenas, by incorporating governance mode, trust dynamics, and knowledge uncertainty, all of which critically shape participation in conflict processes but remain invisible in traditional ladder models.

Case 1: Livestock slaughter-Based on the Split Ladder of Participation

Fig. 11 visually maps the participation of different actors across the seven steps of the land conflict resolution process of the first case, as seen in Fig. 6. The spatial layout across four quadrants reflects varying dynamics of trust, participation, learning, and governance modes. A critical reading of this framework reveals recurring patterns and inconsistencies in stakeholder involvement. Each symbol represents a specific stakeholder, such as pastoralists, VO, suspect, youth, sub-village leader, police, and the court, and their placement in one of the four quadrants reveals the level of participation, learning type, and the degree of trust at that step as described in Fig. 3. The numbers represent steps or stages in the conflict resolution process. Fig. 7 illustrates 7 steps or stages in the conflict pathway, hence the numbers 1 to 7. When actors appear in the same quadrant at the same step, it suggests shared experiences of trust, learning, or participation. Conversely, actors occupying different quadrants at the same step highlight asymmetries or tensions in the process. Furthermore, when an actor moves across quadrants over time, it signals changing roles, influence, or engagement levels, offering critical insights into evolving power dynamics and intervention points.

5.3.1. Reflection on the first case based on the split ladder of participation

In Step 1, pastoralists and youth initiate action within Quadrant Three, indicating high trust, grassroots participation, and a strong

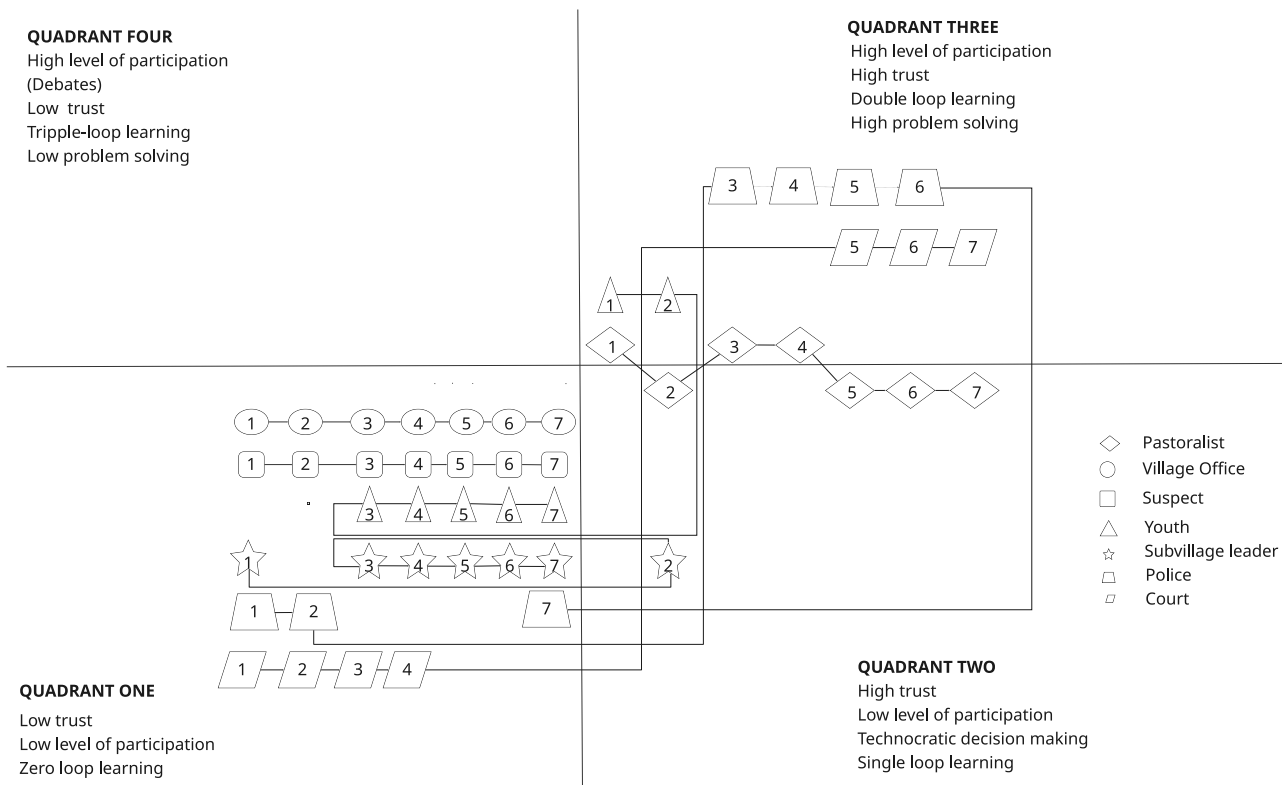


Fig. 11. Actor participation based on the Split Ladder of Participation for Case 1.

orientation toward double-loop learning and local problem-solving. However, by Step 3, the youth are excluded from further participation, shifting to Quadrant One, which is defined by low trust, minimal participation, and zero-loop learning, suggesting a systemic flaw: while communities can mobilize quickly, institutional processes often marginalize them from sustained involvement. Similarly, the sub-village leader emerges as a trusted and active Figure in Step 2 (Quadrant Two) after being left out in Step 1, yet becomes increasingly passive from Steps 4 to 7, falling into Quadrant One. This inconsistency illustrates selective engagement and early-stage reliance on community leadership without sustained empowerment throughout the resolution process. The VO was entirely left out of the conflict resolution process, a further indication of weak coordination, low institutional trust, and marginal stakeholder involvement, reflecting Quadrant One dynamics. The police and court, entering only in Steps 4 and 5, are anchored in Quadrant One, revealing a pattern of low-trust, command-and-control intervention. These actors embody technocratic and formal authority, acting only when the case is escalated. Their roles are reactive and insulated from community dynamics, reinforcing vertical decision-making rather than participatory governance. The absence of feedback loops and the one-directional flow of decision-making, especially in Steps 5 to 7, demonstrates elements of Quadrant Two, where expert-driven procedures dominate, and local actors are informed rather than involved. Importantly, the suspect appears only from Step 4 onward, aligned with legal enforcement stages. Their late involvement reveals a value conflict with the pastoralist, underscoring the disconnect between institutional justice mechanisms and grassroots participation.

The analysis shows a fragmented participation landscape across the communal, administrative, and statutory actors. Communal actors, particularly youth and pastoralists, initiate the process with strong local engagement and high trust, yet youth are excluded almost immediately, dropping into low-trust, low-participation zones. This early

marginalisation highlights how institutional procedures can suppress grassroots involvement. Administrative actors, especially the sub-village leaders, appear consistently throughout all steps but remain confined to low-trust, low-participation zones, suggesting their involvement is largely procedural rather than influential. The Village Office remains absent throughout, signalling weak coordination and limited institutional ownership of the process. In contrast, statutory actors, the police and the court, enter only at escalation points and operate within low-participation, command-and-control spaces, reinforcing vertical, technocratic decision-making with minimal community dialogue. The suspect's late involvement, aligned with legal enforcement stages, further illustrates the disconnect between formal justice mechanisms and earlier communal dynamics. Overall, the differing quadrant positions across actor categories show systemic asymmetry: communal actors mobilise early but are sidelined quickly, administrative actors are inconsistently engaged, and statutory actors dominate late with limited participatory interaction.

5.3.2. Case 2: crop destruction-based on the Split Ladder of participation

Fig. 12 below, when examined alongside the narrative of the second case, reveals a telling trajectory of participation, trust, and governance across the conflict resolution process. The conflict resolution process followed a structured sequence of thirteen steps or stages, as seen in Fig. 9 above.

In Steps 1–3, the farmer and his fellow youth initiate a proactive, community-led response by guarding the cows and reporting the issue to the VO. Their early engagement reflects high interpersonal trust and collective problem-solving, traits associated with Quadrant Three. However, as the process transitions into formal channels, Steps 4–13, the youth are excluded, their involvement ending before decision-making takes shape, shifting to Quadrant One. The sub-village leader, shown in the diagram entering at Step 6, and institutions like the police and

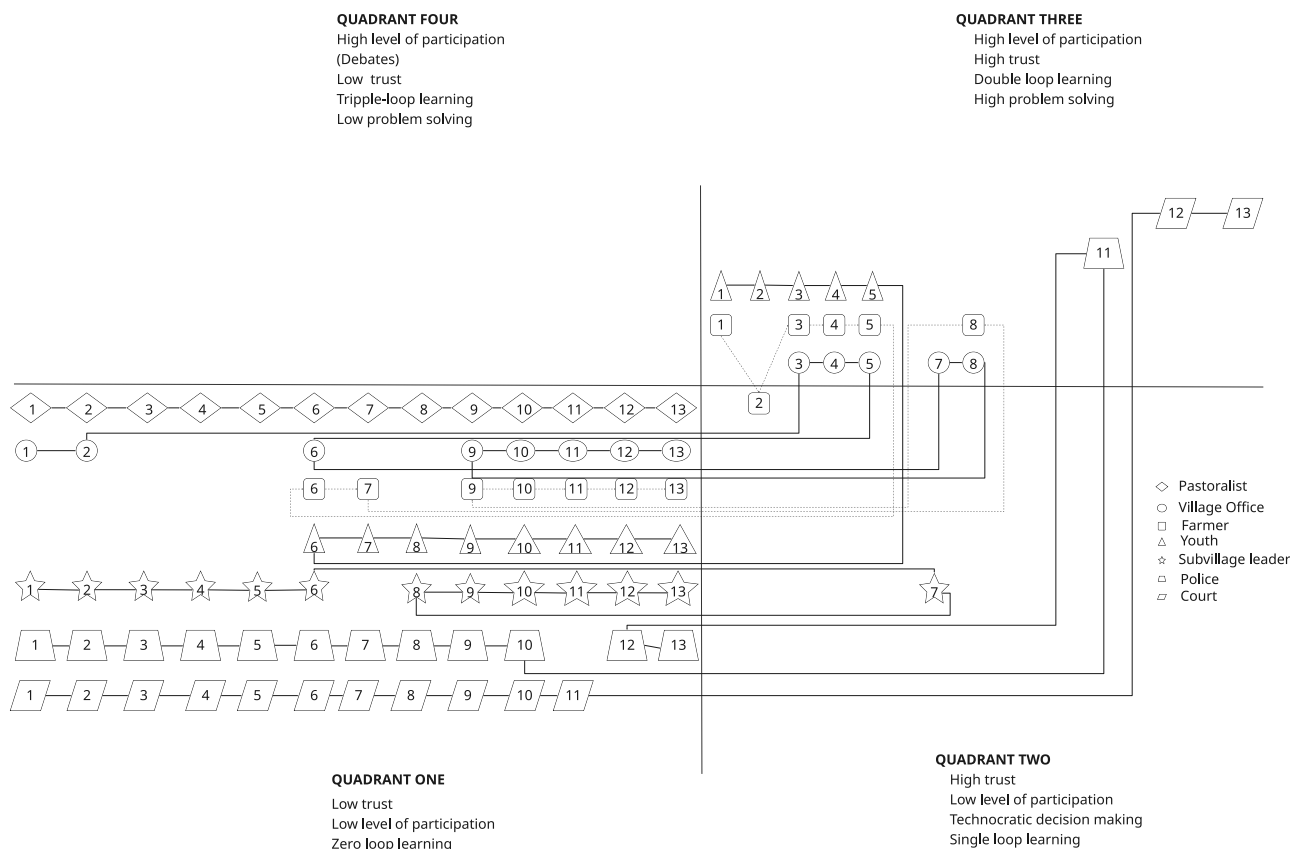


Fig. 12. Actor participation levels based on the Split Ladder of Participation for Case 2.

court (Steps 10–12) only become active in the mid-to-late part of the process, reinforcing a reactive and procedural form of governance. Their temporary or symbolic presence reflects limited stakeholder integration and single-loop learning, characteristic of Quadrants One and Two. Meanwhile, the VO kept on shifting across quadrants one, two, and three throughout the process, ending in Quadrant One, implying visible yet ineffective involvement, with low trust and poor problem-solving outcomes despite sustained engagement. Crucially, the pastoralist avoids early community mediation but reappears at the formal stages, aligning with Quadrant One traits, low trust in local institutions, and reliance on formal authority. The case concludes with a court-ordered compensation (Step 13), yet the resolution process does not loop back to earlier actors like the youth or farmer. This absence of feedback loops reinforces a top-down, technocratic model of conflict resolution, central to Quadrant Two, where expert-led procedures dominate, and community actors are left uninformed or sidelined.

Based on Fig. 12 above, the participation levels of the various actors in the land use conflict resolution process reveal a highly uneven and structurally imbalanced participation landscape across the conflict-resolution process. Administrative actors offer little corrective balance: the sub-village leader stays confined to Quadrant One throughout all thirteen steps, suggesting routine, procedural involvement with no real influence, while the Village Office similarly remains locked in low-trust zones, revealing bureaucratic inertia and limited problem-solving capacity. Communal actors exhibit inconsistent and limited influence: youth begin with strong engagement in Quadrant Three but are quickly pushed into Quadrant One, signalling early exclusion and declining trust. The farmer remains largely in low-trust, low-participation spaces, with only occasional movement toward Quadrant Three, indicating that any gains in influence are selective and fragile. The pastoralist's early placement in Quadrant One further reflects initial marginalisation and weak integration into community-led problem-solving. Statutory actors, the police and court, enter only at the later stages and occupy Quadrant Two, where high institutional trust combines with low participation, reinforcing a technocratic, top-down approach that sidelines community perspectives. Taken together, these patterns demonstrate deep asymmetries in power, trust, and learning across actor groups, producing a resolution process that neither distributes influence equitably nor incorporates meaningful feedback from those most affected.

6. Discussion

This section interprets the empirical findings by situating them within broader debates on participation, governance fragmentation, and land conflict resolution. This study makes three key contributions. First, it offers a methodological contribution by integrating Arstein's Ladder and the Split Ladder dynamically to trace participation trajectories across governance arenas. Second, it provides a theoretical contribution by demonstrating that participation is discontinuous and shaped by institutional transitions, challenging linear models of participation. Third, it makes an empirical contribution by showing how governance fragmentation structures inclusion and exclusion in a Tanzanian village context. It advances the central argument of the paper: participation in fragmented governance systems is not a uniform or linear process, but a dynamic and contested trajectory shaped by power relations, trust, institutional authority, and knowledge conditions.

This study situates land-use conflict participation within broader debates on governance fragmentation, institutional pluralism, and rural power relations. Consistent with political ecology and development governance scholarship [54–56], the findings show that participation in Fukayosi Village is not a uniform or cumulative process. Instead, participation expands, contracts, and shifts as disputes move across community-based, administrative, and statutory arenas. This study advances perspectives on assessing social conflict resolution by demonstrating that participation should be evaluated as a process shaped by institutional transitions rather than as a static outcome. Actors do not

steadily “climb” toward inclusion; rather, they experience fluctuating influence depending on trust relations, institutional authority, and evidentiary requirements. This reinforces emerging critiques that procedural participation frameworks often overlook the relational and institutional conditions that shape who is able or willing to engage meaningfully in conflict resolution [48], and further reveals additional dimensions influencing participation, including institutional transition points, actor continuity or discontinuity, and procedural thresholds that are not fully captured in existing models.

A central insight is the discontinuity of actors across stages of conflict resolution, a pattern strongly linked to fragmented governance. Community-relational arenas, such as early mediation with youth or sub-village leaders, offered broad inclusion, whereas state-procedural arenas, such as the police and court, narrowed participation to those with legal literacy, documentation, or institutional proximity. This explains why farmers gained influence as conflicts escalated, while pastoralists and youth lost visibility and voice. These dynamics illustrate how overlapping but poorly integrated governance systems structure participation unevenly, forcing citizens to navigate discontinuous pathways rather than a coherent institutional process. They also indicate that stakeholder influence is temporarily structure, with different actors gaining or losing power at specific stages of the conflict process.

Power asymmetries and trust deficits further shaped participation outcomes. Pastoralists disengaged not simply because of procedural hurdles but because formal institutions were perceived as biased or inaccessible. Youth, though influential during incident response, disappeared once the process entered administrative or statutory stages, reflecting structural exclusion rather than voluntary withdrawal. These patterns echo wider findings in land governance across the Global South, where institutional design alone rarely ensures equitable participation.

Methodologically, this study advances participation analysis in two ways. First, applying Arnstein's Ladder dynamically, rather than as a static typology, captures shifts in influence across stages, responding to critiques that the ladder oversimplifies governance complexity [49]. Second, integrating the Split Ladder provides a more context-sensitive account by incorporating trust, governance modes, and knowledge uncertainty—factors essential for understanding participation within fragmented institutional landscapes [19,53]. Together, these tools allow participation to be analysed as a trajectory across multiple governance interfaces rather than a single procedural outcome. Importantly, the dual-framework approach shows that participation is negotiated, partial, and sometimes strategically selective, yet still consequential for conflict outcomes.

These findings carry meaningful implications for land conflict resolution practice. Strengthening participation requires more than designing formal mechanisms; it demands attention to the full ecosystem of governance arenas through which disputes move. Policy interventions should focus on improving coordination between community and formal institutions, addressing trust deficits among pastoralists and other marginalised groups, ensuring continuity of participation across stages, and recognising informal actors—such as youth, as legitimate contributors beyond the incident stage. Without addressing systemic fragmentation, participatory reforms risk reinforcing, rather than mitigating, existing inequalities in land governance.

However, important limitations must be acknowledged. The analysis is based on two cases within one village, which restricts generalisability. Moreover, although trust, power, and institutional logics were inferred through interviews and process tracing, the findings may also reflect context-specific and sampling-related biases. The selection of two conflict types may have influenced observed participation trajectories, as different forms of conflicts can produce distinct engagement dynamics. Additionally, the sample composition, including limited representation of women and other marginalised groups, may shape interpretations of participation. Methodological choices, including reliance on interviews and observation, may also privilege visible interactions while under-representing informal or hidden power dynamics. Furthermore, reliance

on retrospective accounts may introduce recall bias, and the absence of longitudinal data limits the assessment of how participation evolves.

Future research should build on these findings through comparative and multi-sited studies to examine how participation trajectories vary across regions and governance systems. Longitudinal approaches could provide deeper insight into how participation evolves over time and across repeated conflicts. Integrating mixed-method designs, such as longitudinal ethnography or social network analysis, would further strengthen the understanding of relational dynamics, trust formation and institutional learning. Future studies could also explore the role of digital tools, legal literacy, and institutional reforms in shaping access to different governance arenas and in reducing fragmentation. Such work would advance theory on participation under conditions of uncertainty and fragmentation, particularly within sustainability governance in the Global South, to better capture relational dynamics and institutional learning over time.

Finally, this study contributes to political ecology and governance scholarship by empirically demonstrating how power, knowledge, and fragmented institutional arrangements jointly shape participation trajectories over time. It shows that governance fragmentation not only generates inefficiency but also actively structures who is included, excluded, or silenced.

7. Conclusion

This study demonstrates that participation in land use conflict resolution in Tanzania is not a linear or uniform process but a dynamic, negotiated trajectory shaped by the country's fragmented governance landscape. By tracing actor movements across Arnstein's Ladder and the Split Ladder, the analysis reveals that participation expands and contracts as conflicts shift between community, administrative, and statutory arenas. Grassroots actors, farmers, pastoralists, and youth mobilize strongly at the outset, operating through relational trust networks, but their influence diminishes once cases move into village offices, the police, and the courts. Fragmentation arises from overlapping mandates, weak coordination, inconsistent procedural pathways, and shifting trust relations, resulting in discontinuous engagement and unequal influence across stages of the process. These patterns underscore that participation is shaped not only by institutional design but also by power asymmetries, procedural uncertainties, and strategic choices made by actors navigating multiple governance logics.

By situating these findings within political ecology and governance debates, the study contributes a layered understanding of participation as a contested process unfolding across hybrid institutional environments rather than a fixed position on a ladder. The combined use of Arnstein's Ladder and the Split Ladder provides a methodological advancement that captures both the formal structure of participation and the relational factors, trust, authority, and knowledge uncertainty, that drive actors' movements. This dual-framework approach offers a more realistic analytical lens for contexts where governance is plural and actors navigate between community-based forums and state authorities based on perceived legitimacy, procedural advantage, or risk.

Policy and practice implications follow directly from these insights. First, interventions should not assume a linear or uniformly inclusive participatory pathway; instead, they must map the actual ecosystem of forums, actors, and trust relations that shape conflict trajectories. Second, strengthening participation requires improving coordination between community structures, village administration, and statutory bodies to avoid abrupt discontinuities that exclude key actors. Third, conflict resolution institutions should establish clear feedback mechanisms and documentation processes to prevent cases from bypassing mandated entry points and to ensure continuity as disputes escalate. Fourth, enhancing the legitimacy and responsiveness of village-level institutions, through training, resourcing, and transparent procedures, may prevent premature escalation to the police and courts. Finally, participatory frameworks must explicitly account for power

asymmetries by ensuring that marginalized actors, including youth and minority pastoralist groups, remain engaged throughout the process rather than only at the initial stages.

Overall, the study underscores that effective land conflict resolution requires not merely expanding participation but understanding and engaging with the fragmented, shifting governance landscape within which participation is negotiated.

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Data availability statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request. While the data are currently part of ongoing research and not yet hosted on a public repository, plans are in place to make them openly accessible through a dedicated website in the near future.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used ChatGPT to assist with minor edits and restructuring of content. After using this tool, the author(s) reviewed and revised the material as necessary and took full responsibility for the final content of the publication.

CRediT authorship contribution statement

Beatrice A. Kaijage: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Visualization, Project administration. **Oswald Devisch:** Conceptualization, Validation, Writing – review & editing, Supervision, Funding acquisition. **Regina J. Lyakurwa:** Writing – review & editing, Supervision, Funding acquisition. **Fredrick B. Magina:** Validation, Writing – review & editing, Supervision, Funding acquisition. **Liesbeth Huybrechts:** Conceptualization, Funding acquisition.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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