

Sense of Place as a Governance Mechanism: Eco-Neighbourhood Claims and Environmental Justice in a Peri-Urban Corridor of Cali, Colombia

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Research Article

Keywords: sense of place, environmental justice, territorial habitus, peri-urban governance, eco-neighbourhood

Posted Date: October 18th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-11010507/v1>

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Additional Declarations: No competing interests reported.

Abstract

Peri-urban communities in the Global South generate spatially precise, ecologically grounded territorial knowledge that formal planning systematically excludes. This article argues that sense of place (SoP) operates as the site of a structural double bind: the depth of territorial attachment that produces authoritative ecological knowledge causes planning institutions to misread it as disqualifying parochial bias, simultaneously enabling and deepening environmental injustice. A qualitative participatory case study in Parcelación Andalucía — a peri-urban settlement under real-estate pressure in the Cali–Jamundí corridor, Colombia — combines collective mental mapping, thematic workshops and fieldwork with 24 Community Action Board (Junta de Acción Comunal, JAC) leaders. Applying Schlosberg's (2007) triadic justice framework and the Bourdieusian concept of territorial habitus within a socio-ecological systems approach, findings show that residents' multi-generational habitus underpins an eco-neighbourhood proposal as a claim for recognitional and procedural justice. A portable analytical matrix crossing place attachment dimensions with Schlosberg's justice triad is proposed as a replicable diagnostic instrument for peri-urban governance contexts across the Global South.

1. Introduction

Urban expansion drives biodiversity loss, hydrological alteration and social fragmentation, particularly in the Global South, where demographic growth and informality intensify pressure on peri-urban landscapes of high ecological value. Urban sustainability frameworks have proliferated in recent decades, ranging from green infrastructure planning to ecosystem services valuation, yet these approaches remain predominantly technocratic and overlook the socially constructed relationships between communities and territories that sustain collective action and long-term ecological management. Scholarship and policy alike treat the affective, symbolic and political dimensions of territorial identity as secondary considerations, even though these dimensions articulate the very motivation that drives communities to act as stewards of their own ecosystems.

Cali, Colombia, illustrates this tension with particular clarity. Host city of COP16 in 2024 and institutionally positioned as a 'biodiverse' city through the Local Biodiversity Action Plan PAB-Cali 2026–2036 and the Cali Sustainable Master Plan (DAGMA, 2024), the city simultaneously confronts accelerated real-estate pressure along its southern fringe. The Municipal Land-Use Agreement 0373 of 2014 and the Territorial Planning Plan POT 2038 under formulation designate the Cali–Jamundí corridor as the only legally authorised urban expansion zone, precisely where housing supply grew by 136 per cent between 2013 and 2016 (El País, 2016). This pressure converges on a striking ecological fact — the Valle del Cauca retains less than 2 per cent of its original tropical dry forest cover (HALAC, 2022), and the last continuous strip of that forest extends across the southern peri-urban area of the city where urban growth reaches its greatest intensity.

The theoretical framework guiding this study integrates sense of place (SoP) with environmental justice theory. SoP operates as a multidimensional construct encompassing attachment, identity and a sense of

belonging to territory, and its affective, cognitive and conative layers have received extensive theorisation (Tuan, 1975; Relph, 1976; Scannell and Gifford, 2010; Erfani, 2022). This literature has consistently documented SoP as a positive governance resource, yet two structural gaps limit its theoretical development. Scholarship has widely demonstrated SoP's role as an enabler of community governance in rural and Indigenous contexts, but its operation in rapidly urbanising peri-urban corridors of the Global South remains empirically under-examined (Masterson et al., 2017; Cvitanovic et al., 2024). Even recent contributions that extend participatory and digital mapping methods to sense of place in peri-urban settings remain concentrated in the Global North (Oliveira et al., 2026), which sharpens rather than closes this empirical gap. More significantly, no prior study has examined how SoP can simultaneously enable and undermine just governance – that is, how the very depth of territorial attachment that generates authoritative ecological knowledge leads planning institutions to misread it as disqualifying parochial bias, deepening the injustice that same attachment motivates communities to resist. Building on this gap, the study incorporates Bourdieu's (1999) concept of territorial habitus – a durable, embodied, pre-reflexive set of dispositions toward the land that intergenerational reproduction renders practically taken for granted – to explain why planning institutions systematically exclude community stewardship knowledge, since that knowledge lives in practice, memory and place rather than in the legible formats that technical planning protocols demand. Alongside Schlosberg's (2007) triadic environmental justice framework, which articulates distributive equity, recognition of difference and procedural participation as three interdependent dimensions of justice, and Masterson et al.'s (2017) conceptualisation of SoP as a slow variable within socio-ecological systems, these frameworks form a single analytical chain – attachment generates territorial habitus, habitus produces epistemic authority, and institutional misrecognition of that authority reproduces environmental injustice – rather than functioning as parallel lenses. Together they position sense of place not as sociological texture but as a structural mechanism through which urban planning reproduces the very injustices it formally claims to prevent.

Parcelación Andalucía, a peri-urban settlement on the southern periphery of Cali, provides the case study for this analysis. Residents founded the settlement in the mid-twentieth century on remnant wetlands and fragments of tropical dry forest with high native biodiversity, and they continue to sustain active agroecological practices. The community now faces a Partial Urban Development Plan that the Municipal Planning Department (DAPM) held on hold since 2018, together with an ambiguous legal-territorial status arising from the fact that the settlement falls outside any formally recognised borough. In response, residents organised through Community Action Boards (Juntas de Acción Comunal, JAC) – which Law 743 of 2002 defines as mechanisms for citizen participation in local development management – and advanced a proposal for designation as an eco-neighbourhood. Unlike conventional urbanisation, this settlement model integrates community governance, ecological territorial management and genuine participation as a constitutive logic. Twenty-four JAC leaders took part in workshops of the 'Expansión de Vida' programme at Universidad Autónoma de Occidente in 2023 and produced mental maps that form the central empirical material of this study.

This article addresses two research questions. How does sense of place function as a governance mechanism for environmental justice claims in a peri-urban settlement facing real-estate pressure in the Global South? And under what conditions does community-produced spatial knowledge challenge institutional planning epistemologies rather than reinforce them? The paper advances three contributions — it identifies a structural double bind in which the depth of territorial habitus that produces authoritative ecological knowledge simultaneously causes planning institutions to misread that knowledge as parochial bias, making SoP a driver rather than merely a correlate of environmental injustice; it proposes a portable 3×3 analytical matrix crossing Scannell and Gifford's (2010) tripartite attachment model with Schlosberg's (2007) justice triad as a replicable diagnostic instrument for peri-urban governance conflicts; and it extends SES-based SoP scholarship into the peri-urban Global South, where the intersection of informal settlement histories, ecological value and technocratic planning pressure remains a distinct and undertheorised configuration. Section 2 presents the methodology, Section 3 reports findings from the participatory mapping process, Section 4 discusses these findings in relation to regional cases and adaptive governance frameworks, and Section 5 develops conclusions and implications for territorial planning. Methodological Approach

2. Methodological Approach

2.1. Research Design and Epistemological Framework

This study employs a qualitative interpretive approach grounded in participatory action principles. We treat sense of place not as an individual psychological construct but as a socioecological phenomenon that emerges from sustained community engagement with territory over time. This orientation draws on the phenomenological tradition (Tuan, 1975; Relph, 1976) while remaining attentive to how spatial meanings become embedded in social and ecological systems (Bourdieu, 1999; Masterson et al., 2017).

Rather than seeking generalisable patterns across multiple sites, we adopt an intensive case study logic that prioritises depth of understanding within a single context. This choice aligns with the research questions, which ask how sense of place operates as a governance mechanism for environmental justice claims in a peri-urban settlement facing real-estate pressure in the Global South, and under what conditions community-produced spatial knowledge challenges institutional planning epistemologies. A six-month engagement period, spanning initial design, data generation and subsequent thematic analysis, allowed us to develop sustained observation of community dynamics while simultaneously generating participatory products — in particular the mental maps that render spatial thinking visible and analysable.

As researchers affiliated with Universidad Autónoma de Occidente, we designed and facilitated the 'Expansión de Vida' workshops that also served as the primary site of data generation. We acknowledge this dual role as a reflexive consideration rather than a methodological limitation. Throughout the process we took deliberate steps to guard against imposing interpretive frames on participants: we facilitated workshops as open dialogical spaces rather than as structured instruments, we refrained

from introducing the eco-neighbourhood framing until participants themselves articulated it, and we submitted preliminary thematic interpretations to JAC leaders for comment and correction before finalising the analysis. This member-checking process revealed broad resonance between our interpretations and participants' own understanding of their territorial situation, which strengthens our confidence in the credibility of the findings. Andalucía and Periurban Expansion in Cali

2.2. Study Context: Parcelación Andalucía and Peri-urban Expansion in Cali

Parcelación Andalucía is a peri-urban settlement located in southern Cali, Colombia, whose origins trace back to mid-twentieth-century informal occupation. The settlement displays distinctive ecological and social characteristics relevant to understanding sense of place under conditions of rapid urbanisation. The territory contains remnant wetland ecosystems and dry tropical forest fragments that support high native biodiversity. Residents practise active agroecology, maintain productive gardens and cultivate small-scale farms within residential parcels, and these everyday practices shape their daily relationships with land and ecological systems.

Administratively, Parcelación Andalucía occupies an ambiguous legal position within Cali's formal territorial divisions. This ambiguity generates distinctive governance challenges and opportunities, since the settlement operates primarily through community-based organisations rather than formal municipal structures. The area also faces sustained pressure from Cali's urban expansion corridor extending toward the municipality of Jamundí. This pressure materialises in the consolidation of large-scale urban developments that now coexist directly with the settlement, including Ciudad Pacífica, which urbanised approximately 800,000 square metres in the last five years; Ciudadela Kachipay, which urbanised 24,000 square metres and provides an average of 6.2 square metres of green area per inhabitant; and Bochalema, which covers 396,745.98 square metres. The proximity of these macro-projects intensifies the urgency of territorial planning and sustainability questions in Parcelación Andalucía.

2.3. Participants and Sampling Strategy

We engaged 24 community leaders from eight Community Action Boards (Juntas de Acción Comunal, JAC) distributed across the greater peri-urban corridor that includes Parcelación Andalucía and its immediately adjacent sectors. Participants included both presidents and active members of these JACs, selected through purposive sampling on the basis of demonstrated participation in community governance and territorial decision-making. The sample comprised leaders from Ciudad Vivero (5 participants), Parcelación Andalucía (5), Ciudad Pacífica (4), Plan Parcial Ciudadela Bochalema (5), Mirasol (1), Cachipay (2), Vegas de Comfandi (1) and Arboleda (1).

This sampling strategy reflects a deliberate analytical choice. While Parcelación Andalucía constitutes the focal case, territorial governance in this corridor operates through relational networks that extend across adjacent sectors facing equivalent planning pressures. Including leaders from neighbouring JACs allowed us to capture the broader socioecological system within which Andalucía's sense of place is

embedded and contested, while keeping the analytical focus on Andalucía as the settlement with the most consolidated territorial habitus and the most advanced collective governance proposal. This sampling strategy intentionally centres those with sustained engagement in community organisation, since sense of place emerges not merely from residence but from active participation in collective decision-making about territory. Participants showed diversity across gender, age and residential subareas within the peri-urban corridor. Data Generation Techniques

2.4 Data Generation Techniques

2.4.1. Thematic Workshops and Participatory Setting

Over a six-month period, we facilitated seven structured thematic workshops in partnership with Universidad Autónoma de Occidente. These workshops opened a participatory space where community leaders engaged with territorial and sustainability questions through guided dialogue and collaborative learning. The workshops addressed two complementary themes. The Territorial Ordering workshops (two sessions) engaged participants with concepts of space, environment and territory, and explored determinants of territorial planning, urban expansion, active citizenship, identity and pluralism, state–society relations, and peace and coexistence. The Community Communication workshops (five sessions) addressed community-based communication strategies, digital technologies, social media platforms and digital tools for collective mobilisation.

The workshop format itself functioned as a data generation technique. Rather than extracting information from participants in traditional interview or survey mode, the workshops created conditions under which participants could articulate their relationships with territory, negotiate competing understandings of sustainability and collectively imagine alternatives to current dynamics. This approach acknowledges that sense of place does not constitute pre-formed knowledge that participants simply report; instead it emerges through reflective engagement with place and community.

2.4.2 Mental Mapping as Participatory Representation

During the Territorial Ordering workshops, participants produced four collective mental maps drawn on large paper sheets. Mental mapping renders spatial knowledge and environmental cognition visible through visual representation and ranks among the most established techniques in environmental psychology and participatory planning (Otto et al., 2018; Scannell and Gifford, 2010; Smith and Aranha, 2020). Working in small groups, participants drew their understandings of green corridors, water networks, sites of collective memory, zones of biodiversity and threatened areas within and around Parcelación Andalucía. The maps functioned simultaneously as data products and as catalysts for discussion, since their creation prompted participants to articulate why certain spaces mattered, how they envisioned ecological and social relationships, and what they valued in their territory.

Each mental map synthesises multiple individual perspectives and reflects negotiated group understanding rather than individual perception. The maps therefore offer spatial evidence of how participants think collectively about territory in relation to sustainability and community wellbeing.

2.4.3 Systematic Observational Fieldwork

Throughout the six-month engagement period, and continuing beyond the formal workshop phase, we conducted systematic observational fieldwork in Parcelación Andalucía. This fieldwork involved multiple visits to the territory, during which we documented community dynamics, productive practices, land-use patterns, social infrastructure, ecological conditions and spatial organisation through detailed field notes. Observation occurred both during workshop sessions and during separate field visits to the settlement.

The observational approach served three functions. First, it grounded our understanding of the territory beyond participant representation and allowed us to witness agroecological practices, water management systems and community spatial organisation directly. Second, it provided contextual information for interpreting the mental maps and workshop discussions. Third, it documented relationships between sense of place as articulated in workshops and actual community practices and territorial management on the ground. This triangulation across participatory products, workshop discussion and direct observation strengthens the interpretive validity of our findings.

2.5. Data Analysis: Thematic Synthesis and Interpretive Integration

Our analytical approach combined thematic analysis of mental maps with systematic synthesis of observational field notes and workshop documentation. Rather than employing automated coding software, we conducted manual thematic analysis appropriate to the participatory and visual nature of our data. This choice follows Braun and Clarke's (2006) reflexive thematic analysis approach, which treats systematic interpretive engagement as a rigorous epistemological stance in its own right, not a fallback from computational methods, and explicitly identifies inter-rater reliability as a criterion that belongs to a different – realist and positivist – epistemological tradition than the one this study adopts.

The analytical process unfolded across several stages. We first conducted open thematic coding of the mental maps and identified recurring spatial elements, environmental representations and social meanings embedded in the visual products. We then organised these visual themes into categories aligned with established theoretical dimensions of sense of place – attachment (emotional bonds to place and relationships of care), identity (the ways place shapes self-understanding and community membership) and belonging (social inclusion and sense of home). In parallel, we subjected observational field notes to systematic thematic analysis and identified patterns in community practices, governance dynamics and relationships between people and territory.

In a subsequent analytical phase, we compared emergent themes from maps and observations against Schlosberg's (2007) environmental justice framework, treating it not as a predetermined coding scheme but as a conceptual lens through which to understand how community sense of place relates to environmental justice and sustainability governance. We then developed integrated interpretations

across all three data sources to understand how sense of place operates as a mechanism of territorial stewardship and adaptive governance.

2.6 Ethical Considerations and Study Limitations

This research received ethical approval from [institution name and approval code]. We obtained informed consent from all participants, explained the research purpose and data use clearly, and ensured that participation remained voluntary throughout the study period. We maintained confidentiality of individual participant identities and present findings at the collective community level rather than attributing specific statements to individuals. The mental maps reproduced in this article underwent anonymisation before publication, with personal identifiers and precise household locations removed.

The study carries several limitations we address transparently. The sample of 24 community leaders reflects purposive rather than random selection, which limits statistical generalisability — a limitation that case study methodology accepts by design, since it seeks depth of understanding rather than statistical representation, and our sample size suits intensive qualitative investigation. We engaged a single peri-urban corridor as our primary site, which prioritises depth over breadth. Nevertheless, several characteristics of Parcelación Andalucía — its peri-urban location, informal settlement history, grassroots JAC governance, agroecological practices and position within a Global South expansion corridor — resonate with conditions across many urbanising contexts and suggest analytical transferability to cases sharing these structural features, particularly those where informal governance networks operate under sustained real-estate pressure in the absence of clear institutional mandates.

Participation in the workshops favoured residents already engaged in community governance and territorial planning, which means we captured the voices of actively organised leaders while likely missing perspectives of less organised or more marginalised residents. We recognise this as a constraint on whose sense of place our research represents and flag it as a direction for future participatory research in the area.

3. Results: Findings from participatory workshops and mental mapping

The workshops with 24 JAC community leaders in Parcelación Andalucía generated a rich corpus of spatial, narrative and affective data that reveals both the depth and the internal structure of residents' sense of place and the governance tensions that this territorial identity must navigate. Far from producing a uniform territorial imaginary, the participatory sessions brought to light a stratified and internally differentiated understanding of the sector, organised around three recurrent clusters — the emotional relevance of ecological elements, community articulation around a threatened identity, and the mobilising potential of the eco-neighbourhood proposal as a collectively elaborated governance response.

The mental maps that participants produced consistently foregrounded ecologically significant elements that formal cartographic representations of the sector either omit altogether or reduce to generic land-use categories. Remnant wetlands, native tree corridors, water channels and areas associated with particular species — iguanas, agoutis and migratory birds — appeared with high frequency and occupied the affective centre of participants' spatial representations rather than their margins. The boundaries that participants drew around these elements showed remarkable precision and deliberation, and they functioned less as descriptive demarcations than as normative claims, marking an ecological inheritance that the community regards as non-negotiable and communicating what belongs here and what must not be lost. The spatial vocabulary of the maps also revealed a multisensory attachment — participants labelled areas not only by ecological function but also by sensory and experiential qualities, including the sound of water, the smell of soil after rain and the shade of specific trees, a dimension that Tuan (1975) associates with the deepest and most enduring forms of topophilia.

Figure 3 presents the collective mental map that workshop participants produced during the Territorial Ordering sessions. The map renders visible the systemic logic with which Andalucía residents understand their territory. Rather than representing the area as a set of parcels, participants drew an integrated socioecological network in which hydrological infrastructure, biodiversity corridors, sites of collective memory and community spaces appear as mutually constitutive elements. Wetlands and water channels occupy the structural core of the map rather than its margins, and the most threatened zones cluster near the roads that have historically enabled real-estate access from the Cali–Jamundí axis. This spatial grammar constitutes a governance argument in its own right — it places ecology at the centre and real-estate pressure at the periphery, inverting the visual logic of urban planning documents that typically foreground infrastructure and treat biodiversity as a residual or restrictive category. As Barthel and Scott (2023) argue, cartographic gestures of this kind encode a political affirmation as much as the narrative dimension of the workshops reinforced and elaborated what the maps expressed spatially. Community dialogues revealed a strong sense of historical continuity — participants consistently situated their ecological demands within accounts of multigenerational habitation and territorial care tracing back to the formation of the sector in the mid-twentieth century. One JAC leader from Parcelación Andalucía put it this way: "We did not arrive here to build; we arrived here to stay with what was already alive." Another participant from Ciudad Vivero noted that "the water that runs through here has always been ours to take care of — it is not an amenity, it is part of who we are as a community." These accounts reflect what Masterson et al. (2017) describe as the slow accumulation of territorial identity that operates as a latent resilience variable within socioecological systems. Participants described agroecological practices — pesticide-free cultivation, seed conservation and water management — simultaneously as material strategies and as cultural inheritances, insisting that these practices express who they are as a community rather than merely what they do. The alignment between ecological stewardship and collective self-definition, reiterated across sessions by participants from different generations and residential subareas, indicates a territorial identity that has reached a community-scale sedimentation consistent with what Bourdieu (1999) defines as shared territorial

habitus — a durable and transposable set of dispositions toward the land that intergenerational reproduction has rendered practically taken for granted.

Confronted with this richly constituted sense of place, participants articulated an omnipresent experience of threat that shaped the second major thematic cluster in the data. Real-estate pressures associated with the Cali–Jamundí expansion corridor emerged directly and repeatedly, not as abstract policy forces but as concrete intrusions. Participants referred to construction cranes visible from their homes, lot surveys conducted without community consultation and proposals circulating through municipal channels without any call for residents to express their views. One participant from Ciudadela Bochalema described the experience directly: "They measure the land without asking. As if we were not here, as if this place had no history." These testimonies align with Schlosberg's (2007) account of the distributive dimension of environmental justice — the ecological costs of urban expansion, including ecological degradation, biodiversity loss and flooding from impermeable surfaces, fall disproportionately on communities with limited influence over the development decisions that generate those costs. Several participants also expressed frustration with how territorial decisions take shape, articulating a recognition injustice in which their knowledge of wetlands, their histories of territorial care and their documented agroecological management practices remained absent from the Partial Plan process, which advanced on the basis of technical assessments by actors with no residential or experiential ties to the place. The mental maps that the community produced under these conditions function not only as descriptive products but also as counter-cartographies that document ecological value the community regards as authoritative and that formal planning had not registered.

Table 1 presents the central analytical instrument of this study — a 3×3 matrix crossing Scannell and Gifford's (2010) tripartite place attachment model (person, process, place) with Schlosberg's (2007) triadic environmental justice framework (distributive, recognition, procedural). To our knowledge, no prior study has operationalised these two frameworks in systematic dialogue to analyse how sense of place generates and sustains environmental justice claims in a peri-urban governance conflict. The matrix serves not only as an analytical display of the Parcelación Andalucía case but as a portable diagnostic instrument applicable to other peri-urban contexts where community territorial knowledge confronts institutional exclusion. Each of the nine nodes illuminates a specific facet of the relationship between territorial identity and claims for justice — from the ways in which multigenerational habitation histories constitute experiential capital at distributive risk (person–distributive node), to the ways in which the eco-neighbourhood proposal demands that the physical attributes of the sector anchor territorial planning rather than serve as a residual variable (place–procedural node). The analytical productivity of the matrix lies in its capacity to convert a land-use conflict into a multidimensional justice problem, since the same situation raises simultaneous questions about who bears ecological costs, which forms of knowledge matter in planning processes and who holds real power over decisions — and the absence of an answer to any one of these three questions undermines the sustainability of any proposed resolution.

Table 1

Tripartite matrix: place attachment × environmental justice applied to the Parcelación Andalucía case

Distributive justice (equitable distribution of environmental benefits and burdens)	Person (individual and collective identities; shared memories and meanings)	Process (affect / cognition / behavior)	Place (physical and social characteristics of the territory)
	Experiential capital at risk because decades of cohabitation with wetlands shape an identity whose dispossession through urbanization constitutes a distributive injustice that formal planning does not see.	Emotional attachment coexists with an acute awareness of threat and this tension drives collective organization in the JAC and active defense of the peri-urban territory.	Wetlands, dry forest and permeable soils function as environmental goods and the community bears the costs of their degradation without having decided their fate.
Recognition justice (inclusion of voices; respect for local knowledge)	Knowledge held by JAC leaders —species, water cycles, history of the place— constitutes legitimate governance rather than “local opinion” that technical planning can discard.	Mental maps translate affective attachment into structured ecological knowledge and their absence from the Partial Plan represents an epistemic injustice rather than a technical omission.	The physical attributes of the sector function as a justice claim because the community demands that its knowledge of these attributes carry the same weight as professional technical studies.
Procedural justice (genuine participation in territorial decisions)	JACs (Law 743 of 2002) hold procedural legitimacy grounded in their rootedness in place and exclusion from the Partial Plan denies the authority of territory as a subject of governance.	Active resistance —workshops, maps, eco-neighborhood proposal — constitutes real participation and a merely reactive consultative role reproduces the procedural injustice that the community denounces.	The eco-neighborhood proposal requires that ecology, history and community land use provide the starting point for territorial planning rather than a variable that urban regulation manages.

The eco-neighbourhood proposal that emerged as the third major thematic cluster represents the convergence point of the two preceding ones. An eco-neighbourhood integrates ecological principles into neighbourhood design and management by prioritising the conservation of green spaces and biodiversity, promoting sustainable water and energy management, supporting agroecological food production and fostering active resident participation in territorial governance — building, in Tuan's (1975) terms, a bond of topophilia between inhabitants and their surroundings. Participants did not frame the eco-neighbourhood as a project yet to be built; they framed it as the formal recognition of a community that already practises agroecology, already monitors biodiversity and already organises to defend wetlands and dry-forest remnants. In this sense, the proposal embodies what Delgado-Serrano et al. (2018) describe as the governance potential of community-based natural resource management in Latin America — the capacity of place-anchored communities to self-organise around ecological

stewardship even without formal institutional recognition. Critically, the proposal also illustrates the double bind that the introduction identified as the paper's central argument — the same depth of territorial habitus that makes the eco-neighbourhood proposal ecologically authoritative is precisely what planning institutions, lacking instruments to read embodied and practice-based knowledge, have treated as an informal and legally ambiguous demand rather than a legitimate governance input. Sense of place here does not merely support a governance response; it simultaneously generates that response and constitutes the obstacle that planning institutions place in its path.

4. Discussion

The findings from the participatory workshops with JAC leaders in Parcelación Andalucía reveal a community that operates as a functional socioecological system in which sense of place acts as what Masterson et al. (2017) describe as a 'slow variable' — a dimension of the system that changes gradually yet decisively conditions its resilience trajectory and its capacity for adaptive governance. The collective articulation of wetlands, fragments of tropical dry forest and flood dynamics as constitutive elements of community identity, expressed with spatial coherence in the mental maps produced during the workshops, corresponds to the activation of ecological stewardship motivation that Masterson et al. identify as the primary contribution of sense of place to socioecological system governance. Hakkarainen et al. (2022) strengthen this interpretation through their concept of place-embedded agency, which holds that the capacity to act in governance processes arises precisely from sustained embeddedness in a territory, with its history, ecology and social fabric. In Parcelación Andalucía, this condition distinguishes JAC leaders from the technical-administrative actors who manage the Partial Plan from outside the spatial and historical experience of the community. Where Cvitanovic et al. (2024) identify the intangibility of sense of place and structural institutional barriers as the main obstacles to its incorporation into socioecological system management, the Expansión de Vida workshops represented a methodologically deliberate attempt to overcome those barriers by translating affective, territorially grounded knowledge into spatial and narrative forms that can, in principle, enter formal planning processes.

Yet the evidence from Parcelación Andalucía points toward a more unsettling dynamic than the established literature acknowledges. The same depth of territorial habitus that generates ecologically authoritative knowledge — a durable, embodied, pre-reflexive set of dispositions toward the land that Bourdieu (1999) identifies as collectively produced rather than individually held — is precisely what renders that knowledge illegible to the instruments of technocratic planning. Planning protocols demand knowledge in formats of numeric assessment, cadastral categorisation and juridical documentation, none of which correspond to how practice-based, multigenerational territorial knowledge takes shape. This mismatch produces a structural double bind at the heart of the case — the communities best qualified to participate in territorial governance, because their territorial habitus carries the deepest ecological and social knowledge of the place, are systematically disqualified by the very depth of that attachment, which institutions read as parochial bias rather than legitimate expertise. The double bind means that sense of place does not simply correlate with environmental injustice in Parcelación

Andalucía — it drives its deepest structural dimension. This finding inverts the standard narrative in SoP literature, where attachment consistently appears as a governance resource. Here, attachment also constitutes an institutional liability, and resolving that liability requires institutional transformation rather than community capacity-building.

The matrix in Table 1 makes the full architecture of this double bind visible across three interdependent dimensions. In distributive terms, long-standing residents shoulder a disproportionate share of the ecological degradation driven by urbanisation precisely because their identities, livelihoods and social reproduction remain most tightly coupled to the threatened landscape, and they risk losing not only material environmental goods but also the experiential capital sedimented in place identity over generations. In recognition terms, the depth of attachment that endows JAC leaders with authoritative territorial knowledge about wetlands, water cycles and species dynamics becomes the basis on which planning actors dismiss their input — treating decades of place-based practice as anecdote rather than evidence. In procedural terms, the same attachment that grounds the JAC's legal legitimacy under Law 743 of 2002 becomes the basis for their exclusion from the Partial Plan process, which advanced on the basis of technical assessments by actors with no residential or experiential ties to the place. The absence of an adequate institutional response to any one of these three dimensions undermines the legitimacy of any proposed planning resolution, since distributive, recognition and procedural justice remain interdependent in Schlosberg's (2007) framework.

This dynamic does not represent an exception within Latin American peri-urban contexts. In the peri-urban landscapes of Stockholm, Rastandeh et al. (2025) identified sense of place as the critical factor for negotiating compatible land uses between recreational demand and ecosystem protection, and showed that it facilitated the implementation of nature-based solutions — but also reported significant scalability challenges under conditions of intense urban development pressure structurally comparable to those facing southern Cali. The scalability challenge Rastandeh et al. identify captures exactly what the double bind predicts — the stronger and more spatially specific community place attachment becomes, the harder planning institutions find it to process as a governance input rather than an obstacle to development. Closer to home, Díaz-Pinzón et al. (2024), in their examination of urban wetland governance in Cali through a socioecological systems lens, show that the absence of clear institutional mandates and jurisdictional coherence — a condition that accurately describes the legal limbo of the Andalucía Partial Plan, held by DAPM since 2018 — generates community management not as a desired governance outcome but as an adaptive response to institutional failure. Quimbayo Ruiz (2018) situates Colombian urban environmental movements, including wetland defence organisations structurally comparable to the JAC in Andalucía, within a national tradition of territorial citizenship in which community identity and ecological claims remain inseparable. In Recife, Brazil, Uwayezu and de Vries (2022) similarly found that pursuing spatial justice within urban redevelopment processes strengthened perceived and de facto tenure security for residents of informal settlements, suggesting that the eco-neighbourhood proposal's recognitional and procedural claims in Andalucía carry a comparable potential to convert contested legal-territorial status into a more secure governance footing. Together, these cases confirm that the Expansión de Vida workshops did not capture an isolated local

mobilisation — they documented a recognisable form of Latin American peri-urban socioecological governance that exhibits internal coherence and territorial rootedness yet remains structurally vulnerable to external forces that the state fails to regulate, because those forces operate at a scale of market logic that is almost entirely independent of community organisational capacity (Delgado-Serrano and Ortiz-Guerrero, 2015).

The place attachment literature has not traditionally engaged with the exclusionary potential of SoP, and this gap deserves explicit acknowledgement. Scholarship documents cases where strong community place attachment supports NIMBY dynamics, reinforces exclusionary urban politics or resists necessary territorial change (Manzo and Perkins, 2006). The Parcelación Andalucía case does not fall into that pattern — the community's eco-neighbourhood proposal actively supports biodiversity conservation, wetland protection and inclusive agroecological governance, and the spatial evidence in the mental maps shows an ecological sensitivity that formal planning documents in the corridor have not matched. Nevertheless, the analytical framework developed here does not claim that strong place attachment always generates emancipatory governance — it claims that the double bind between attachment and institutional misrecognition is a structural feature of peri-urban governance conflicts in the Global South that the literature has not yet systematically theorised, and that recognising it is a precondition for designing planning institutions capable of receiving community territorial knowledge rather than inadvertently disqualifying it.

Articulating the local findings with global sustainability frameworks clarifies what is at stake beyond the borders of the corridor. The Valle del Cauca retains less than 2 per cent of its original tropical dry forest cover (HALAC, 2022), placing this territory within the biosphere integrity and land-system change planetary boundaries identified by Rockström et al. (2009) and refined by Steffen et al. (2015). From the perspective of adaptive co-management theory, governance effectiveness depends not only on formal institutional design but also on the quality of trust relations and shared learning processes among actors with different knowledge systems (Armitage et al., 2009) — precisely the relational infrastructure that the Expansión de Vida workshops began to build. The eco-neighbourhood proposal advances a form of polycentric governance that Folke et al. (2005) identify as a structural condition for sustainable socioecological systems management. The analytical implication of this convergence is that resolving the double bind identified in this study is not only a local justice imperative — it constitutes a governance condition for keeping peri-urban ecosystems of global significance within safe operating boundaries.

5. Conclusions

This study demonstrates that sense of place in Parcelación Andalucía does not function as a peripheral affective texture — it acts as a governance mechanism that articulates three interdependent dimensions simultaneously: the motivation for ecological stewardship that converts territorial attachment into collective action, the production of territorially grounded knowledge that challenges the epistemic hierarchies of formal planning, and the capacity to formulate environmental justice claims that are distributive, recognitional and procedural at once. The eco-neighbourhood proposal that emerged from

participatory workshops with 24 JAC leaders synthesises these three dimensions in a concrete territorial project, advancing a form of community governance anchored in place that asserts the right to co-produce the territory's future on the basis of the accumulated knowledge of its inhabitants.

The study advances three contributions to scholarship on sense of place, environmental justice and peri-urban governance. The primary contribution – and the one that most directly challenges existing theory – lies in identifying the structural double bind that sense of place produces in peri-urban governance conflicts. The same depth of territorial habitus that generates ecologically authoritative knowledge, and that motivates sustained stewardship of wetlands, dry-forest remnants and water systems, simultaneously renders that knowledge institutionally illegible to planning protocols that demand numeric assessment, cadastral categorisation and juridical documentation. SoP does not only correlate with environmental injustice dynamics – it drives their deepest structural dimension, making attachment both the resource that communities mobilise and the liability that planning institutions use to disqualify them. The second contribution concerns the 3×3 analytical matrix crossing Scannell and Gifford's (2010) tripartite attachment model with Schlosberg's (2007) justice triad, which functions as a portable diagnostic instrument other researchers and practitioners can apply to peri-urban governance cases where community territorial knowledge confronts institutional exclusion. The third contribution extends SES-based SoP scholarship empirically into the peri-urban Global South, where the intersection of informal settlement histories, high ecological value and technocratic planning pressure represents a governance configuration that rural and Indigenous SoP research has not yet addressed.

The paralysis of the Andalucía Partial Plan at DAPM since 2018 and the legal-territorial limbo that keeps the community outside any formally recognised borough do not simply represent administrative failures – they signal an urban governance model that lacks the instruments to receive community knowledge and sense of place as legitimate planning inputs. Two concrete responses follow directly from the analytical findings of this study. The POT 2038 under formulation should incorporate a formal validation protocol for community-produced mental maps and spatial knowledge within Partial Plans affecting urban edge settlements, treating counter-cartographies as evidence with equivalent standing to technical studies rather than supplementary consultation material. The Municipal Planning Department DAPM should also evaluate the Andalucía eco-neighbourhood as a pilot case under the Edge Control strategy of the POT 2038 – a measure that would protect remaining tropical dry forest and wetlands while advancing the biodiversity and decarbonisation commitments that Cali made publicly during COP16 in 2024. Both measures require institutional redesign rather than additional community effort, which is precisely the implication of the double bind argument – resolving it demands transformation on the institutional side.

Future research should pursue two verifiable propositions that this study generates. Communities with a territorial habitus of three or more generations exhibit greater procedural justice claims than recently settled communities under equivalent real-estate pressure, because multigenerational habitation produces deeper epistemic authority that institutions find harder to dismiss – and testing this proposition through systematic comparison with Latin American peri-urban cases where community

knowledge achieved institutional traction would identify the structural conditions under which the double bind breaks down. In parallel, participatory mental mapping generates institutional legibility for community knowledge only when formal feedback mechanisms connect mapping outputs to planning bodies before decisions advance — a proposition that longitudinal monitoring of the 'Expansión de Vida' process in Parcelación Andalucía could assess by tracking whether the governance capacities activated through the workshops sustain themselves over time or dissipate under the structural pressure of real-estate market forces. Building resilient peri-urban territories is ultimately a political process that demands planning institutions capable of reading territorial habitus not as an obstacle to development but as the most authoritative governance resource a place can offer.

Declarations

Author Contribution

HU and EP conducted the fieldwork and led the research underlying this study. HU, EP and FR drafted the manuscript. FR was responsible for organising the document and for the editorial revision and correction work. All authors reviewed and approved the final manuscript.(HU = Hernando Uribe, EP = Efraim Parra, FR = Fabiana Restrepo)

Data Availability

The mental maps, workshop materials and thematic coding developed for this study contain identifiable information about named community leaders and are subject to the confidentiality terms agreed with participants during the 'Expansión de Vida' workshops. For this reason, the underlying qualitative dataset is not deposited in a public repository. Anonymised excerpts and the coding framework are available from the corresponding author upon reasonable request.

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Figures

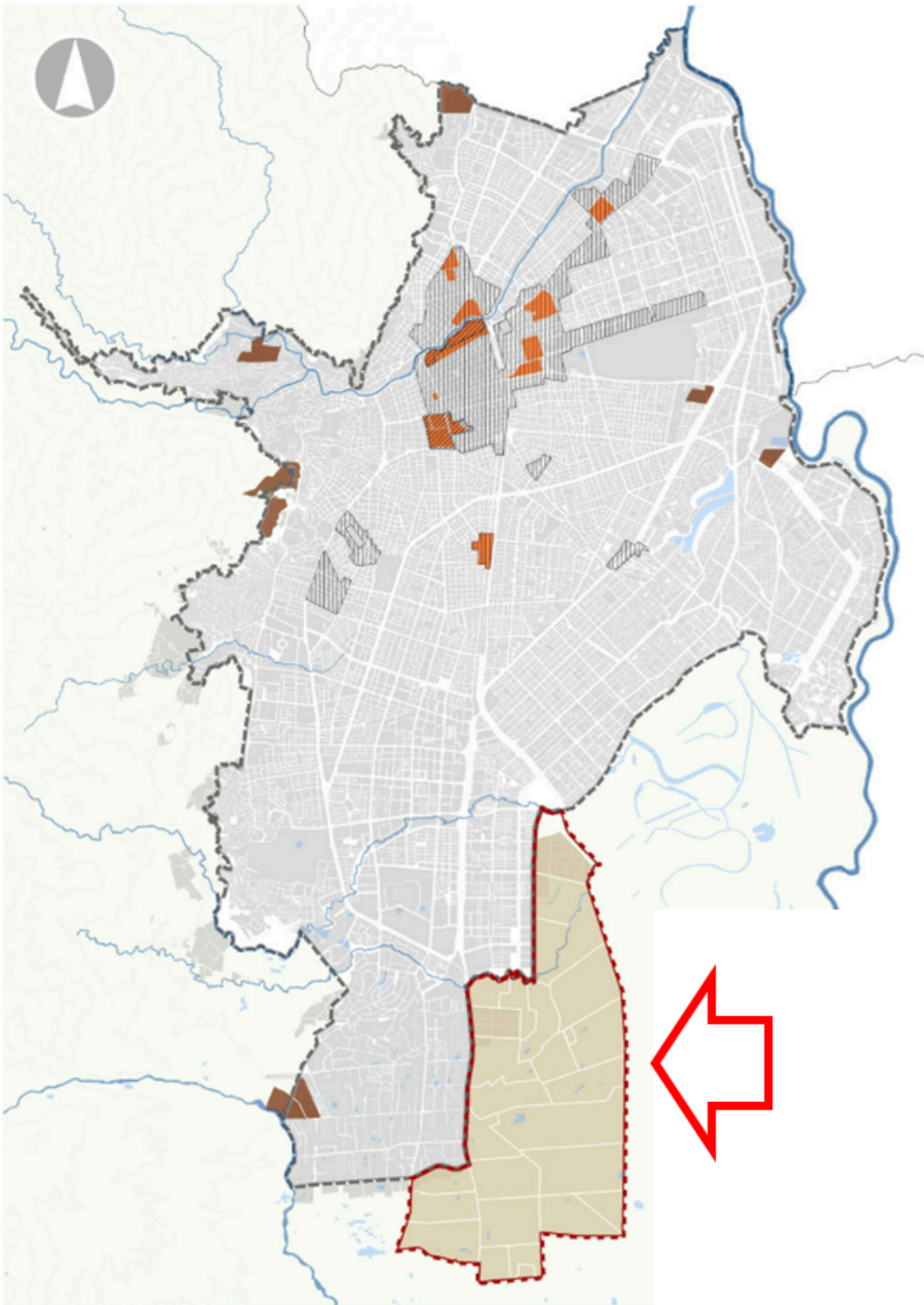


Figure 1

Location map of Cali–Jamundí corridor.

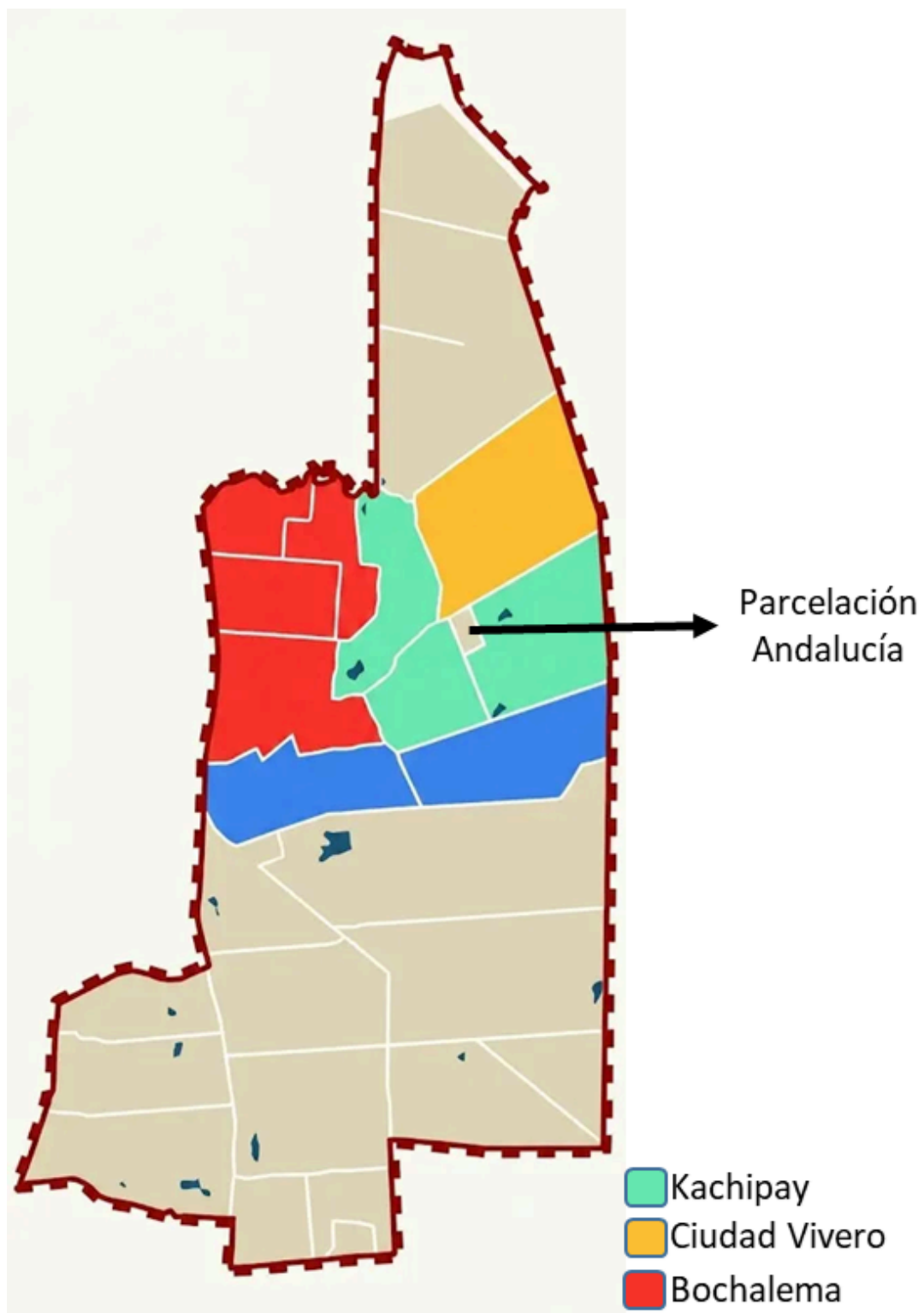


Figure 2

Location map of Parcelación Andalucía.

