

The capitalist production of the urban-rural interface: the case of Ricaurte in Cuenca, Ecuador

La producción capitalista de la interfaz urbano-rural: el caso de Ricaurte en Cuenca, Ecuador

A interface urbano-rural de Cuenca e seu crescimento no contexto do sistema capitalista global: o caso da unidade territorial de Ricaurte, Cuenca, Equador

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Abstract: The urban-rural interface of Ricaurte, in Cuenca (Ecuador), is a hybrid and conflictive territorial configuration produced by the superposition of metropolitan logics of urban expansion, real estate valorization, and industrialization with local practices of agriculture, community water management, and the everyday reproduction of life. From a critical perspective grounded in the approaches of the production of space, territorial justice, and the coloniality of power, it argues that the dichotomous classification between urban land and rural land is insufficient to understand the transformations taking place in these territories. Methodologically, the research follows a descriptive qualitative design based on literature review, exploratory case analysis, direct observation, in situ field visits, and the interpretation of secondary geoinformation produced through situated academic exercises. The results show that urban expansion in Ricaurte not only fragments the territory and puts pressure on natural resources, but also subordinates key ecological and productive infrastructures, such as streams, irrigation canals, and agroproductive corridors, while weakening community forms of governance and deepening processes of sociospatial segregation. At the same time, practices such as mingas and community irrigation networks express active forms of resistance against the subordination of the territory to the logics of capital. The article concludes that recognizing the urban-rural interface as a specific territorial category makes it possible to reorient planning toward the ecological, productive, and community functions that sustain life in these spaces, thus providing a starting point for more integrated decision-making regarding the socio-environmental system.

Keywords: urban-rural interface; production of space; territorial justice; socio-environmental system; territorial governance.

Resumen: La interfaz urbano-rural de Ricaurte, en Cuenca (Ecuador), es una configuración territorial híbrida y conflictiva, producida por la superposición de lógicas metropolitanas de expansión urbana, valorización inmobiliaria e industrialización, con prácticas locales de agricultura, gestión comunitaria del agua y reproducción cotidiana de la vida. El objetivo de este artículo es sostener que la clasificación dicotómica entre suelo urbano y suelo rural resulta insuficiente para comprender las transformaciones que experimentan estos territorios y para ello se sitúa en una perspectiva crítica apoyada en los enfoques de la producción del espacio, la justicia territorial y la colonialidad del poder. Metodológicamente, la investigación se desarrolla mediante un diseño cualitativo descriptivo, basado en revisión bibliográfica, análisis exploratorio del caso, observación directa, recorridos in situ y lectura de geoinformación secundaria producida en ejercicios académicos situados. Los resultados muestran que la expansión urbana en Ricaurte no sólo fragmenta el territorio y presiona los recursos naturales, sino que subordina infraestructuras ecológicas y productivas fundamentales, como quebradas, canales de riego y corredores agroproductivos, al tiempo que debilita formas comunitarias de gobernanza y profundiza procesos de segregación socioespacial. A la vez, prácticas como las mingas y las redes comunitarias de

riego expresan resistencias activas frente a la subordinación del territorio a las lógicas del capital. Se concluye que reconocer la interfaz urbano-rural como una categoría territorial específica permite reorientar la planificación hacia las funciones ecológicas, productivas y comunitarias que sostienen la vida en estos espacios, constituyéndose en un punto de partida para decisiones más integrales sobre el sistema socioambiental.

Palabras clave: interfaz urbano-rural; producción del espacio; justicia territorial; sistema socioambiental; gobernanza territorial.

Resumo: A interface urbano-rural de Ricaurte, em Cuenca (Equador), é uma configuração territorial híbrida e conflituosa, produzida pela sobreposição de lógicas metropolitanas de expansão urbana, valorização imobiliária e industrialização com práticas locais de agricultura, gestão comunitária da água e reprodução cotidiana da vida. A partir de uma perspectiva crítica apoiada nas abordagens da produção do espaço, da justiça territorial e da colonialidade do poder, sustenta-se que a classificação dicotômica entre solo urbano e solo rural é insuficiente para compreender as transformações que esses territórios experimentam. Metodologicamente, a pesquisa desenvolve-se por meio de um desenho qualitativo descritivo, baseado em revisão bibliográfica, análise exploratória do caso, observação direta, percursos in situ e leitura de geoinformação secundária produzida em exercícios acadêmicos situados. Os resultados mostram que a expansão urbana em Ricaurte não apenas fragmenta o território e pressiona os recursos naturais, mas também subordina infraestruturas ecológicas e produtivas fundamentais, como riachos ou córregos, canais de irrigação e corredores agroprodutivos, ao mesmo tempo em que enfraquece formas comunitárias de governança e aprofunda processos de segregação socioespacial. Ao mesmo tempo, práticas como as mingas e as redes comunitárias de irrigação expressam resistências ativas frente à subordinação do território às lógicas do capital. Conclui-se que reconhecer a interface urbano-rural como uma categoria territorial específica permite reorientar o planejamento em direção às funções ecológicas, produtivas e comunitárias que sustentam a vida nesses espaços, constituindo-se em um ponto de partida para decisões mais integrais sobre o sistema socioambiental.

Palavras-chave: interface urbano-rural; produção do espaço; justiça territorial; sistema socioambiental; governança territorial.

1. Introduction

The theoretical development of planning has tended to structure analysis around an urban-rural dichotomy, without fully integrating the complexity of territories in transition, such as the urban-rural interface (UR-I). This absence has produced partial and incomplete approaches, in which the socioeconomic, environmental, and territorial dynamics specific to these spaces are rendered invisible within models that force them to fit conventional categories. This is confirmed even in the conceptual shifts that redefined the role of the planner between the 1960s and 2000. According to Benabent (2014), these shifts moved from the figure of the expert toward that of the manager of dialogue and consensus, including Habermas's communicative rationality, Forester's communicative planning, the active participation of citizens in Davidoff's advocacy planning, John Friedmann's transactive planning, and Healey's collaborative planning.

The work of López-Goyburu and García-Montero (2017) points out that from 2000 onward several disciplines identified the urban-rural interface, with a stronger presence in those sciences with a marked territorial component, such as ecology, environmental studies, or urban planning, concluding that new planning strategies specific to this space are needed, on the grounds that it integrates urban and rural functions in a unique

way. This view recognizes the UR-I as a distinct domain that requires particular attention in planning, which makes it possible to define the UR-I as a transitional space with dynamics of its own, different from both the urban core and the rural environment. It must therefore be incorporated into territorial planning as a system distinct from the urban or the rural, including its articulating function between the city and the countryside (Niño Soto et al., 2005), and understood as the place where the tensions produced by the clash between the urban and the rural are manifested (Delgado & Galindo, 2006).

To the above, as several authors have noted, a decolonial perspective must be added, since the UR-I is not a neutral territory of transition but a contested space, where urban modernity is imposed as the only legitimate path to development, displacing rural economies, community structures, and forms of territorial self-management. Thus, Lefebvre (2013) proposes that space is neither neutral nor naturally given, but socially produced through relations of power and capital. In the same vein, Meneses and Santos (2014) denounce the exclusion of non-capitalist ways of inhabiting. Finally, Quijano (2020), already in the 1990s, explained the imposition of the European model and therefore of its urban model as the only possibility of development, with the consequent impossibility of territorial horizons other than utopian ones. Three theoretical frameworks considered for the analysis of the capitalist production of the UR-I are set out below.

1.1. Logics of spatial production in the UR-I

The institutional production of space is driven by the management and planning of these territories through rigid plans and assumptions of stable horizons, which clash with the reality of dynamic and changing contexts (Botequilha-Leitão & Díaz-Varela, 2020). Even the much-desired resilience identified as a necessary quality is not intended to transform power relations in the city, but to manage its crises so that the economic and political system can continue operating without alterations (Meerow & Newell, 2019). For this to occur with greater acceptance, the territory of the UR-I is regarded as residual; and, lacking visibility, it becomes the favorable site for externalizing the costs of urbanization, through dumps, treatment plants (López-Goyburu & García-Montero, 2018), or pollution of natural watercourses (Lockaby & Sun, 2012).

Despite the above, the social structures that inhabit the UR-I often possess cooperation networks, in which practices such as the *mingas* in Ecuador (Bravo et al., 2023) or the *mutirão* in Brazil (Pilote, 2011) remain essential for the planning and maintenance of irrigation canals, roads, and other spaces of common use and dependence, operating as territorial agents that shape the territory according to their own logics and needs. These dynamics resemble those identified in the “resilient” territories analyzed in

the Ecuadorian Andes, such as the parish¹ of Octavio Cordero, in the canton of Cuenca, where communities have managed to maintain traditional structures of water management and agricultural production despite real estate pressure and the transformation of peri-urban land (Rebaï, 2019).

Collective governance systems, as Rayner and Zamorano (2002) propose in their conceptualization of the right to the city in Latin America, must be understood not only as a normative aspiration, but as a political process under construction, sustained by collective practices that challenge the structural exclusion inherited from colonial modernity, and which also involve the claim to the territory, with its streams, mountains, and productive soils that are intertwined with collective and individual activities. This right is reconfigured in territorial dispute, where local actors reinterpret on a daily basis the meaning of inhabiting, producing, and governing space. The city is not delivered by the State or the market; it is claimed through collective action, in a process of incessant resistance.

In the case of the UR-I, the transformation of land can be understood as a confrontation between a technical-state institutional framework that seeks to order the territory and social practices that sustain it, give it meaning and, at times, resist it, such as the *minga*, which is not inscribed in any normative or state body. Following Lefebvre, land (territory) is not an empty support inevitably destined for urbanization, but a socially produced space, historically and socially constituted. It is spatial practice that produces it and gives it meaning over time, through uses, labor, the reproduction of life, and symbolization.

However, under capitalist conditions, this production is organized in a contradictory manner, within the framework of spatial practice (the perceived), representations of space (the conceived), and spaces of representation (the lived) (Lefebvre, 2013). Within this triad, representations of space (plans, regulations, and technical discourses) tend to operate as the dominant dimension, linked to order and development. This can subordinate collective meanings of inhabiting and erode collective governance, in addition to reorienting uses and materialities toward logics of valorization (exchange value), in articulation with the real estate market and state powers. This process, unequal and conflictive, not only reconfigures the physical landscape, but also disputes the meaning of inhabiting and affects the bonds that sustain the territory as a common good.

Understanding the UR-I requires moving beyond inherited geographical taxonomies that fragment the territory into defined and opposing units. As Brenner and Schmid (2015) propose, we face an era of planetary urbanization in which the urban fabric extends beyond the limits of the dense city, reaching territories traditionally considered rural. From this perspective, the urban should not be understood as a zone, a form, or a

1 In Ecuador, the parish (parroquia) constitutes a sub-cantonal political-administrative unit, equivalent to an internal subdivision of the canton, which may be urban or rural in character.

type of settlement, but as a process: the historical and dynamic process in which socio-spatial configurations are constantly transformed, dissolved, and reconstructed. The UR-I thus ceases to be a mere edge of the city and becomes a node of extended urbanization where the logics of capital reorganize everyday life and transform the territory.

1.2. The socio-environmental system and the reproduction of inequalities in the UR-I

The coexistence of traditional practices, such as agriculture, livestock raising, forestry, and other trades, with modern urban activities not only accentuates socio-spatial tensions, but also exposes the continuity of a process of territorial coloniality, in which certain ways of inhabiting and producing space are systematically subordinated to the dynamics of capital and hegemonic urbanization, as evidenced in the coexistence of *precariópolis* and *privatópolis* (Arenas & Hidalgo, 2011), and in the fact that contemporary urbanization entails the creation of new geographies of centrality and marginality that do not respect traditional administrative boundaries (Brenner & Schmid, 2015). Its understanding must therefore not be reduced solely to terms of socioeconomic segregation, since it responds to a logic of territorial coloniality (Quijano, 2014) in which certain sectors of the population have been historically marginalized from the right to the city. This reveals the need to reconfigure territorial governance for this population, with a structural change in normative frameworks and in the power relations that define which city is produced and for whom, since the direct participation of those concerned in urban life is an essential condition of the right to the city (Lefebvre, 1978).

Real estate expansion of the residential type with large gated communities, as one of the most visible mechanisms of urban expansion, leads to the creation of socioeconomic clusters and perpetuates cycles of inequality with those who have not yet migrated to the new ways of inhabiting, while at the same time reinforcing the fragmentation of the social fabric and the reduction of shared public space (Ahmad et al., 2014). According to Frenkel and Israel (2017), spatial justice not only implies an equitable distribution of resources, but also the capacity of communities to participate actively in shaping the territory and in the decisions that affect their quality of life. This perspective aligns with the argument of Fainstein (2010), who maintains that urban justice must be grounded in three fundamental principles: equity, democracy, and diversity.

Urbanization has also caused the degradation of natural ecosystems, especially streams and surface watercourses, whose permanence is increasingly uncertain in the face of the pressure of urban growth. These water bodies not only fulfill a key ecological function in providing water for human consumption, but also for irrigating land that still sustains a population engaged in agriculture, and they regulate the local water bal-

ance through processes of infiltration, aquifer recharge, and runoff control (Lockaby & Sun, 2012).

In this context, the transformation of the landscape does not occur in a neutral manner but responds to logics of commodification of the territory that reorganizes the distribution of land and resources, promoting greater territorial fragmentation. As has been observed in studies on urbanization in the UR-I, the loss of agricultural land in favor of real estate development and the degradation of water ecosystems not only affect environmental sustainability but also weaken the autonomy of rural communities by integrating them into economic dynamics dominated by land speculation and dependence on urban infrastructure (Lockaby & Sun, 2012).

The article is thus situated within an approach distinct from the traditional classificatory dichotomy that operates in Ecuador, recognizing the urban-rural interface as a hybrid and conflictive space. Its central objective is to establish the UR-I as a specific category of territorial planning from a critical perspective grounded in the approaches of the production of space, territorial justice, and the coloniality of power, as a point of departure for building decisions that affect the socio-environmental system. In this way, the article aims to contribute to the advancement of theory through the exploratory analysis of cases situated in Cuenca, Ecuador.

2. Context of the study

In the case of Ecuador, rigid institutional territorial planning has managed urban growth through the creation of new plans that incorporate rural land with the intention of transforming it into urban land. However, this model has not only perpetuated the problems already existing at urban edges but has also promoted an expansion poorly integrated with the consolidated urban fabric, generating spatial fragmentation and affecting the mobility and accessibility of inhabitants, as has also been observed in other Latin American cities such as Bogotá (Barbosa et al., 2022).

The UR-I identified in order to apply the theoretical approaches described above is the parish of Ricaurte in Cuenca, Ecuador, whose characteristics make it possible to assess a historically agricultural territory linked to irrigation systems and community practices, which is undergoing rapid and constant transformation mediated by: urban expansion with low- and medium-density residential projects, and the emergence and expansion of industrial projects that have altered land use and the everyday life of its inhabitants, with the consequent appearance of new urban actors who have displaced former residents, agricultural practices, and resources necessary for food sovereignty. Several of the analyses focus on areas such as the Titina stream, the surroundings of industrial enclaves adjacent to residential areas, and *Polígonos de Intervención Territorial* (PIT) identified on the basis of the planning instruments in force which, administratively, over the

last two decades, have shifted from rural land to urban land, as Unidades de Planificación de Ricaurte.

The functional integration of Ricaurte with Cuenca is evidenced in patterns of daily mobility (Flores-Juca et al., 2024), where most of its inhabitants commute daily to the city, with a high dependence on public transport and significant travel times, which reinforces the subordination of the rural territory to urban dynamics. This integration is manifested at multiple scales, showing that the parish cannot be understood in isolation. Ricaurte operates as a residential, productive, and service extension of the city, while at the same time retaining organizational forms, social practices, and local economies that respond to its territorial history. This dual condition generates a structural tension between the expansive logic of the metropolitan urban system, which drives intensive land occupation and real estate revalorization, and a local logic that maintains forms of territorial appropriation more deeply rooted in agriculture, communal water management, and the neighborhood economy.

The center of Ricaurte accumulates various tensions since, while it concentrates basic public infrastructure and articulates local services, it also experiences pressures to be transformed into a center of urban densification, affecting its traditional role as a space of community encounter. Understanding this functional and symbolic relationship between the local and the metropolitan logic is crucial in order to reorient territorial planning toward a model that, in addition to regulating growth, recognizes and strengthens its structuring capacity in relation to its surroundings.

3. Methodology

The methodological design is qualitative and descriptive, based on a literature review and an exploratory analysis of the case. The research relies, in the first place, on a bibliographic review aimed at informing the discussion of the transformations occurring in the UR-I and at building the conceptual framework of the study. To this end, key conceptual texts on territorial justice, coloniality of power, and the production of space are considered, in order to critically interpret the dynamics of urbanization and development driven by real estate capital and their implications for the socio-environmental system. In the second place, the exploratory analysis of the case makes it possible to examine how these transformations are expressed in the territory and how they materialize in responses of resistance and in the exercise of the right to the city through social participation, community practices, and their governance.

The texts mentioned were obtained through various academic platforms and databases. The main ones include: Scopus, for internationally indexed articles; Google Scholar, to locate specific texts and non-indexed

Spanish-language literature; the open repositories SciELO and Redalyc, which provided access to Latin American journals; as well as university digital libraries. Legal documents were obtained from the official portals of the Asamblea Nacional del Ecuador and the Gobierno Autónomo Descentralizado Municipal de Cuenca, while journalistic data came from local online media, relevant for contextualizing recent phenomena.

Based on this literature, the empirical observation phase was designed in accordance with the theoretical concepts of the research, strengthening the analysis through information obtained by means of direct observation, *in situ* field visits, and the management of secondary geoinformation, carried out between April and June 2025. These activities were undertaken together with 39 sixth-semester students from the Diseño Arquitectónico y Urbano II course, as part of an urban-architectural assessment in the periphery of Cuenca, Ecuador. The process, academic and exploratory in nature, included interpretations of the urban-rural dynamics of Ricaurte, the elaboration of critical assessments, and the formulation of urban planning proposals oriented toward sustainability and territorial justice.

Finally, the integration stage consisted of consolidating the findings into a coherent synthesis that interweaves the theoretical framework with empirical evidence. Each field observation was contrasted with documentary or theoretical sources, generating a reflection that made it possible to identify opportunities for reorienting planning in the UR-I from a critical, participatory, and sustainable standpoint.

4. The urban-rural interface of Ricaurte in the city of Cuenca and its tensions

In the city of Cuenca there is a legal-administrative boundary between the urban and the rural; however, its permeability and its delineation were debated even at the time of its creation, as evidenced by the technical and political difficulty faced by the Municipality in 2022 in approving the Plan de Desarrollo y Ordenamiento Territorial (PDOT) (Gobierno Autónomo Descentralizado del Cantón Cuenca [GADCC], 2022a), which contains this decision. In that plan, the classification of urban land in the canton went from 7,171.78 ha in 2003 to 10,661.34 ha in 2022, with one of the prominent arguments being that the real city had already grown beyond a previously defined boundary.

However, beyond administrative certainty, this inflexible approach responds to a deeper logic of late capitalism (Fisher, 2019), in which territorial planning becomes a tool for managing the urban crisis, a new plan or prescription for the same ailment, rather than a mechanism of social transformation that mobilizes processes of collective organization and creation.

4.1. Logics of spatial production in Ricaurte

Urban growth is dominated by speculative logic, in which private developers seek to expand the urban perimeter in order to access cheaper land, without necessarily guaranteeing functional integration with the consolidated city, in a context in which society in most cities shows positive population growth rates, changes in household configuration (smaller families or even dwellings for single individuals), where housing is used as an economic asset (from the standpoint of exchange value rather than use value), or the creation of second or third homes for weekends, leisure, or profit. This has favored low-density suburbanization with limited access to services in environmentally and socially vulnerable areas, positioning this way of inhabiting above all other possibilities (Figure 1).

Territorial expansion tends to follow the main road corridors and the new highways, where urban growth has aligned with road connectivity, without considering criteria of territorial cohesion. In many cases, the informal road network has also played a key role by facilitating land occupation without adequate planning, further increasing dependence on the private automobile in the absence of investment in public transport.

Expansion has not been accompanied by effective strategies to densify and optimize already urbanized land. The lack of regulation and of its enforcement has allowed large tracts of underused or vacant land to continue increasing in value over time, without active State intervention to promote their use for more sustainable urban purposes.

In the case of Ricaurte, the phenomena described above are evident in several places, and particularly in the area of Tiopamba and Molinopamba, according to the Plan de Uso y Gestión de Suelo (PUGS) of Cuenca (GADCC, 2022b), Unidades de Planificación Ricaurte 6, 7, 10, 11, and 12. Through a joint analysis with students, using both traditional and critical cartography, several of the aspects cited above are identified in this place:

- The accelerated transformation of land uses, especially in the plots located along the main roads, has favored a fragmented occupation

Figure 1

Collage of conflicts between different ways of dwelling in the territory

Source: Prepared by the author based on Parra et al. (2025b).



guided by real estate logic. This pattern, likewise observed in other cities, may be interpreted as an expression of tentacular growth, insofar as expansion is concentrated along the road axes without sufficient articulation with comprehensive territorial planning (Figure 2).

- The progressive increase in building heights as a function of accessibility and exposure to the urban market, where the lots with better connections to public infrastructure have been subject to greater densification, encouraging processes of selective verticalization (Figure 3).
- An internal urban structure with significant limitations for the consolidation of the urban fabric, owing to the irregular geometry of the plots and dispersed building. In these cases, the lack of planning generates fragmented and discontinuous spaces, which hinders the provision of urban services and integration with the consolidated fabric (Figure 4).
- The coexistence of agricultural activities with a strong dependence on streams and irrigation canals, under constant threat from real estate expansion. These areas of agricultural production are pressured by the growth of the city, where the edge zones have lost agricultural infrastructure in favor of low- and medium-density real estate developments (Figure 2).

Figure 2

Assessment of UP-RIC-6

Source: Prepared by the author based on Marín and Morales (2025).

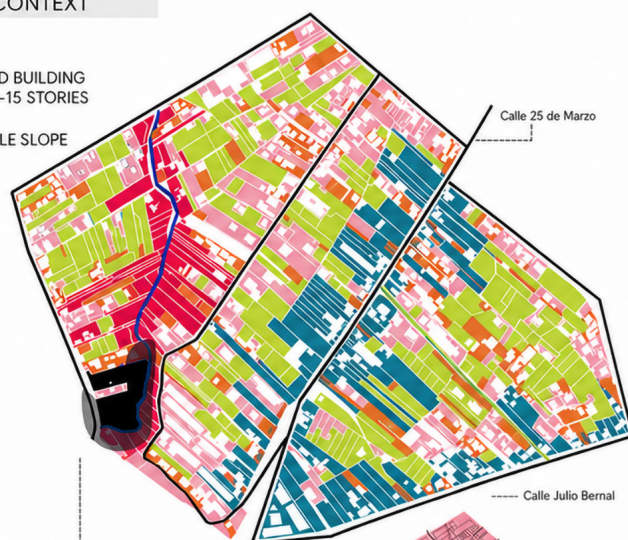
ARCHITECTURAL URBAN DIAGNOSIS

CURRENT CONTEXT AND REGULATORY FRAMEWORK

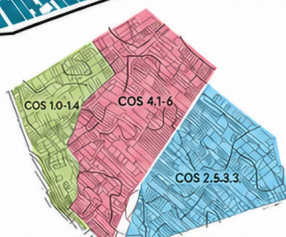
RICAURTE UP POLYGON – RIC-6

GENERAL CONTEXT

- STREAM
- PERMITTED BUILDING HEIGHT: 1–15 STORIES
- UNSUITABLE SLOPE



A 6,773.71 m² parcel located in a risk area due to unsuitable slope conditions and proximity to the stream.



Building height	Minimum lot area (m²)	Minimum frontage (m)	Net residential density (DU/ha)	Development type	Front setback	Side setback	Rear setback
1–3 stories	300	12	67	Attached	5	3	3



The terrain slope determined the permitted residential building height.

- Permitted height: 1–3 stories
- Permitted height: 1–2 stories

Regulatory non-compliance indicates that the stream is not the underlying cause of the problem.

- 54.48 % Properties that do not comply with regulations
- 45.52 % Properties at risk due to proximity to the stream that do not comply with regulations

Due to limited access, the land remained undeveloped and was used for cultivation.

- 48.54 %

Mixed land use is concentrated along primary access routes.

- 22.36 % Residential land use
- 77.54 % Mixed land use

ROADS

- Arterial
- Collector
- Local access
- Local
- Path

Building Height Map



Figure 3

Assessment of UP-RIC-7

Source: Prepared by the author based on Flores et al. (2024b).

UP-RIC-10: EXISTING CONDITIONS

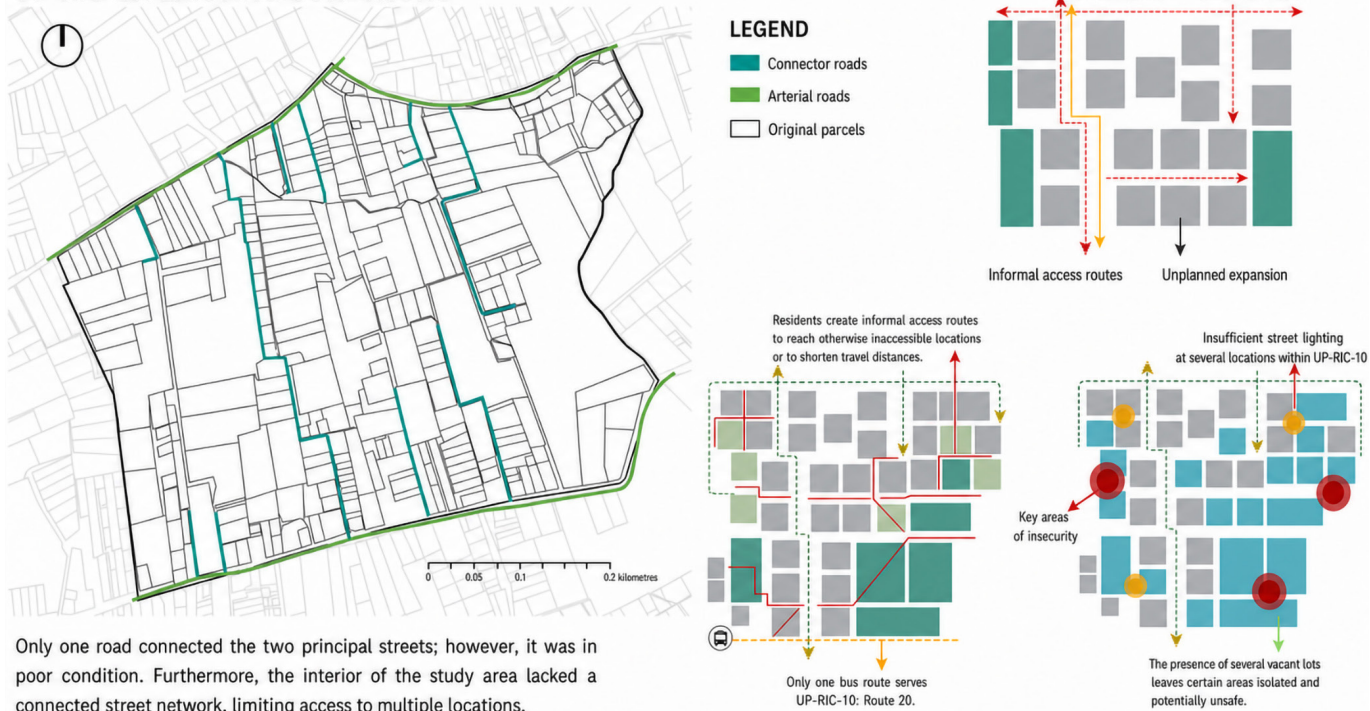


Figure 4

Assessment of UP-RIC-10

Source: Prepared by the author based on Iñaguazo et al. (2025).

This scenario reflects an urbanization whose lack of integration with the consolidated urban environment and the informal occupation of land with agricultural vocation, added to the total absence of real mechanisms of citizen participation, contradicts one of the fundamental principles proposed by Lefebvre: the right of inhabitants not only to inhabit, but to participate actively in the construction of the city (Lefebvre, 2013). In this sense, planning imposed from technocratic and market-driven logics strips communities of their capacity to produce their space, denying the right to transform it in accordance with their needs, practices, and territorial values.

4.2. Effects of urbanization on the socio-environmental system of the UR-I of Ricaurte

Ricaurte has historically been a rural parish with a strong link to agricultural activity and a robust community irrigation system. For decades, water has been a key element in the configuration of the territory, not only enabling agricultural production, but also functioning as an element of social cohesion and community organization.

From the 1990s onward, real estate pressure and the establishment of industries marked the beginning of a radical transformation of the landscape in Ricaurte, where the population has attempted to integrate traditional agricultural uses with urban residential sectors and industrial activities. However, this process has generated a reconfiguration of the territory in which high-impact industries and high-density residential projects have taken a central role, affecting not only environmental quality, but also the social and economic sustainability of the parish, given that irrigation systems are not necessary for these land uses (Figure 5).

One of the most critical industrial sectors in Ricaurte is the production of polyvinyl chloride (PVC) pipes, whose presence has raised significant environmental and social concerns. Studies have shown that prolonged exposure to PVC-derived compounds may be linked to an increased incidence of skin cancer and respiratory diseases among factory workers and nearby communities (Patil & Kubade, 2024). In addition, the chemicals used in PVC manufacturing, such as phthalates and heavy metals, can infiltrate soils and water sources, negatively affecting the quality of irrigation water and jeopardizing peri-urban agricultural production.

On the other hand, many streams and watercourses have been converted into informal dumping sites for sewage and urban waste, with the consequent pollution and loss of biodiversity (Figure 6). In areas with accelerated urban expansion, as documented in several intermediate cities, surface water quality has been observed to deteriorate by up to 50% compared with conserved rural areas, affecting the availability of drinking and agricultural water in the medium and long term (Lockaby & Sun, 2012). Real estate development has filled in streams or modified surface runoff in order to maximize the economic exploitation of land, in some cases causing

ANALYSIS OF THE IMMEDIATE AND WIDER URBAN CONTEXT

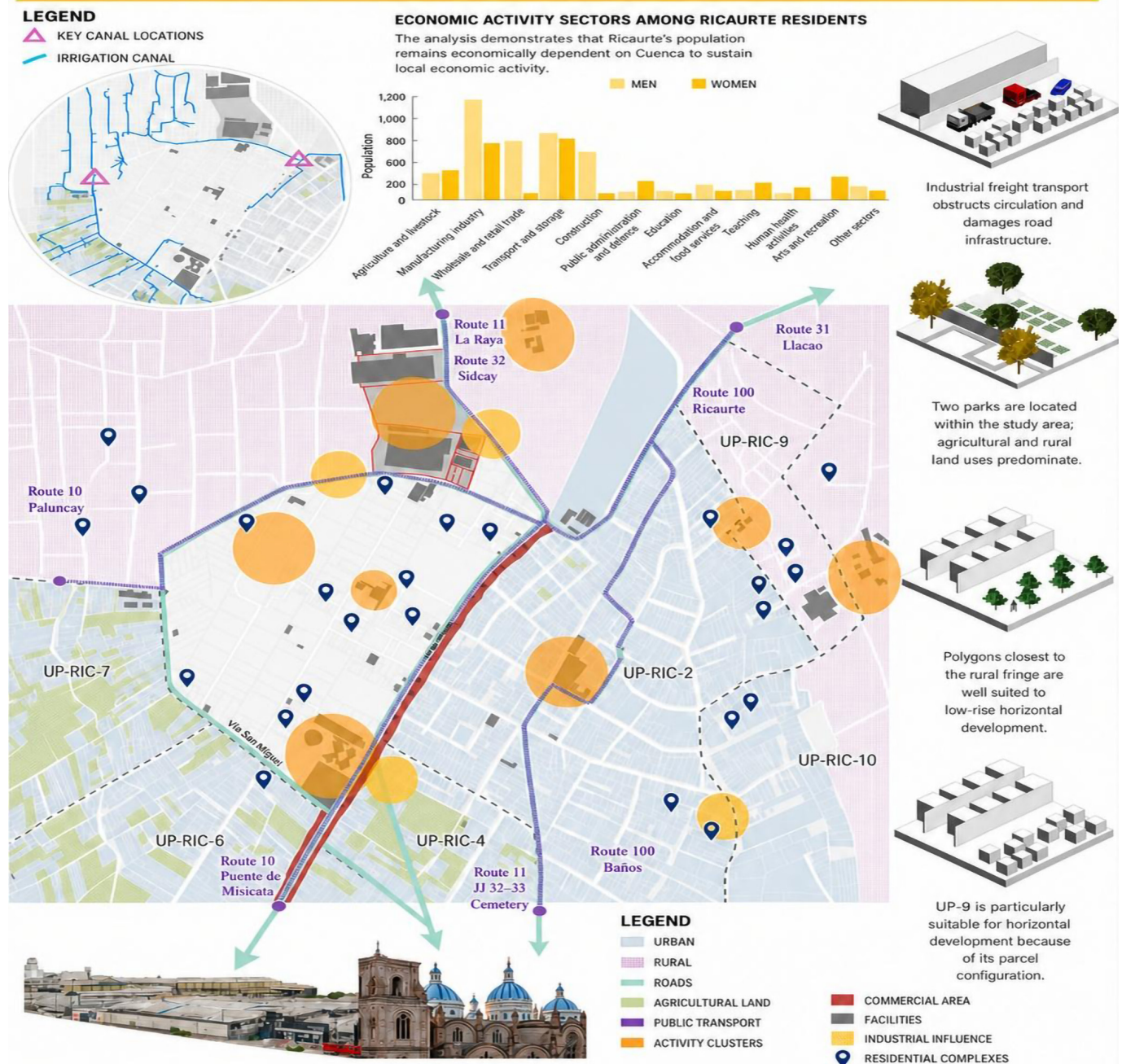


Figure 5

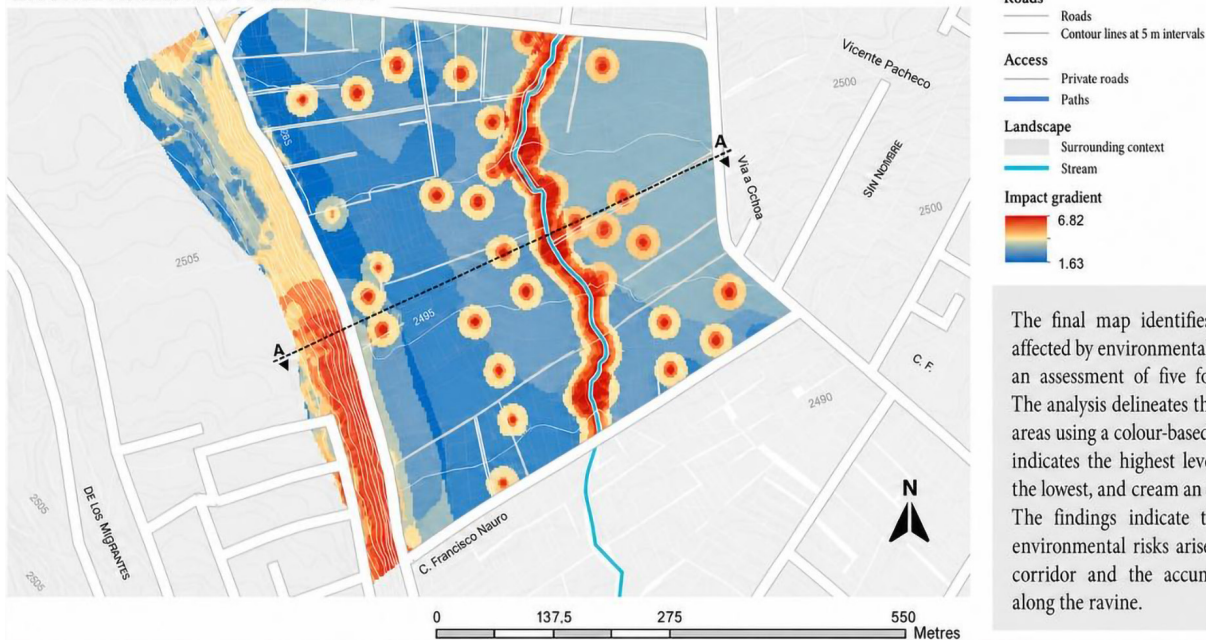
Assessment of UP-RIC-1

Source: Prepared by the author based on Parra et al. (2025b).

the collapse of stream banks and the sedimentation of irrigation canals, which aggravate the risk of flooding during periods of intense rainfall affecting the population, their activities, and their assets, as occurred at the beginning of 2025 (Teleamazonas, 2025).

Additionally, the socioeconomic transition in the urban-rural interface must be understood as a multidimensional process in which countless factors interact interdependently, generating tensions between urban-industrial development models and traditional ways of life. The arrival of new residents and the introduction of urban economic activities not only transform traditional social and cultural dynamics, such as the *minga* or community co-responsibility in maintaining streams and clean ditches, but

LA ASUNCIÓN - UP-RIC-7 ENVIRONMENTAL POLLUTION



The final map identifies the areas most affected by environmental hazards, based on an assessment of five forms of pollution. The analysis delineates the most vulnerable areas using a colour-based classification: red indicates the highest level of impact, blue the lowest, and cream an intermediate level. The findings indicate that the principal environmental risks arise from the stream corridor and the accumulation of waste along the ravine.

also reconfigure community identities and local economic structures, often with negative impacts on territorial resilience.

The work situated in the Titina stream identified how the network of irrigation canals and the stream itself face growing pressure due to processes of conventional urbanization (Figure 7). Despite being water infrastructures fundamental to the sustainability of local agricultural production, their integration into the urban model has been limited, which generates land-use conflicts, territorial fragmentation, and risks of environmental degradation. Planning is not protecting the ecological and productive function of the stream and the irrigation canals, despite their important contribution to food sovereignty and diversity, consumption patterns, and the micro-economy that sustains several families through diverse agricultural production such as maize, potatoes, legumes, vegetables, and even grass for small animals such as guinea pigs (Figure 8).

The restructuring of the territory not only affects food self-sufficiency and access to water, but also introduces a model of governance in which the State and private companies play an increasingly dominant role in land regulation, displacing traditional community structures in decision-making and supplanting or hindering the operation of pre-existing networks such as the Sociedad de Riego de Ricaurte, whose mission is the care and guarantee of the functioning of the irrigation network for all its beneficiaries.

With the implementation of new structures, the mechanisms of socio-spatial differentiation that reproduce historical and colonial hierarchies in the appropriation and use of the territory go beyond the lack of access to basic services: they reflect a geography of power in which traditional and low-income populations are displaced, while actors with greater economic

Figure 6

Assessment of environmental pollution in planning unit UP-RIC-7

Source: Prepared by the author based on Flores et al. (2024a).

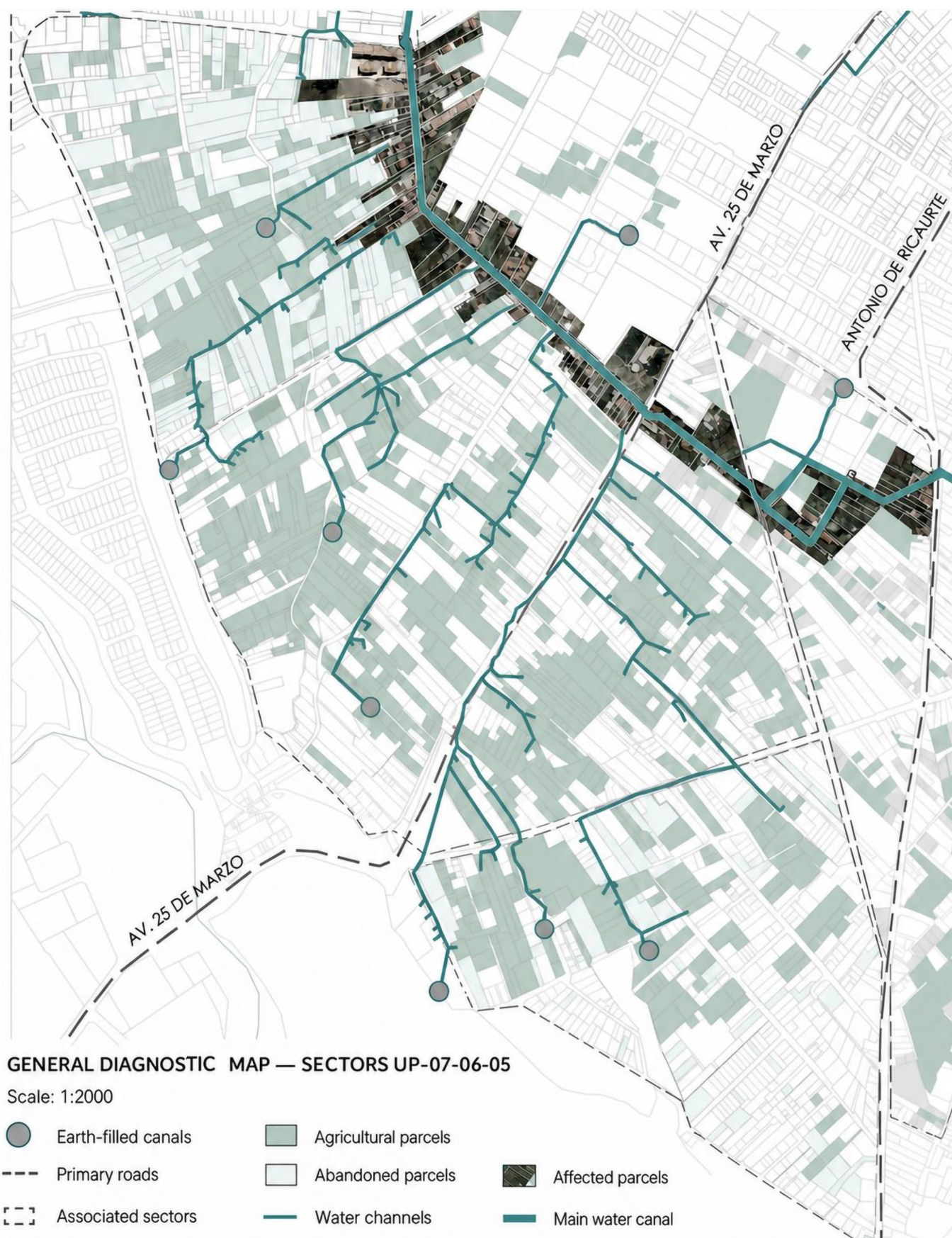


Figure 7
 Assessment of the irrigation system in planning units UP-RIC-5, UP-RIC-6, and UP-RIC-7
 Source: Prepared by the author based on Guerrero et al. (2025).



and political capital impose new forms of spatial occupation. This process generates problems affecting both the population living in poverty and those with a precarious integration into the dominant urban model.

Urbanization is not only a physical process, but a strategy of power that defines which territories and which populations have a right to the city and which are relegated to the periphery. In this sense, the accelerated urbanization of the UR-I not only reconfigures access to resources and land, but also strips communities of their capacity for agency over the territory, weakening networks of reciprocity and collective management such as those represented by the Sociedad de Riego de Ricaurte and the management of its infrastructure (Figure 9).

Spatial inequity in the UR-I of Ricaurte not only affects access to services, but also impacts the mobility and economic opportunities of its inhabitants, where segregation is no longer based solely on functional differences in land, but on intentional strategies of delimitation and control of space. In the past, although separated by fences or by different crops in adjoining plots, inhabitants shared similar or at least comparable physical conditions. Today, however, these divisions have evolved into more pronounced forms of spatial segmentation. Where there were once simple fences, high walls are now erected, not only physical but also symbolic, delimiting access to the city. The former wire meshes have been replaced by more rigid structures, with walls that support security and surveillance systems such as cameras and electrified fencing. Likewise, vegetal or mixed

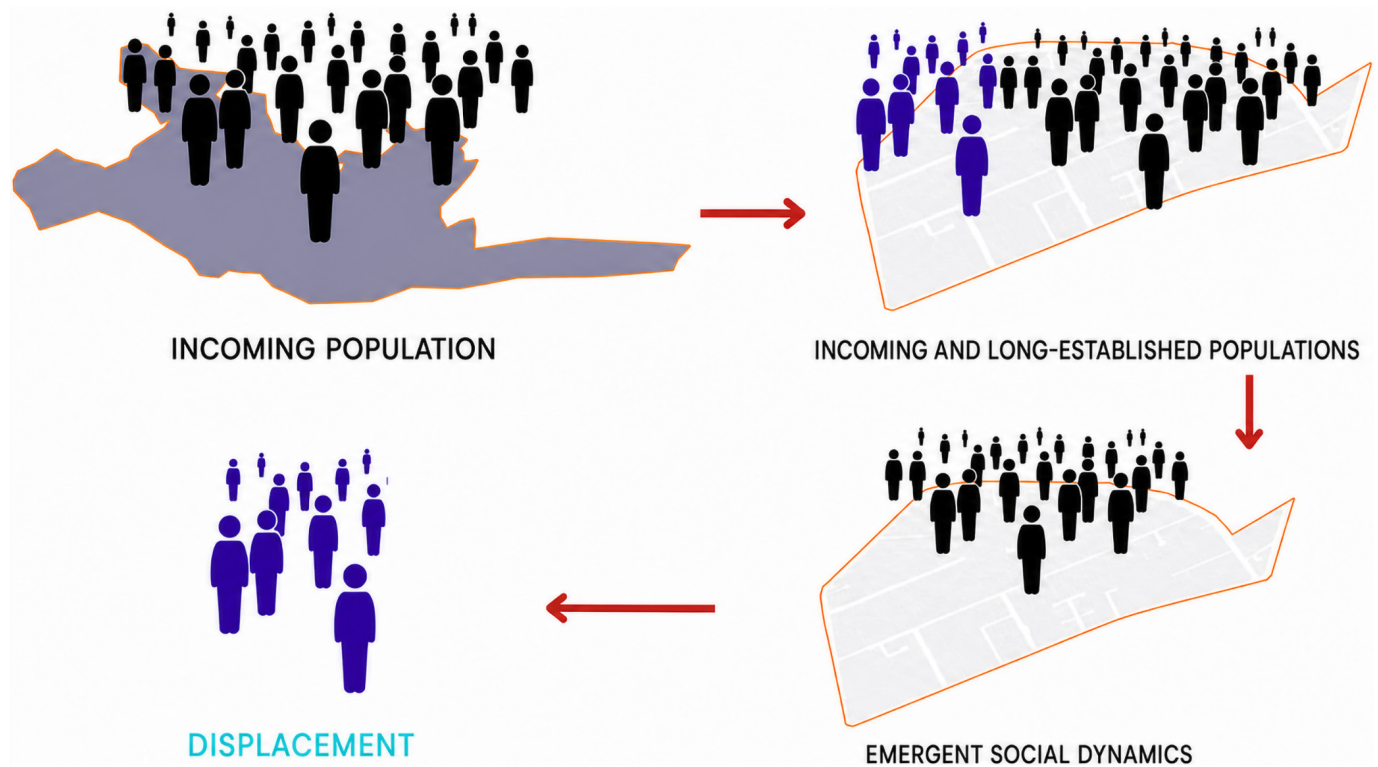


Figure 9

Diagram of population displacement

Source: Prepared by the author based on Parra et al. (2025b).

walls have been replaced by completely blind walls on which, in some cases, the name of the new housing complexes is displayed in high relief, generating a closed and exclusive identity.

This phenomenon is not isolated; it responds to a logic of privatization of space observed in multiple urban contexts worldwide. In several cities around the world, the proliferation of gated neighborhoods and controlled residential developments has turned security into a privilege and into a tool of socio-spatial segregation (Figure 10).

These developments usually justify their existence through discourses of security and quality of life, when in reality they function as devices of exclusion, limiting access to urban infrastructure and resources for those who are not part of these enclaves, while also avoiding the direction of collective efforts and public resources toward mitigating or solving the invoked insecurity and precariousness of life that they claim as their justification.

5. Discussion

The results show that the urban-rural interface of Ricaurte does not constitute merely a transitional strip between the urban and the rural, but a territory actively produced through unequal relations of power, in which accelerated urbanization operates as a mechanism of socio-spatial differentiation. Socioeconomic phenomena such as exclusion, territorial insecurity, the stigmatization of the environment, and difficulties in accessing resources and mobility do not appear as isolated effects, but constitute manifestations of a territorial logic that privileges the speculative valorization of

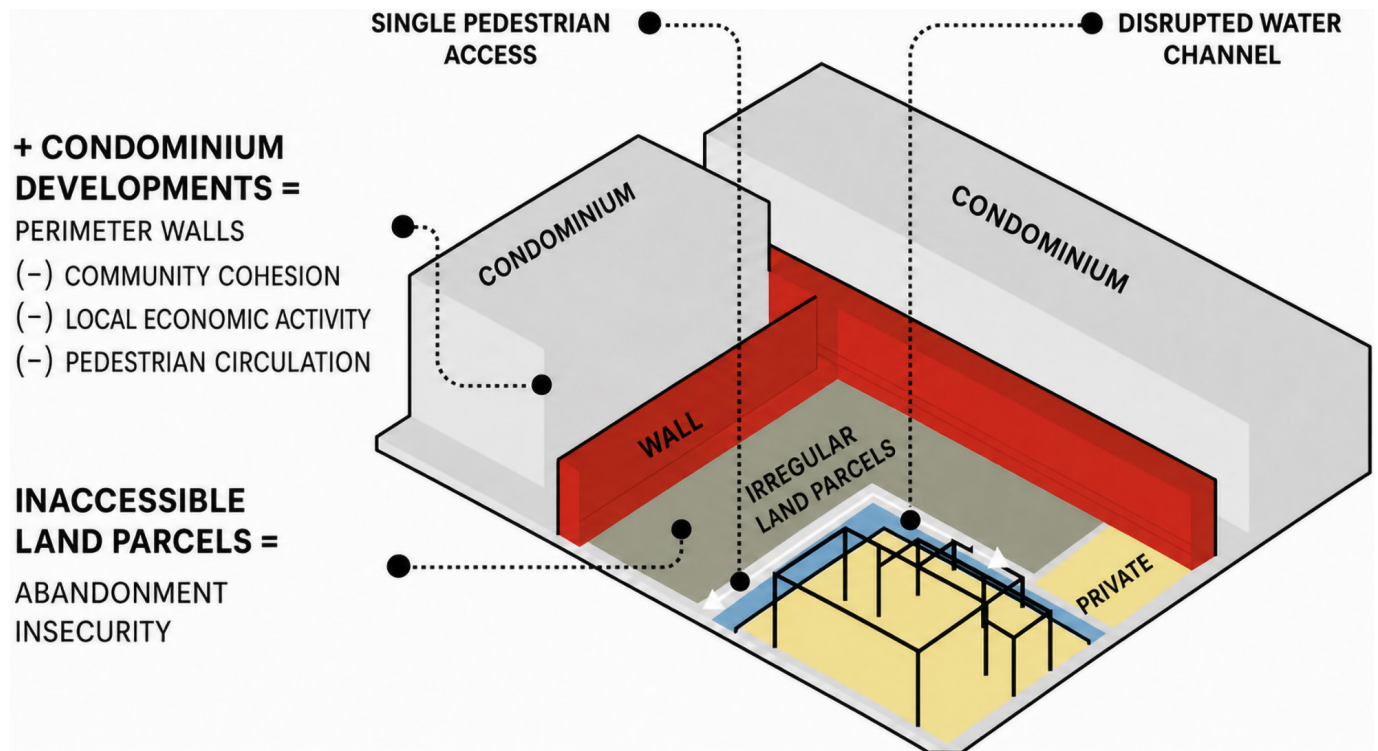


Figure 10

Diagram of the creation of residential condominiums and fragmentation of the pre-existing territory

Source: Prepared by the author based on Parra et al. (2025a).

land, especially in those areas close to the city or articulated by mobility infrastructures – a logic that, far from generating integration, selectively reorganizes access to infrastructures, services, and opportunities, while certain groups are pushed into processes of marginalization, displacement, or loss of the capacity to sustain their ways of inhabiting and producing space.

From this perspective, it is necessary to set out three findings on the basis of which territorial planning in the UR-I must be rethought:

First, the fragmentation observed in Ricaurte should not be understood only as the morphological expression of urban expansion, but as the concrete expression of a mode of production of space that subordinates pre-existing territorialities to the demands of urban expansion and real estate profitability. In this process, the territory ceases to be conceived as a support for social, productive, and symbolic practices and becomes progressively a commodity available for new forms of occupation, consumption, and value extraction. The capitalist production of space in the UR-I not only transforms the physical landscape, but also erodes traditional agricultural practices, dismantles the community fabric, minimizes pre-existing governance, and deepens forms of deterritorialization.

A second relevant finding shows that the UR-I cannot be understood solely from the logic of urban expansion, since it is also organized by an ecological and productive base whose centrality persists, even though it has been increasingly rendered invisible. In Ricaurte, the network of streams, irrigation canals, and agroproductive corridors continues to structure everyday life, food production, community cohesion, and an important part of the neighborhood economy. However, the empirical analysis shows

that these territorial infrastructures have been subordinated by a form of planning that does not incorporate them as constitutive elements of the urban-rural system, but rather as obstacles, residues, or secondary supports in the face of the expansion of developable land. This omission not only compromises environmental sustainability, but also weakens the material reproduction of life and its practices in the territory.

The dispute in the UR-I is not limited to land use; the pressure on the Titina stream and on the irrigation systems shows that it also involves the dispute over the control of water, of agricultural productivity, and of the community infrastructures that sustain the permanence of ways of life not fully subordinated to the dominant urban logic. The degradation of streams, the filling in of channels, the sedimentation of canals, and the loss of ecological continuity are not collateral effects of growth, but expressions of a pattern of urbanization that externalizes socio-environmental costs onto those spaces considered peripheral or residual.

A third aspect of the discussion concerns the way in which recent urbanization physically materializes new internal borders in the territory. The transition from fences, agricultural divisions, and permeable edges toward blind walls, gated developments, surveillance systems, and control devices expresses a qualitative transformation in the organization of space. This is not merely a formal modification of the landscape, but the consolidation of new forms of segregation and privatization that reorder access to the city and reinforce the separation between ways of inhabiting. In this way, gated residential enclaves or the culverting of natural channels function as territorial devices that translate into spatial terms a logic of exclusion, selective protection, social differentiation, and the abandonment of development horizons other than the capitalist imposition of urban expansion.

The results make it possible to interpret that urban expansion in the UR-I not only displaces agricultural activities, degrades ecosystems, or redefines land uses, but also seeks to reorder the territory in accordance with a rationality that tends to subordinate its ecological, productive, and social functions to the valorization of capital. Nevertheless, this process encounters limits and resistances in the lived space of spatial production, where collective practices of organization and care persist, such as the *mingas*, the community irrigation networks, and other forms of cooperation anchored in memories, bonds, and shared uses of space. Far from constituting residues of an outdated and retreating order, these practices express the active permanence of a different way of producing and sustaining the territory, and reveal that the dispute in Ricaurte is not exhausted at the normative or functional level, but involves a confrontation between antagonistic territorial projects. On one side, a logic oriented by technical-state regulation, the commodification of land, and urban expansion as the only dominant horizon is asserted; on the other, forms of territorial organization emerge that, by defending the collective management of water, community rec-

iprocity, and the continuity of ecological and productive bonds, counter that imposition with a rationality centered on the multiple possibilities for the reproduction of life. From this reading, the UR-I appears as a territory where lived space does not disappear in the face of urbanizing pressure, but is recomposed and resists, materially and symbolically disputing the subordination of the territory to the logics of capital.

6. Conclusions

The case of Ricaurte makes it possible to conclude that the UR-I can no longer be understood as a simple transitional strip between two previously given categories, but as a specific, hybrid, and conflictive territorial configuration, produced by the superposition of metropolitan logics of expansion, real estate valorization, and industrialization with local practices of agriculture, community water management, and the everyday reproduction of life. The evidence analyzed shows that this condition is not only morphological, but functional, ecological, productive, and political, so that the dichotomous classification between urban land and rural land proves insufficient to understand the territorial processes that unfold there.

The UR-I operates as a contested socio-environmental system, where urban expansion not only reorganizes land use, but also redefines the conditions of access to water, mobility, infrastructures, agricultural production, and the collective capacity to decide about the territory. The findings confirm that recognizing the UR-I as a distinct category makes it possible to better understand the conflictive coexistence between diverse territorialities, as well as the way in which planning and management decisions may reinforce or contest processes of dispossession, fragmentation, and socio-spatial subordination.

From the lived dimension of space in Lefebvre, this conflictive configuration should not be understood solely as the result of a structural imposition of capital upon the territory, but also as the setting in which other ways of inhabiting, producing, and giving meaning to space persist, are recreated, and are disputed on a daily basis. In Ricaurte, community practices linked to water, agriculture, neighborhood proximity, the memory of the territory, and collective forms of organization do not constitute mere residues of a previous order, but active expressions of resistance to the abstract homogenization of space driven by capitalist urbanization, which annuls other possible horizons.

The UR-I is also manifested as a space of representation, where inhabitants sustain material and symbolic bonds that challenge its reduction to a commodity, to a land reserve, or to a functional support for the expansion of the city. The resistance of the territory lies not only in its biophysical conditions or in the persistence of certain ecological and productive infrastructures, but in the social capacity of its inhabitants to continue produc-

ing meanings, practices, and relations that dispute, from lived experience, the total subordination of space to the logic of exchange value.

On the basis of the above, it is established that an approach alternative to the traditional classificatory dichotomy makes it possible to reorient territorial analysis, and that the UR-I should not be read solely as a reserve for urban expansion or as a situation prior to the consolidation of the city, but as a territory with a rationality and dynamic of its own, whose understanding requires incorporating its water infrastructures, local economies, forms of governance, and conflicts as a central part of decision-making. To that extent, establishing it as a specific territorial category is not only a conceptual adjustment, but a new point of departure for considering more integrated decisions regarding the socio-environmental system in relation to its planning and management.

References

- Ahmad, F., Grant, J. L., Hanif, N. R., Tedong, P. A., & Wan Abd Aziz, W. N. A. (2014). *Guarding the neighbourhood: The new landscape of control in Malaysia*. *Housing Studies*, 29(8), 1005–1027. <https://doi.org/10.1080/02673037.2014.923089>
- Arenas, F., & Hidalgo, R. (2012). Negocios inmobiliarios y la transformación metropolitana de Santiago de Chile: Desde la renovación del espacio central hasta la periferia expandida. *Revista Geográfica de América Central*, 2(47E), 1-16. <https://www.revistas.una.ac.cr/index.php/geografica/article/view/2207>
- Benabent, M. (2014). *Introducción a la teoría de la planificación territorial*. Universidad de Sevilla.
- Barbosa, V., Chica-Mejia, J. E., & Suárez Pradilla, M. M. (2022). The growing suburban sprawl in large Latin American cities: Applying space syntax to the case of northern peripheral region of Bogotá. *Journal of Settlements and Spatial Planning*, 13(2), 37–49. https://geografie.ubbcluj.ro/ccau/jssp/arhiva_JSSPSI2021CSPTER/05JSSPSI2021CSPTER.pdf
- Botequilha-Leitão, A., & Díaz-Varela, E. R. (2020). Performance Based Planning of complex urban social-ecological systems: the quest for sustainability through the promotion of resilience. *Sustainable Cities and Society*, 56, 102089. <https://doi.org/10.1016/j.scs.2020.102089>
- Bravo, J. A., Cárdenas, A. V., Naranjo, C. L., & Pinos, A. S. (2023). La minga como práctica comunicativa que orienta la transformación social de los indígenas de Chimborazo, Ecuador. *Communication Papers*, 12(25), 105–116. https://doi.org/10.33115/udg_bib/cp.v25i12.22921
- Brenner, N., & Schmid, C. (2015). Towards a new epistemology of the urban? *City*, 19(2–3), 151–182. <https://doi.org/10.1080/13604813.2015.1014712>
- Delgado, J., & Galindo, C. (2006). Los espacios emergentes de la dinámica rural-urbana. Problemas del Desarrollo. *Revista Latinoamericana de Economía*, 37(147). <https://doi.org/10.22201/iiiec.20078951e.2006.147.7639>
- Fainstein, S. S. (2010). *The just city*. Cornell University Press.
- Fisher, M. (2019). *Realismo capitalista: ¿No hay alternativa?* Titivillus. <http://comunizar.com.ar/wp-content/uploads/Fisher-Mark-Realismo-Capitalista.pdf>

- Flores, D., Guamán, A., Lojano, I., & Vásquez, D. (2024a). *Diagnóstico ambiental* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.
- Flores, D., Guamán, A., Lojano, I., & Vásquez, D. (2024b). *Diagnóstico urbano arquitectónico* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.
- Flores-Juca, E., Jiménez-Pacheco, P., Mora-Arias, E., & Parrado, C. (2024). Mobility and gender patterns in occupational activities of residents of the rural growth areas of Cuenca – Ecuador. *Territorios*, 50. <https://doi.org/10.12804/revistas.urosario.edu.co/territorios/a.12678>
- Frenkel, A., & Israel, E. (2018). Social justice and spatial inequality: Toward a conceptual framework. *Progress in Human Geography*, 42(5), 647–665. <https://doi.org/10.1177/0309132517702969>
- Gobierno Autónomo Descentralizado del Cantón Cuenca (GADCC). (2022a). *Plan de Desarrollo y Ordenamiento Territorial del cantón Cuenca*. <https://cuenca.com.ec/wp-content/uploads/2026/05/2-Propuesta-PDOT-2022.pdf>
- Gobierno Autónomo Descentralizado del Cantón Cuenca (GADCC). (2022b). *Plan de Uso y Gestión de Suelo del cantón Cuenca*. <https://repositorio.flacsoandes.edu.ec/items/1e5074b9-e44f-4715-8dd8-2f38ccbcd57e>
- Guerrero, N., Ñaguazo, D., & Jarama, M. (2025). *Plan Especial de Gestión Hídrica* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.
- Ñaguazo, D., Mejía, C., & Sánchez, S. (2025). *Plan Parcial Unidad de Planificación RIC-10* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.
- Lefebvre, H. (1978). *Derecho a la ciudad*. Ediciones Península.
- Lefebvre, H. (2013). *La producción del espacio*. Capitán Swing.
- Lockaby, B. G., & Sun, G. (2012). Water quantity and quality at the urban-rural interface. In D. N. Laband, G. Lockaby, & B. Wayne (Eds.), *Urban-rural interfaces: Linking people and nature* (pp. 29-48). Soil Science Society of America. <https://doi.org/10.2136/2012.urban-rural.c3>
- López-Goyburu, P. (2017). Innovative views on the urban-rural interface: The plan of expansion of Amsterdam, the County of London Plan and the Greater London Plan, and the Copenhagen Plan. *EURE*, 43(128), 175–196. <https://dx.doi.org/10.4067/S0250-71612017000100008>
- López-Goyburu, P., & García-Montero, L. G. (2018). The urban-rural interface as an area with characteristics of its own in urban planning: A review. *Sustainable Cities and Society*, 43, 157–165. <https://doi.org/10.1016/j.scs.2018.07.010>
- Marín, G. & Morales, M. (2025). *Diagnóstico Urbano Arquitectónico* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.
- Meerow, S., & Newell, J. P. (2016). Urban resilience for whom, what, when, where, and why? *Urban Geography*, 40(3), 309–329. <https://doi.org/10.1080/02723638.2016.1206395>
- Meneses, M. P., & Santos, B. de S. (2014). *Epistemologías del sur: Perspectivas*. Akal.
- Niño Soto, A. S., Toro Vasco, C., & Velasco Bernal, V. (2005). UR-I como un espacio articulador entre la ciudad y el campo, con funciones y problemas particulares. *Ingenierías Universidad de Medellín*, 4(7), 55–65. <https://www.redalyc.org/pdf/750/75004705.pdf>
- Parra, D., Rodas, L., Sigcha, I., & Yunga, J. (2025a). *Diagnóstico social* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.

- Parra, D., Rodas, L., Sigcha, I., & Yunga, J. (2025b). *Diagnóstico urbano arquitectónico* [Ejercicio académico no publicado]. Carrera de Arquitectura, Universidad Politécnica Salesiana.
- Patil, U. A., & Kubade, P. R. (2024). The importance of alternative materials to PVC and effective plastic waste management strategies for a better future. *Springer Proceedings in Materials*, 58, 127–136. https://doi.org/10.1007/978-981-97-6875-2_14
- Pilote, S. (2011). *Solidarity vs. individualism: The power of mutirão*. RioOnWatch. <https://rioonwatch.org/?p=1762>.
- Quijano, A. (2014). Colonialidad del poder, eurocentrismo y América Latina. In *Cuestiones y horizontes: De la dependencia histórico-estructural a la colonialidad/descolonialidad del poder* (pp. 777–832). Consejo Latinoamericano de Ciencias Sociales. <https://biblioteca.clacso.edu.ar/clacso/se/20140507042402/eje3-8.pdf>
- Quijano, A. (2020). *Por la imaginación política: De la socialización a la descolonialidad del poder*. Programa Democracia y Transformación Global.
- Rayner, J., & Zamorano Villareal, C. (2022). Introduction: The right to the city in Latin America. *City & Society*, 33(1), 59–70. <https://doi.org/10.1111/ciso.12397>
- Rebaï, N. (2019). The “lifeshed” as a new scale of production of sustainable urban-rural territories: Insights from the Ecuadorian Andes. *Urbano*, 22(39), 8–25. <https://doi.org/10.22320/07183607.2019.22.39.01>
- Teleamazonas. (2025, 7 de janeiro). *Inundaciones en Cuenca por desbordamiento de quebradas lluvias*. <https://www.teleamazonas.com/inundaciones-cuenca-lluvias-quebradas/>