



Capacities for sustainable habitat management in local governments of the Central Region of Argentina

Capacidades para una gestión sostenible del hábitat en gobiernos locales de la Región Centro de Argentina

Capacidades para a gestão sustentável de habitats nos governos locais da Região Central da Argentina

Capacités de gestion durable de l'habitat dans les gouvernements locaux de la région centrale de l'Argentine

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Abstract

In Latin America and Argentina, urban-territorial development tends towards a growth model that results in a deepening of socio-territorial and environmental conflicts. The role of local governments in promoting sustainable urban-housing policies that mitigate, incorporate adaptations and reduce socio-environmental vulnerabilities in cities has been surpassed in terms of their ability to act in the face of new demands. This work focuses on the critical analysis, through case studies, of the existing or pending capacities for sustainable habitat management, available in small and intermediate municipalities of the Central Region of Argentina. The notions of locality and institutional sustainability, together with the incorporation of axes and criteria provided by the counter-agendas of social organizations, are identified as key factors to promote moving towards a transformative sustainable territorial and housing management model.

Keywords: habitat, sustainable development, management, local government, capacities

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Resumen

En América Latina y Argentina, el desarrollo urbano-territorial tiende a un modelo de crecimiento que deriva en una profundización de los conflictos socio-territoriales y ambientales. El rol de los gobiernos locales en la promoción de políticas urbano-habitacionales sostenibles que mitiguen, incorporen adaptaciones y reduzcan las vulnerabilidades socioambientales en las ciudades se ha visto superado en cuanto a su capacidad de accionar frente a las nuevas exigencias. Este trabajo se centra en el análisis crítico, a través del estudio de casos, de las capacidades existentes o pendientes para una gestión sostenible del hábitat, disponibles en municipios pequeños e intermedios de la Región Centro de Argentina. En ello las nociones de localidad y de sostenibilidad institucional, junto a la incorporación de ejes y criterios provistos por las contra-agendas de organizaciones sociales, se identifican como factores claves a promover para avanzar hacia un modelo de gestión territorial y habitacional sostenible transformador.

Palabras clave: hábitat, desarrollo sostenible, gestión, gobierno local, capacidades

Resumo

Na América Latina e na Argentina, o desenvolvimento urbano-territorial tende a um modelo de crescimento que resulta no aprofundamento dos conflitos socioterritoriais e ambientais. O papel dos governos locais na promoção de políticas habitacionais urbanas sustentáveis que mitiguem, incorporem adaptações e reduzam as vulnerabilidades socioambientais nas cidades foi superado em termos de sua capacidade de agir diante de novas demandas. Este trabalho centra-se na análise crítica, através de estudos de caso, das capacidades existentes ou pendentes para a gestão sustentável de habitats, disponíveis em municípios pequenos e médios da Região Central da Argentina. Neste, as noções de localidade e de sustentabilidade institucional, juntamente com a incorporação de eixos e critérios fornecidos pelas contra-agendas das organizações sociais, são identificadas como factores-chave a promover para avançar para um modelo de gestão territorial e habitacional sustentável e transformador.

Palavras-chave: habitat, desenvolvimento sustentável, gestão, governo local, capacidades

Résumé

En Amérique latine et en Argentine, le développement urbain-territorial tend vers un modèle de croissance qui entraîne un approfondissement des conflits socio-territoriaux et environnementaux. Le rôle des gouvernements locaux dans la promotion de politiques de logement urbain durables qui atténuent, intègrent des adaptations et réduisent les vulnérabilités socio-environnementales dans les villes a été dépassé en termes de capacité à agir face aux nouvelles demandes. Ce travail se concentre sur l'analyse critique, à travers des études de cas, des capacités existantes ou en attente de gestion durable de l'habitat, disponibles dans les petites et intermédiaires municipalités de la région centrale de l'Argentine. En cela, les notions de localité et de durabilité institutionnelle, ainsi que l'incorporation d'axes et de critères fournis par les contre-agendas des organisations sociales, sont identifiées comme des facteurs clés à promouvoir pour évoluer vers un modèle transformateur de gestion territoriale et de logement durable.

Mots-clés : habitat, développement durable, gestion, gouvernement local, capacités

Capacities for sustainable habitat management in local governments of the Central Region of Argentina

Introduction

The construction of sustainable cities is a current challenge. International agendas, such as those produced by social organizations or networks of local governments^[1], recognize the importance of this challenge, given that cities “consume 78% of the world’s energy and produce more than 60% of greenhouse gas emissions” (Global Compact, 2024). These phenomena have their climatic effects, which reproduce and increase natural disasters, affecting millions of people and threatening the socio-economic benefits achieved (UNISDR, 2015).

In Argentina, in parallel with global and Latin American trends, urban-territorial development tends to follow a growth model that leads to deep inequalities and socio-urban-environmental conflicts (Rodulfo & Boselli, 2015; Martino, 2018). In the country, “the residential sector accounts for 28.6% of final energy consumption, and in terms of greenhouse gas emissions, it is responsible for 14.7% of energy sector emissions” (Ministry of the Interior, Public Works and Housing, 2018, p. 6). Therefore, the demands set forth by international agendas related to the habitat are more than pertinent (Habitat III, 2016). Alongside this, the guidelines outlined by counter-agendas from the aforementioned social organizations deepen those established by international agendas and, from critical stances, advocate for more structural policies.

Given that cities are strategic spaces in these goals, addressing these challenges requires fundamental leadership from local governments. Local governments are one of the most important driving forces for achieving sustainable development, as, for the prevailing model to be modified, it is crucial to advance towards better and greater localization of sustainable habitat management (UNDP, 2023). In this context, strengthening political and cultural dimensions enables the acquisition or development of local capacities for territorial intervention, which recovers the political project being promoted.

Within these frameworks, and building on the progress of ongoing studies and projects, this paper focuses on a critical analysis —through case studies— of the existing or pending conditions and capacities for sustainable habitat management in small and intermediate municipalities in the Central Region of Argentina. The aim is to address the demands set by the sustainability paradigm in urban-housing matters within contexts of “inframunicipalism” (Iturburu, 2001).

The hypothesis posited is that local governments in the country —particularly medium and small ones— have not developed sufficient conditions or capacities to ensure sustainable management of the structural processes of territorial and housing formation. Thus, the actions they implement are merely palliative and short-term. In response, the premises established by the agendas generated through the participation and militancy of social organizations in the region serve as guiding inputs to advance towards ‘strong’ sustainability and a transformation of existing policies.

In the country, “the residential sector accounts for 28.6% of final energy consumption, and in terms of greenhouse gas emissions, it is responsible for 14.7% of energy sector emissions” (Ministry of the Interior, Public Works and Housing, 2018, p. 6). Therefore, the demands set forth by international agendas related to the habitat are more than pertinent (Habitat III, 2016).

[1] Charter for the Right to the City, 2005; Declaration “Equity and Urban Justice” from the Preparatory Conference of Habitat III “Financing Urban Development,” 2016; Cities for Adequate Housing, 2018.

Thus, contributions are made to nourish models, strategies, and technologies that foster sustainable local habitat management, which not only intervenes in the effects but also contributes to addressing the root causes of the climate crisis we are facing.

Theoretical Framework

Socio-Urban-Housing Crisis and Environmental Crisis: Two Sides of the Same Coin

As has been made explicit, cities have a direct impact on the consolidation of an unsustainable development model, which leads to and exacerbates energy and climate crises.

Cities, at the mercy of capital, have given rise to speculative excesses. In the face of governments' abdication of urban planning and regulatory policies for strategic goods, land, water, and access to decent housing are left in the hands of the market, excluding large populations. This situation worsens, generating socio-spatial externalities (violence, crime linked to illegal activities, urban segregation, growth of informal settlements and pockets of poverty, displacement of populations, etc.), climatic externalities (increased floods and droughts due to extensive urban and productive growth that does not respect pre-existing substrates, natural disasters, etc.), and energy-related externalities (imbalance between energy needs or consumption and available supply, energy poverty, high service costs, etc.). These externalities are interrelated and highlight the interdependence between natural, social, and economic systems as constitutive parts of this major crisis presented by the prevailing development model, demanding urgent transformations.

The Contribution of Agendas: From Integral Management to the 'Strong Sustainability' Management of the Habitat

In this context, the agendas related to the design and management of urban-housing policies have evolved both conceptually and operationally, attempting to provide guidance and tools capable of addressing the aforementioned phenomena.

Integral habitat management is an approach adopted by international agendas in the 1970s (Habitat I), where the concept of housing as a physical unit, isolated from the network of services and social interrelations, was questioned (Murillo, 2019). This type of management was defined as "a set of processes aimed at articulating, using, coordinating, organizing, and allocating resources

that allow for the production, functioning, and maintenance of the habitat at the local level" (Herzer & Pérez, 1999, p. 7), linking housing processes to social integration processes.

Later, the concept of sustainability, introduced within the framework of 'sustainable development' as part of international organizations' agendas, brought the search for a balance between economic growth, social equity, and environmental sustainability, where the satisfaction of present needs does not compromise the ability to meet future needs. It also highlighted the essential interrelation between local and regional scales at the territorial level to achieve this balance.

In response to this, some authors, such as Naredo (1996), question the reciprocal relationship between urbanization and development, arguing that the 'sustainable development' derived from international agendas perpetuates subordination and dependence on the prevailing economic model. They denounce that the United Nations declarations: Habitat I (Vancouver), Habitat II (Istanbul), and the New Urban Agenda of Habitat III (Quito) (United Nations, 1976, 1996, 2016), supported ambiguous postulates, without the critical, systemic, and multi-actor incorporation of housing sustainability.

On the other hand, social counter-agendas, linked to the paradigm of Ecological Development (1973), Good Living ('sumak kawsay,' 2008), and Well-Living ('suma qamaña,' 2009), reinforce this critical stance under Latin American currents from the concepts of 'strong sustainability' (Norton, 1992). This type of sustainability they aspire to "concerns itself with the health of the ecosystems in which human life and economy are embedded, without ignoring the impact that monetary reasoning has on the processes of the physical world" (Naredo, 1996, p. 6), establishing clear demands and limitations on the prevailing economic (and urban-housing) development model.

In this regard, two key milestones stand out at the regional and national levels: the **World Charter for the Right to the City** (World Social Forum, 2005) and the **National Consensus for Adequate Housing**^[2] (Habitar Argentina, 2017). These milestones reflect the negative impact of transforming the city into a commodity serving the interests of capitalist accumulation, presenting political proposals to make the city a space for the construction of collective life.

The central focus of these agendas is the questioning of the current development models, which concentrate

[2] The Consensus reflects the positioning of the multisectoral collective Habitar Argentina. It advocates for profound transformations in the factors that determine inequalities and designs innovative and diversified policy responses and strategies that guarantee the right to adequate housing in Argentina.

wealth and power, generate poverty and exclusion, degrade the environment, and accelerate migration and urbanization processes, socio-spatial segregation, and the privatization of common goods and public space. Among their contributions, the following stand out: the integral vision of the urban-housing issue and action strategies; the social and ecological function of land and the implementation of redistributive mechanisms for urban wealth; regulation of the market and real estate speculation; prioritization of vulnerable sectors (low-income populations, women, children, the elderly, and dissidents); the central role of local governments; citizen participation; actor coordination; urban-rural balance; the promotion of various forms of social habitat production; socio-urban integration; and the democratization of access to facilities and services.

The Nature and Scope of Argentina's Housing Policy

Both in Latin America and in Argentina, urban-territorial-housing development tends to follow a growth model that leads to a deepening of social and territorial inequalities. Specific patterns can be identified within this model (Martino, 2018). First, a growth pattern of urban expansion that is not in line with demographic growth, aimed at achieving higher profitability at the cost of losing peri-urban areas and biodiversity. Second, the invisibilization and lack of capitalization of available resources in territories, associated with the exclusion of minority groups through the reproduction of hegemonic-capitalist models. Finally, a weak position of the State in the face of free real estate speculation, which prevents the conditions necessary for local governance.

At the same time, Argentine housing policies respond to a logic of products over processes, a purely material conception of housing, and business-driven productive modalities that do not recognize local resources and knowledge. They also follow a centralized logic where local governments and actors are subject to the discretion of the national state, reducing their role to that of recipients-implementers with budgetary and competential limitations (Gargantini, 2013). Focusing on the most impoverished sectors, the problem is concentrated on quantitative solutions over qualitative ones, recognizing only some of the variables that comprise them.

The Recovery of the Local and Institutional Sustainability

While the solution to environmental problems depends on coordinated global action, the deterritorialization brought about by economic globalization requires territorializing sustainability while also making territorial deve-

lopment sustainable, with the aim of improving the living conditions of the population (Guimaraes, 2003).

Key to this is the localization of sustainable habitat management (Global Taskforce, 2016), as a process of “defining, implementing, and monitoring strategies at the local level to achieve sustainable development goals and targets” (Hernández et al., 2021). In this regard, the local does not refer solely to a particular scalar dimension (territorial, governmental, or administrative), but recognizes as local actors those “agents for whom the local society constitutes their means of livelihood, work, reproduction, and primary sense of belonging” (González Meyer, 2009, p.70). These actors drive proposals and subnational territorial processes, fostering endogenous and critical development perspectives and strategies in contrast to centralized or imposed development models.

Thus, local governments play a crucial role in housing policy, strengthening the territorial-urban competences assigned to them by legal frameworks. However, for these elements to be incorporated, housing management models must be modified, and new local capacities must be developed or reinforced, avoiding the uncritical acceptance of the pseudo-transformational discourse of sustainability inherent in a dynamic conservatism where nothing changes.

Capabilities are understood as the real and potential ability that states and their specific agencies must possess to articulate sectoral interests, choose a course of action, and make autonomous decisions, successfully overcoming the restrictions posed by the institutional environment in order to achieve organizational goals and promote the general well-being (Completa, 2017). The autonomy levels of local governments are crucial for advancing toward sustainable urban-housing models.

Strategic to this is the strengthening of the political and cultural dimensions (institutional sustainability) (Guimaraes, 2003 and Fernández, 1998), to recover and give importance to the project behind the concept of sustainability adhered to. Thus, alongside technical-administrative or technical-bureaucratic capacities, relational institutional capacities between the state and its environment, the interests and preferences of actors, and the likelihood of fulfilling the interests/needs of society become significant (Gargantini, 2020). In contexts of inframunicipalism like Argentina, where more than 94% of local governments are small or intermediate (with populations under 100,000)^[3], yet they concentrate 39% of the national housing deficit (Origlia, 2021), strengthening these capacities is a major challenge.

[3] According to the Federal Registry of Local Governments, there are 2,311 local governments in the country, of which 76.07% are small and include communes or settlements (0 to 9,999 inhabitants); 18.13% are medium-sized (10,000 to 199,999 inhabitants); and only 1.73% are large (more than 200,000 inhabitants).

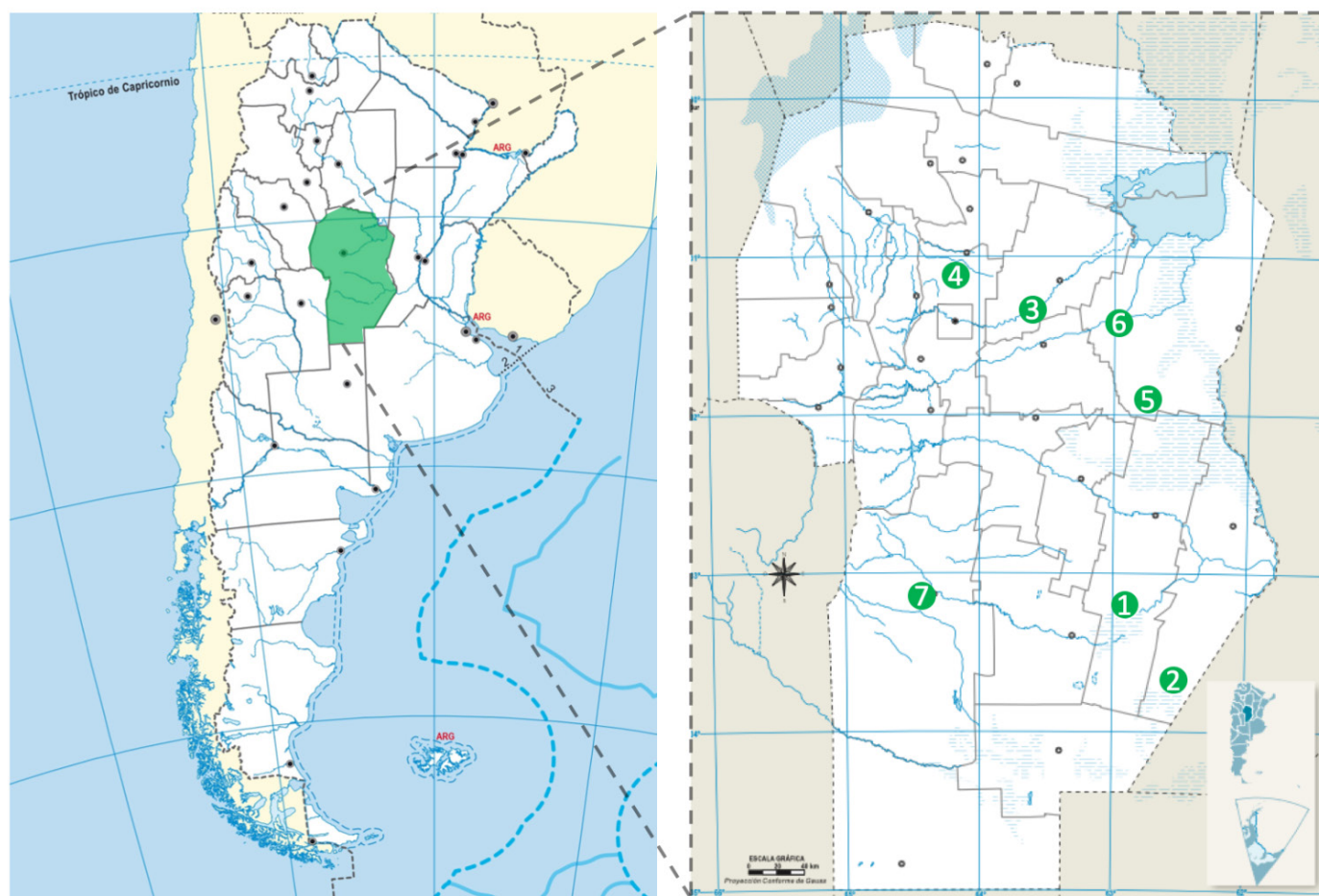


Figura 1. Location of the Province of Córdoba and the Studied Municipalities. Source: Own elaboration based on maps from the National Geographic Institute of the Argentine Republic.

Nota:

1. Laborde. Population: 5,957 (INDEC, 2010)
2. Arias. Population: 7,193 (INDEC, 2010)- 9,300 (Censo Municipal, 2020)
3. Río Primero. Population: 7,389 (INDEC, 2010)- 7,800 (Censo Municipal, 2011)
4. Juárez Celman. Population: 12,129 (INDEC, 2010)- 18,000 (Ministerio del Interior, 2017)
5. Las Varillas. Population: 16,316 (INDEC, 2010)- 20,000 (Fuente provisoria, 2023)
6. Arroyito. Population: 22,726 (INDEC, 2010)- 40,000 (Censo Municipal, 2020)
7. Río Cuarto. Population: 158,298 (INDEC, 2010)- 200,000 (Fuente provisoria, 2023)

Case Studies

Based on this conceptual and contextual framework, and from a critical case study approach, this work aims to identify the institutional conditions and capacities available in small and medium-sized municipalities in the Central Region of Argentina^[4], in order to respond to the demands of the sustainability paradigm in the context of inframunicipalism in urban-housing matters (Iturburu, 2001).

[4] The Central Region of Argentina is a subnational territorial block, composed of the provinces of Córdoba, Entre Ríos, and Santa Fe, with a significant national impact in economic and social matters, as it concentrates high levels of human, health, educational, scientific, and cultural development, making it one of the regions with the greatest impact on the country's development.

The results of this work stem from the case study of selected municipalities within the framework of the inter-area Project of the Executive Unit (PUE)^[5], carried out during the 2019-2023 period^[6]. The selection was based on identifying those municipalities that, meeting the conditions of geographic location (Córdoba Province^[7]) and scale (small or medium-sized), had developed housing and environmental policies in the last two government terms, and expressed interest in participating in the stu-

[5] Experimental Center for Affordable Housing (AVE-CONICET).

[6] Executive Unit Project "Management Model for Regional Production of Construction Components for Housing Improvements from the Recycling of Urban Solid Waste." Experimental Center for Affordable Housing, 2017.

[7] The province of Córdoba is located in the aforementioned Central Region and holds significant demographic and economic weight in the regional and national context, derived from agroindustry, services, tourism, and the automotive industry. It is also a reference for municipalism, "as a regime of great autonomy in relation to many small municipalities" (Graglia, 2006, p.57).

Escala	Labor de Pequeño	Arias Pequeño	Río Primero Pequeño	Juárez Celman Mediano	Arroyito Mediano	Las Varillas Mediano	Río Cuarto Mediano
Caracterización socio-urbano y habitacional	<ul style="list-style-type: none"> -Porcentaje de hogares con al menos una NBI de 4,14% (Censo 2010) -Mayor necesidad insatisfecha relacionada a las condiciones sanitarias -Mayor porcentaje de déficit habitacional cualitativo por sobre el cuantitativo -Déficit habitacional de hogares que en gran parte no poseen capacidad de pago y de recursos en general -Áreas de Obras y Servicios Públicos, Desarrollo Social, Medio Ambiente y Empleo -Proceso de extensión del área urbana -Suelo urbano disponible poco accesibles para sectores de medios y bajos recursos -Escaso registro formal de la situación de déficit habitacional -Información centralizada en pocos agentes -Trabajo compartimentado 	<ul style="list-style-type: none"> -Mayor porcentaje de déficit habitacional cualitativo por sobre el cuantitativo -Hogares con necesidades habitacionales con capacidades constructivas (albañiles, electricistas, gasistas, soldadores) y técnicos metalúrgicos) -Área de Ambiente, Obras Públicas y Catastro y Corralán -Existencia de irregularidades en lotes privados -Suelo urbano poco accesible para el municipio -Uso de tecnologías tradicionales -Escaso registro formal de la situación de déficit habitacional 	<ul style="list-style-type: none"> -Porcentaje de hogares con al menos una NBI de 7,7% (Censo 2010) -Mayor necesidad insatisfecha relacionada a las condiciones sanitarias y hacinamiento -Mayor porcentaje de déficit habitacional cualitativo por sobre el cuantitativo -Hogares en asentamientos relevados como prioritarios en materia de déficit habitacional se evidencia una importante voluntad de aporte de mano de obra por parte de las familias -Áreas de Secretaría de Obras Públicas, Dirección de Hábitat y Vivienda y Coordinación de Ambiente -Escaso registro formal de la situación de déficit habitacional -El municipio cuenta con tierra para el desarrollo de planes habitacionales 	<ul style="list-style-type: none"> -Porcentaje de hogares con al menos una NBI es de 7,8% (Censo 2010) -Mayor necesidad insatisfecha relacionada a las condiciones de hacinamiento -Mayor porcentaje de déficit habitacional cualitativo por sobre el cuantitativo -Áreas de Secretaría de Planificación Estratégica 	<ul style="list-style-type: none"> -Porcentaje de hogares con al menos una NBI de 4,4% (Censo 2010) -Mayor necesidad insatisfecha relacionada a hacinamiento -Mayor porcentaje de déficit habitacional cualitativo por sobre el cualitativo -Alto porcentaje de hogares inquilinos (27,8%) -Áreas de Secretaría de Servicios Públicos, Ambiente y Energía, Desarrollo Urbano y Hábitat -Trabajo interáreas -Escaso registro formal de la situación de déficit habitacional -Extensión del área urbana -Articulación público-privada 	<ul style="list-style-type: none"> -Porcentaje de hogares con al menos una NBI de 4,1% (Censo 2010) -Mayor necesidad insatisfecha relacionada a las condiciones sanitarias y hacinamiento -Mayor porcentaje de déficit habitacional cualitativo por sobre el cuantitativo -Áreas de Acción Social, Planeamiento Urbano, Departamento de Vivienda y Departamento de Obras Públicas y Dirección de Ambiente y Desarrollo Sustentable -Banco de Tierras Municipal -Elaboración de Plan de Gestión Integral de la Problemática Habitacional -Escaso registro formal de la situación de déficit habitacional -Alta cantidad de viviendas vacías -Existencia de Fondo Permanente Municipal -Trabajo compartimentado 	<ul style="list-style-type: none"> -Porcentaje de hogares con al menos una NBI de 4,1% (Censo 2010) -Mayor porcentaje de déficit habitacional cualitativo por sobre el cuantitativo -Áreas de Dirección de Higiene Urbana, Subsecretaría de Hábitat y Secretaría de Servicios Públicos -Disponibilidad de tierra municipal
Caracterización física y tecnológica	<ul style="list-style-type: none"> -Alta cobertura de servicios excepto cloacas y pavimento -Uso de tecnologías tradicionales -Emprendimientos municipales de bloquera, fabricación de premoldeados y talleres metalúrgicos -Problemáticas de posible contaminación por subida de napas y colapso de los pozos absorbentes 	<ul style="list-style-type: none"> -Alta cobertura de servicios excepto cloacas y pavimento -Uso de tecnologías tradicionales -Problemática por desechos de pozos absorbentes volcados en la periferia del pueblo y en los campos 	<ul style="list-style-type: none"> -Alta cobertura de servicios excepto gas, cordón cumeta, pavimento y cloaca -Uso de tecnologías tradicionales 	<ul style="list-style-type: none"> -Alta cobertura de servicios excepto cloacas gas y cordón cumeta -Uso de tecnologías tradicionales y tecnologías no tradicional con materiales tradicionales -Existencia de planta productora de componentes constructivos con materiales reciclables 	<ul style="list-style-type: none"> -Alta cobertura de servicios básicos -Uso de tecnologías tradicionales 	<ul style="list-style-type: none"> -Alta cobertura de servicios excepto cloacas y gas -Uso de tecnologías tradicionales -Problemática por riesgo de inundabilidad pluvial -Problemática por existencia de contaminantes dentro del ejido urbano como el glifosato, provenientes de la fumigación -Relación comunitaria con la Coop. de Energía Eléctrica 	<ul style="list-style-type: none"> -Alta cobertura de servicios básicos -Uso de tecnologías tradicionales -Relación municipio cooperativa para la construcción de viviendas
Nivel de sustentabilidad urbano-arquitectónica	<ul style="list-style-type: none"> -Miembro de la Red de municipios por el Cambio Climático -Inventario de la producción y emisión de gases de efecto invernadero (GEI) -Elaboración de Plan Estratégico Sustentable -65% de la población separa en origen sus residuos. -Existencia de basural a cielo abierto -Existencia de planta de separación y clasificación de residuos reciclables secos -Capacitación a la ciudadanía sobre separación de los residuos -Problemática por cercanía entre sector urbano y sector productivo y la fumigación de estos 	<ul style="list-style-type: none"> -Miembro de la Red de municipios por el Cambio Climático -Inventario de la producción y emisión de gases de efecto invernadero (GEI) -Elaboración de "Plan de Sustentabilidad de Arias" y el Proyecto "Arias Productiva y Sustentable" -Existencia de planta de separación y clasificación de residuos reciclables secos y húmedos -Luces led en alumbrado público de toda la localidad -Existencia de casi un árbol por habitante -Capacitación a la ciudadanía sobre separación de los residuos -Incentivos para promover separación de residuos -Mangas de viento para controlar la dirección de los mismos en épocas de fumigación de los campos alejados 	<ul style="list-style-type: none"> -Problemática en relación a sectores afectados por inundaciones, zonas vulnerables y zona de riesgo ambiental, donde se acumulan residuos que se arrojan en el sector -No existe relevamiento de cantidad y calidad de espacios verdes, plazas y/o espacios públicos existentes -Existencia de basural 	<ul style="list-style-type: none"> -Existencia de planta separadora de residuos secos 	<ul style="list-style-type: none"> -Recuperación del río para la conformación de espacio verde público -Existencia de basural -Puntos verdes para depositar de manera diferenciada papel/cartón, vidrio y plástico. -Riesgo de inundabilidad pluvial -Problemática por causa de la deforestación y el monocultivo -Problemática por existencia de contaminantes dentro del ejido urbano como el glifosato, provenientes de la fumigación 	<ul style="list-style-type: none"> -Se realizaron encuentros vecinales, talleres de mapeo y jornadas de intervenciones en los espacios públicos de los distintos barrios -Planta de clasificación y separación de RSU -Los residuos orgánicos no son separados -Problemática por causa de la deforestación y el monocultivo 	<ul style="list-style-type: none"> -Planta de Tratamiento de Residuos Sólidos Urbanos -Separación de residuos en origen

Table 1. Comparative table between case studies

Source: Own elaboration.

dies and developments committed to by the project. The project aimed to develop an innovative management model —through the articulation of strategies addressing housing issues and the treatment of recyclable urban solid waste (RSU)— aimed at enabling local governments in the country to create productive circuits to improve environmental and housing conditions for vulnerable sectors.

While it had specific objectives related to technological innovation and production, it committed to establishing the conceptual foundations and operational conditions necessary to develop a sustainable regional management

model in municipalities and communes. Socio-urban-housing-environmental diagnoses, along with assessments of local capacities and resources, were developed for seven small and medium-sized municipalities in Córdoba Province (see Figure 1):

Methodology for Case Analysis to Detect Findings

To achieve the objectives of the study, both qualitative and quantitative methodologies were combined. In order to identify and characterize the sociopolitical, housing, and environmental context of the municipalities, descrip-

tive and explanatory designs were combined based on existing or ad-hoc collected census and local data. This allowed for refining the final selection and formalizing agreements with the seven municipalities prioritized in the PUE, considering those with socio-environmental progress in their management and willingness to participate in the project.

To recognize and study the existing or pending capacities in each municipality, the categorization established by Gargantini (2020) was used, which groups them into technical-administrative capacities and political-institutional capacities. This capacity study was integrated with both quantitative and qualitative records to reconstruct local processes, as well as the actors involved in them.

The units of analysis were the socio-urban-housing and local environmental management processes. This involved identifying, through a battery of variables and indicators, the problem-solving approach structure (management model) in each case (Pelli, 2000).

The bibliographic-census collection from primary or secondary sources, as well as information from interviews and surveys, were complemented with participatory diagnostic workshops with the technical teams of each municipality^[8]. These contributed to the comprehensive diagnoses of technical-administrative and political-institutional capacities carried out within the framework of the PUE. From this, aspects capable of being transformed into inputs to be considered in policies for strengthening urban-housing sustainability in these types of municipalities were identified.

Results

In the established analysis axes (socio-urban and housing characterization, physical and technological aspects, and the level of urban-architectural sustainability), the results obtained allowed for the following findings to be reported (see Table 1):

Socio-Urban and Housing Characterization

Although the most recent official data comes from the 2010 Census, the small and intermediate municipalities studied show population growth over the last few decades, indicating new demands and demonstrating that, proportionally, the greatest urban-housing growth is now occurring not in large cities but in centers of this scale.

Regarding socio-urban and housing characterization, these municipalities exhibit poverty levels or Basic Needs Unsatisfied (NBI) rates between 4% and 8%, with a notable presence of qualitative housing deficits over quantitative ones, concentrated in low-income sectors or those with unstable income, though with the potential to provide labor. Small settlements (10 to 40 households) in highly vulnerable conditions are also present. However, due to the lack of formal and recurring records of this situation, knowledge about it is limited to these parameters.

Land availability is scarce, and in cases where it exists, it is not accessible to the demanding population sector. Except in isolated cases, there are no strategies or policies for land access such as land banks or similar initiatives. In terms of urban development, the analyzed urban settlements have a concentric density with a radial urban hierarchy. While they have a high coverage of services, these replicate the concentrated-radial urban formation, and those related to connectivity, access to energy resources like gas, and effluent treatment are deficient. There is a lack of green or public spaces with adequate and accessible equipment, and reforestation is necessary.

All the studied municipalities have developed traditional housing and infrastructure programs, funded by national and provincial sources. Only a few have diversified their actions with their own programs (particularly savings circles^[9]) and have begun to implement public-private partnerships due to the lack of municipal resources. However, land policies with services, land regularization, improvements, expansions, microcredits, or technical assistance for construction are very infrequent lines of action.

In terms of technical-administrative structure, while they have Habitat or Housing Departments and Environmental Areas, these are recent (established in recent years); they have limited staff and budget; they are highly dependent on the executive branch but have good coordination with other local entities. Generally, there is no interdepartmental coordination for policy implementation. This indicates a low level of technical-administrative capabilities and an incipient political-institutional capacity.

Physical and Technological Characterization

Regarding physical characterization, the municipalities studied report serious issues related to the inaccessibility of urban-housing sectors for certain populations and risk management in their territories (flooding, encroachment on environmental risk zones, contamination of aquifers and watercourses, etc.), due to scarce or outdated regulatory frameworks in terms of urban growth and service provision.

[8] After the signing of agreements, three diagnostic workshops were developed: on socio-housing situation, local capacities and resources; on physical situation and available technological resources; and on sustainability criteria in urbanism-architecture and Integrated Management of Solid Urban Waste (GIRSU).

[9] A savings circle is a group of households that come together with the goal of saving collectively. Each member contributes a certain amount of money every month. By adding up the contributions from the participants, an amount is accumulated that is used to build a housing unit until the demand of all members is met.

Regarding available resources, technologies, and promoted productive modalities, all municipalities employ traditional technologies^[10], and in no case was compliance with habitability regulations based on environmental parameters observed. Locally, there are interesting cooperative or community-based ventures producing construction and metalworking components with the support of municipal Employment Areas, but with minimal connection to the housing initiatives promoted. As a result, housing construction projects and local or labor development initiatives are treated and promoted separately.

In terms of organizational structure and available technical resources, the formal inclusion of areas related to the environment and housing is verified. These are more consolidated in intermediate municipalities and, in many cases, are complementary to structures linked to public works and services rather than urban or social development areas. However, there are no visible organizational coordination strategies, with a predominance of ministerial or isolated area management.

Urban-Architectural Sustainability Level

At the climatic level, the environments of these municipalities are located in warm temperate zones that have experienced floods, droughts, and fires, many of which are triggered by the extensive growth of the urban area or extractive activities (mainly agricultural) over peri-urban and protected zones.

The unregulated urban expansion, resulting from the exponential growth of land value within the urban fabric, has not yet consolidated the existing urban areas, with a large percentage of interstitial land with underutilized services, but financially inaccessible to the population in need of housing. This expansive growth over the peri-urban areas without forest barriers and the presence of industries in the urban fabric has led to risks of contamination, as well as floods due to occupation in unsuitable zones. Additionally, the presence of nearby waste dumps has caused air, groundwater, and lagoon pollution.

Although the discursive conceptualization of sustainability in these municipalities is associated with the conscious and responsible use of resources without depleting or exceeding their renewal capacity, and promoting different consumption patterns, the actions undertaken have only covered energy efficiency initiatives (LED lighting) and reforestation. In no case has the bioclimatic redesign of urbanizations and homes been promoted, nor has there been intervention in land and urban policies for redistri-

bution of burdens and benefits.

Regarding the integrated management of urban solid waste (GIRSU), there is weekly waste collection, but difficulties also exist due to inefficient road networks, lack of widespread awareness, and problems with treatment and final disposal due to scarce equipment. Household waste is poorly quantified. Waste separation at the source occurs only 65% of the time, and due to the mixing of waste, there are difficulties in treatment. Agricultural and industrial waste accounts for a significant percentage, equal to household waste. The differentiated collection of paper and plastics, the disposal of pathogenic waste, and electronic waste (WEEE) is outsourced, but there is no recovery under circular economy processes for bulky waste.

The final disposal sites are located close to the urban fabric and lack protective barriers, hydrological studies, or environmental impact assessments; the pits are at full capacity, and fires are frequent. There is no treatment of leachate or disposal in controlled landfills (regionally, such sites are scarce, and there is little intermunicipal coordination for this).

In response, municipal actions in GIRSU focus on the emerging installation of recycling plants for urban solid waste, points and plans for separation at the source, municipal composting plants, and sales to recyclers. The recent involvement of work cooperatives in landfills is another ongoing effort. Urban tree planting plans, reforestation campaigns, WEEE and water conservation, paper and bottle exchange for supplies, and some punctual improvements in energy efficiency and composting are also part of the ongoing initiatives.

Regarding current regulations, many local governments have ordinances on public tree planting, urban waste collection, pathogenic waste, and the use of agrochemicals. However, they lack plans for controlling effluents, factory pollutants, and fumigations, and do not have updated urban and construction codes based on environmental parameters. Fines are foreseen for transgressions, but they are not applied, and there is no thorough control or monitoring of existing ordinances.

Discussions

The analyzed cases show that small and intermediate municipalities in Argentina's Center Region, while not facing high levels of poverty or unmet basic needs (NBI) as seen in other parts of the country, are dealing with urban-housing and environmental issues that are escalating and require sufficient capacities for integrated manage-

[10] Traditional construction technologies refer to the techniques and methods that have been used for generations in building constructions. These techniques are based on the use of natural materials such as stone, wood, and clay, as well as the application of artisanal methods for their handling and transformation.

ment based on sustainability principles. According to the developed conceptual framework, these capacities can be grouped into technical-administrative and political-institutional ones.

At the technical-administrative capacity level, the organizational structures of the studied small and intermediate municipalities are still in their early stages and siloed. While they have specific regulations (land use plans, building codes, specific ordinances, etc.), they are not updated and do not incorporate essential variables of strong sustainability, such as the recovery and strengthening of state regulation; the recovery of participatory territorial and urban planning as a key regulatory strategy, prioritizing collective interests over individual ones; the promotion of land policies that encourage the redistribution of burdens and benefits; and limits on urban speculation and the preservation of biodiversity. Additionally, they lack positive stimulus plans, control measures, or effective enforcement of penalties for violations.

Operationally, there is no evidence of strategies to recognize the diverse needs and capitalize on the capacities present in the different population sectors, which prevents the diversification of housing alternatives that align with family trajectories, comprehensive and multi-actor programs, and the use of productive technologies that promote genuine labor integration and local social development. The same applies to the absence of integrated risk monitoring and management systems linked to urban-housing growth and consolidation processes.

Regarding their political-institutional capacities, these municipalities reproduce the discourse of transformation in terms of sustainability, but without deep implications in local urban-housing actions. There are no challenges or perceptions of the need for changes in the consumption and distribution of urban goods and strategic powers; instead, there is only a demand for simple access to them, which does not lead to real equitable redistribution or a reconversion of the prevailing urban-housing growth model. The lack of promotion of a critical citizenship culture, demanding sustainable consumption and use guidelines at the urban-housing level, becomes a factor that fosters conservatism, which focuses on strategies like greenwashing, tree planting, energy transition in street lighting, and outsourced waste collection and recovery.

Regarding sustainable urban-housing management, the local governments and actors involved in the studied cases reduce their role to mere recipients, with higher levels of government defining the action parameters and assigned budgets.

Conclusions

In this study, we aimed to recognize the current conditions and institutional capacities available in municipalities in the Center Region of Argentina, with the objective of addressing the challenges posed by urban-housing agendas of sustainability. We critically examined, using quantitative and qualitative records, the comprehensive frameworks and management processes of socio-urban-housing and environmental issues developed in seven small and intermediate municipalities in the province of Córdoba.

Our analysis revealed that, in the studied municipalities, the notion of sustainability is introduced in a piecemeal and fragmented manner, responding to specific institutional areas (such as Environment, Housing, etc.), without progressing toward integrated and cross-functional approaches. It was also found that strategic factors, such as economic accessibility to land and housing, the urban-social integration of households into territories, and the impact these factors have on environmental, energy, and climate concerns, were not adequately considered or promoted.

Thus, we found a scarcity or absence of effective capacities (both technical-administrative and political-institutional) to advance toward consolidating a comprehensive understanding of strong sustainability principles in urban-housing matters. This results in their collateral connection to environmental policy or their reduction to isolated aspects, without addressing the core issues in urban-housing.

Based on these findings, focusing on urban-housing sustainability in the municipalities studied would require reversing the priorities of conventional urban economies (Fernández Casadevante Kois et al., 2018) and considering the strategic importance of certain variables (land, housing, transportation, infrastructure, etc.) in relation to reducing inequalities and redistributing benefits. This would mean going beyond the current vision of mass production of housing solutions disconnected from the integration contexts (Hernández et al., 2021, and Rodulfo & Boselli, 2015) and unleashing untapped local capacities.

While these conclusions cannot be generalized to all municipalities of this scale or region, the results highlight the need to incorporate the principles and criteria provided by the strong sustainability paradigm (as outlined in the mentioned social counter-agendas) when promoting processes that strengthen local urban-housing capacities. These include the incorporation of solid training and the use of specialized urban-housing tools by political and

technical managers, promoting and strengthening organizational structures at the local level to facilitate integrated territorial approaches, and fostering a critical citizen culture that demands sustainable consumption and use guidelines at the urban-housing level.

Without these changes, we will continue to encourage accessory and tangential environmental actions, without generating the necessary transformations to achieve the true construction of sustainable cities and communities, as the urgent demands of the context require.

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