Urban Management as a Pedagogical Tool.
San José De Cúcuta: Causes, Phenomena and Impacts on Urban Growth

Luz Karime Coronel-Ruiz¹, Erika Tatiana Ayala-García², Magdiel Daviana Tami-Cortes³

¹Arquitecta, Magíster en Gestión Urbana, Universidad Francisco de Paula Santander, Cúcuta, Colombia, Grupo de Investigación TARGET. Email: luzkarimeruiz@ufps.edu.co ORCID: https://orcid.org/0000-0003-0331-0568
²Arquitecta, Doctora en Teoría e Historia de la Arquitectura, Magíster Estudios Territoriales y de la población. ORCID: https://orcid.org/0000-0001-7570-6619 Email: erikatatianaayala@ufps.edu.co, Grupo de Investigación TARGET Universidad Francisco de Paula Santander
³Arquitecta, ORCID: https://orcid.org/0000-0002-3328-5976 Email: magdieldavianatc@ufps.edu.co, Grupo de Investigación TARGET Universidad Francisco de Paula Santander

**How to Cite:** L.K. Coronel-Ruiz, E.T. Ayala-García, M.D. Tami-Cortes. “Urban Management as a Pedagogical Tool. San José De Cúcuta: Causes, Phenomena and Impacts on Urban Growth”. *Perspectivas*, vol. 6, no. 2, 6-20. 2021


ABSTRACT

In this article the transformation of the territory of San José de Cúcuta, Norte de Santander- Colombia, border area with the Bolivarian Republic of Venezuela during the last twenty years was studied, from a territorial and pedagogical approach based on the analysis of the physical dimensions -environmental, social-cultural and economic-normative, and phenomena such as: scarcity of developable land, limited urban planning and control strategies, migration, informality of the land and risks due to socio-natural phenomena as input in order to propose aspects and significant strategies for solving problems present in the territory. A mixed inductive-analytical method was used, by source of documentary data collection. It was found that the city should prioritize interventions focused on property sanitation and land formalization. In addition, that with respect to the physical- environmental and social-cultural dimensions, it is necessary to establish mechanisms for urban planning and management in response to the Sustainable Development Goals proposed for Latin American cities by the United Nations and contemplated in the agenda. 2030 for sustainable development.

Keywords:
Territorial analysis, City, Urban growth, Territory

RESUMEN

En el presente artículo se estudió la transformación del territorio de San José de Cúcuta, Norte de Santander- Colombia, zona fronteriza con la República Bolivariana de Venezuela durante los últimos veinte años, desde un enfoque territorial y pedagógico a partir del análisis de las dimensiones físico-ambiental, social-cultural y económico-normativo, y de fenómenos como: escasez de suelo urbanizable, limitadas estrategias de control y planeación urbana, migración, informalidad del suelo y los riesgos por fenómenos socio-naturales como insumo con el fin de proponer aspectos y estrategias significativas para la solución de problemáticas presentes en el territorio. Se utilizó una metodología mixta de método inductivo-analítico, por fuente de obtención de datos documental. Se encontró que la ciudad debe priorizar intervenciones enfocadas en el saneamiento predial y la formalización del suelo. Además, que con respecto a las dimensiones físico-ambiental y social-cultural, es necesario que se establezcan mecanismos para la planificación y gestión urbana en respuesta a los Objetivos de Desarrollo Sostenible planteados para las ciudades latinoamericanas por las Naciones Unidas y contemplados en la agenda 2030 para el desarrollo sostenible.
Introduction

The Latin American territory in the last decades has presented significant changes in terms of territorial planning, in response to the transformations of the dynamics associated with the urban phenomena and events typical of each territory. These are related to the physical-spatial aspects, and determined by their geographical, economic, environmental, governmental and social factors (Martínez Toro, 2014). In addition, they have been characterized by presenting patterns of land occupation and growth in a dispersed and uncontrolled way, which have resulted in the consolidation of dense urban areas, transformations and imbalances in the territory and the increase in needs with respect to use and land use. Land cover, directly impacting the environmental dimension of cities (Carreño Campo; Alfonso, 2018).

Aponte Páez (2007) assures that cities must maintain a state of urban balance, through which their dimensions guarantee the sustainability and interaction of the territory at different scales, promoting the well-being and quality of life of the population in compliance with the functions of the city. For this author, the sustainable development of the territory is one of the great problems of Latin American cities, which is reflected in the increase in indicators derived from the phenomena of poverty, inequality and environmental deterioration.

For Morawietz (2014), the 1987 World Commission for the Environment Conference set a precedent through the Brundtland report, which determined that the sustainable development of the territory is associated with meeting the needs of the present population and future. Therefore, as can be seen in Figure 01, it must be developed from the integration of attributes such as the availability of resources, adaptability to change, resilience and stability; that configure a systemic vision of the territory, and allow to recognize and address the phenomena and problems associated with the physical-environmental, social-cultural and normative economic dimensions (Gallopín, 1994, 2003).
In Colombia, the urban growth process has been characterized by a densification centered on population concentration within the main urban areas (Center for Research on Social Dynamics, 2007). This makes sense under the scenarios of systematic violence in the country -product of the internal armed conflict-between the 60s and 70s, where the cities absorbed constant processes of human mobility that unbalanced the population relationship between rural and urban areas (Egea Jiménez, Soledad Suescún, 2008; Ruiz, 2011). This resulted in cities showing growth under unplanned land use patterns, with extreme poverty scenarios; such as the one established by the National Planning Department (2015) and López Muñoz (2019) who mention that in 2014, 5.1% of the urban population had extreme poverty rates, and by the World Bank, for who in 2018 in Colombia 77% of the population was concentrated in the large cities of the country.
This scenario resulted in a weakness in the control and planning of territorial governance, with respect to changes in land use, the volume and supply of infrastructure and services (UN Habitat, CAF, FINDETER, APC, SDDE, 2015) in addition to health, the environment, education; and the seven principles indicated by ECLAC (2002) for sustainable cities: multipolarity, interface systems, negative entropy phase, urbanity and open spaces, flows, social participation and the production of the city (pp. 57-59).

Thus, Colombian cities must generate an “effective production of adequate and updated indicators” that allow evaluating the state and requirements of the territories (Quiroga Martínez, 2014, pp. 22), since in this way, from the ordinance territorial strategies can be proposed (integration-intensive-diversification-defensive) (David, 2003) that respond to the main problems, promote the potentialization of the territory, strengthen productivity, sustainability and effectiveness with respect to decision-making monitoring and intervention of the territory.

Material and method

This research was developed through a mixed approach methodology, understood by Hernández Sampieri; Fernández Collado, Baptista Lucio (2014) as an intersubjective reality that allows the approach, analysis and understanding of complex phenomena from a multi-approach, under a broad perspective of the subject of study addressed. This approach favors the characterization of the topics, allowing a deeper understanding of the different levels of the scientific method reflected in the results and the conclusions raised, as well as in the process of each of its stages (pp. 534-537).

An inductive method was approached that studies the common facts found in reality for a defined territory (Rodríguez Jiménez and Pérez Jacinto, 2017, 187), and an analytical method that delved into the phenomena, causes and impact (Lopera Echavarría et al. 2010), of the growth and transformation of the San José de Cúcuta city under the analysis of the study study dimensions: physical-environmental, social-cultural and economic-normative for a period of twenty years.

The source of data collection corresponded to the documentary, in order to interpret and give meaning to primary information sources such as: regulations, decrees and laws, and secondary sources from books and scientific research articles (Gómez, 2011). This process allowed the construction of a theoretical framework that addressed concepts such as urban segregation, territorial imbalance, sustainable city and urban problems or risks; among others, in addition to keywords such as: Territorial Analysis, City, Urban Growth, Territory.

Results and discussion

Problems of the Territory of San José de Cúcuta: The San José de Cucuta city was founded under a model agreed by Juana Rangel de Cuellar in 1733, on the eastern side of the department of Norte de Santander, Colombia. Its geographical limits correspond to the municipalities of Tibú, San Cayetano, Bochalema, Zulia, Los Patios, Puerto Santander and the Bolivarian Republic of Venezuela, under a territorial extension of 1,176 km² (Metropolitan Area of Cúcuta, SF) (see Figure 2).
In 1991, the Metropolitan Area of Cúcuta was created by ordinance number 40 of January 3, made up of the municipalities of Villa de Rosario, Los Patios, San Cayetano, Puerto Santander, Zulia and San José de Cúcuta, the latter being the articulating municipality of the metropolitan territory; Five months after its creation, it was put into operation by Decree 508 of July 3, 1991 (Muñoz Ruiz, 2017). Its extension corresponds to 1,250 km2 and its population to 1,024,234 inhabitants, according to the population data projected by DANE for the year 2020 (North Santander Government, 2020, pp. 11). The geographical position of San José de Cúcuta and its Metropolitan Area, configures a development opportunity, which allows a connection with the interior of Colombia and with the Bolivarian Republic of Venezuela, through

**Figure 2.** Geographic location of the territory of San José de Cúcuta.

*Source:* Own elaboration based on Argis.
the border areas of Villa del Rosario, San Cayetano, Puerto Santander and Zulia (Cely Quintana & Coronel Ruiz, 2019, pp. 30).

San José de Cúcuta as a metropolitan articulator and now the capital city (Congress of the Republic, 2021), has historically presented a territorial transformation derived from the uncontrolled growth of the population with effects on the use and land tenure, which has had an impact on the dimensions normative physical-environmental, social-cultural and economic. This can be evidenced in the Metropolitan Integral Plan 2017-228 of the Metropolitan Area of Cúcuta (2017), where twenty-two problems associated with: infrastructure, housing, public services, metropolitan transparency, heritage, citizen participation, tourism promotion, environmental public policy, technological innovation, land use planning, equity and social inclusion, public space, security and metropolitan strategic planning; among others (pp. 40).

These impacts unleashed urban problems or risks, understood by Lavigne (1988) as an interruption of the systemic process of the city that affects the sustainable development of the territory, unbalances the quality of life of the inhabitants and the fulfillment of the functions of the city (UN Habitat, CAF, FINDETER, APC, SDDE, 2015). For the purposes of this research, three fronts were established that consolidate the main elements of interest related to urban problems or risks in the territory of San José de Cúcuta in the last two decades. The first of them corresponds to the environment and sustainability (physical-environmental dimension), taking into account that this type of problem is transversal to the physical-environmental, social-cultural and normative economic dimensions, and has had a significant impact on phenomena associated with the scarcity of developable land, land informality, urban-territorial management and planning; and, the socio-natural phenomena; in accordance with what is established in the principles of the sustainable city (Lima COP20- CMP10, 2014; Salas- Zapata et al. 2016).

The second front is related to the social-cultural dimension, represented through the relationship of the human being with the environment, from the experience of the inhabitant from the physical-built and the experiences that are part of their reality and daily life. They are part of this risk: migration, the perception of security, extreme poverty, social inequality and the dissatisfaction of basic needs (physiological, security, affiliation, recognition and self-realization) (Maslow, 1991; Sierra de Rodriguez, Ayala García and Coronel Ruiz, 2020). Finally, the third front relates to the problems associated with governance, from the economic-normative dimension. The foregoing in relation to the importance of government management with respect to the development and planning of the territory, which occupies a fundamental role in territorial management, economic development, productivity and competitiveness (Schwedler, 2011; Hernández Bonivento, 2014).

The aforementioned fronts have triggered an increase in inequalities, vulnerabilities and deficiencies in the territory for the city at its different scales. Thus, the position of Aché (2012) becomes relevant, for whom the effects on the physical-environmental, social-cultural and economic-normative dimensions generate disparities and divergences, in response to the form of use and organization of the geographical space, in relation to the "meaning, purpose and scope of territorial relations" taking into account that "the analysis of socio-economic and socio-environmental territorial inequalities, their causes and factors of formation, intensification or attenuation, requires a research (...) in the explanation of the mechanisms that govern the widening or not of territorial inequalities”, challenges that must be assumed by the government entities in charge of planning and managing the city.
**Causes and impact of the growth of the Border territory:** In Colombia the sixties and seventies marked an important pattern in the change of territorial configuration and the growth of cities, as a consequence of the internal armed conflict, which determined an acceleration of the urbanization process in the national territory, through which 75% of the population was concentrated in intermediate cities; increasing the needs derived from the physical-environmental dimension; mainly (Center for Research on Social Dynamics, 2007; Egea Jiménez and Soledad Suescún, 2008).

This scenario meant for San José de Cúcuta an increase in the urban-spatial segregation process and the growth of the territory that determined a change in the urban fabric (Cervio, 2015; Cervio and Vergara, 2017), multiplying the problems associated with the consumption of land, from the demand for services and infrastructure, to social relations, to the extension of metropolitan land and migration, under the consolidation of an informal territorial profile present to date; especially towards the peripheral area of the city, which has been the place where the vulnerable population related to strata 1 and 2 has generally settled, and which according to DANE (2020) presented an index of 10 % of extreme poverty, even making use of the expansion land available for development, in accordance with the provisions of the San José de Cúcuta Municipal Council Corporation (2019) in the Territorial Planning Guide.

![Inhabited land for VIP and VIS](image)

VIP projects, benefiting subsidies in kind, National Government Housing Program (2012-2014).

Figure 3. Location of Informal Settlements of San José de Cúcuta 2020.

Source: Self-made.
In response to the occupation of the expansion land and the socio-cultural and physical-environmental phenomena present in the territory, San José de Cúcuta implemented in 2011 the free title transfer program, foreseen in the national housing policy through of Law 1537 of 2012, which aims to legalize property owned by the State, known as “fiscal assets” (Congress of the Republic of Colombia, 2005; Ministry of Housing, City and Territory, 2011; Congress of the Republic of Colombia, 2020).

However, in the case of the city of San José de Cúcuta, which has a border profile, the impact of land occupation informally has been continuous, especially considering that within the guidelines that are part of the national regulations, they find aspects of the application process of the program, which are not coherent and do not respond to the dynamics and characteristics of the city. Since the reality present in the territory approached from the sociocultural, economic, urban, cadastral, geological, environmental and legal conditions of land, present particularities that should not be studied or determined only from the generality of the norm. From this point of view, national regulations have not efficiently favored the application of the free title transfer program and, therefore, compliance with the purposes established in the national housing policy - Law 1537 of 2012 (Metrovivienda Cúcuta, 2015 (See Table I).

Table I. Total Titled Properties in San José De Cúcuta, Period 2009-2018.

<table>
<thead>
<tr>
<th>Administrative act (resolution)</th>
<th>Year</th>
<th>Released Properties</th>
<th>Securities effective and delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>4163</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>3082</td>
<td>453</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0169 of march 29</td>
<td>2012</td>
<td>12,809</td>
<td>589</td>
</tr>
<tr>
<td>0513 of november 09</td>
<td>2013</td>
<td>532</td>
<td></td>
</tr>
<tr>
<td>0437 of july 31</td>
<td>2014</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>0706 of october 06</td>
<td>2015</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0199 of may 23</td>
<td>2016</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>2017</td>
<td>283</td>
<td>283</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

Source: Made from Coronel Ruiz (2019).

A large part of the human settlements located in the peripheral area of the city are classified according to the Territorial Guide of Agreement 022 of 2019, under the condition of high threat due to risk of mass removal, and framed according to the article 49, under the classification of protection land, a denomination through which it is specified that the geographical, landscape, and environmental characteristics can determine areas of threats and non-mitigable risk for the location of human settlements (See figure 4).
San José de Cúcuta has geological faults associated with the eastern Colombian mountain range and the Venezuelan Uribante Caparo, as well as one of the highest seismic levels in the country, which has represented physical-built damage to the territory in different periods of time, on all related to the year 1875, in which the city suffered the earthquake in the Andes, with an almost total impact on the territory (Ministry of Mines and Energy, 1999; Ingeominas, 1997).

The city presents climatic phenomena associated with the bimodal rain regime, with atmospheric variations that determine intense periods of rain (phenomenon of the girl) or drought (phenomenon of the child) (Flórez G, et al. 2008;), which have brought impacts negative for the territory, especially the phenomenon of the girl child that has had its maximum impact in 2010, 2011 and 2020 causing landslides and floods in areas classified as risk of mass removal, which according to data provided by Metrovivienda Cúcuta (2015) has represented the affectation of 2,672 homes approximately. This has configured the increase in the housing deficit in the city of, thus generating the scenario (2012-2013) that allowed the local government to postulate the population profile "Total Households Affected by natural disasters, public calamities and / or
emergencies that live in non-mitigable high-risk areas” within the 100 thousand free homes program (Coronel Ruiz, 2016; Ayala García, 2020).

The situation of internal problems of the Bolivarian Republic of Venezuela since the closure of the border on August 15, 2015 to date, which generated the massification of migrations (human mobilities) to Colombian territory, defined by the International Bank for Reconstruction and Fomento / Banco Mundial (2018) as a response to the context of transition in economic, political and security matters from the Venezuelan territory, a process that has been developed through human mobilities associated with the types of migration: transit, return, destination and pendular, carried out from a regular or irregular approach.

The constant arrival of migrants has generated a change in the profile and the urban landscape; as well as an accelerated growth of the population, which, according to the figures of Migración Colombia as of December 31, 2020, reports for the national territory the presence of more than 1,729,000 Venezuelans, of which 966,000 are in an irregular situation. In addition, within this scenario, it is important to establish that the referenced data with a cut-off date of April 30, 2020, determine that the Norte de Santander department houses 11.38% (203,604) Venezuelan migrants on departmental soil, of which 106,436 Migrants are in the city of San José de Cúcuta, 39,373 in the municipality of Villa del Rosario, 7,523 in the municipality of Los Patios, 3,568 in the municipality of Zulia, 2,265 in the municipality of Puerto Santander and 457 in the municipality of San Cayetano; figure that for the Metropolitan Area of Cúcuta corresponds to the presence of 159,622 Venezuelan migrants; that is, 78.39% of the migrant population of Norte de Santander, while the city of San José de Cúcuta represents 52.27% of it (Migración Colombia, 2020).

This phenomenon impacts the socio-cultural dimension of the territory, because generally the host cities must address the socioeconomic conditions of the migrant population (most of them in extreme poverty), which in turn generate impacts associated with the economic, institutional, social, health services, education services, employment services, social protection services, shelter and temporary housing, provision and services of water and basic sanitation, targeted impacts (transport and energy), impacts on the physical and growth, establishing new contexts of vulnerability for the receiving territory (International Bank for Reconstruction and Development / World Bank, 2018), and evidencing that the city of San José as a border area and its metropolitan area do not have the capacity to develop strategies that allow mitigating and address the impact generated by migration.

The causes, phenomena and problems mentioned above from the study dimensions of this research, show for San José de Cúcuta a territorial imbalance that affects the quality of life of the inhabitants and generates negative impacts on aspects related to the functions of the city. This becomes relevant, when taking into account the United Nations Millennium Goals (MDGs) in 2000 and the Sustainable Development Goals (SDGs) in 2015 considered that socio-environmental factors such as the deficient provision of services and the Basic sanitation represent a negative scenario for the sustainability of the territory, generating in turn territorial, social and environmental inequalities that do not favor competitiveness and development (Aché Aché, 2012) and took up issues related to the sustainability of the territory, in order to balance environmental, social and economic aspects and provide a better quality of life for the population (United Nations Territory Program, SF). However, to effectively comply with them, it is the function of government entities to provide integrated governance that ensures the management and development of political, economic

...and social actions whose purpose is to promote the efficient growth of the territories at different scales, which In the case of the city of Cúcuta, it must include its metropolitan area.
Conclusions

This research contributed to the generation of pedagogical tools aimed at analyzing the causes, phenomena and the impact of urban growth in relation to the transformation of the territory of San José de Cúcuta, determining the main problems that, from the physical-environmental dimensions, Social-cultural and economic-normative have negatively impacted the productivity, sustainability and strengthening of the city and its metropolitan area in the last twenty years.

Regarding urban management, it was determined that San José de Cúcuta and its metropolitan area have physical and functional characteristics that can contribute to the potentialization of the territory. This is evidenced in that its location and physical-geographical aspects can be taken as a scenario of growth and access to opportunities to improve communication and the exchange of goods and services, with the interior of the country and with the Bolivarian Republic of Venezuela.

The city has the challenge of formulating and developing mechanisms based on instruments for urban planning and management under a unified physical-territorial organization model (Metropolitan Area) in accordance with national regulations, which allow the generation of social-economic development strategies through short, medium and long term in order to recover the integral balance of the territory, stability related to the environment, social equity, physical security, satisfaction of the basic needs of the population, productivity and habitability of the territory; improving urban functionality and territorial cooperation in search of better opportunities. This will favor the integration and planning of the territory, as well as consequently the solution to the problems derived from the environment and sustainability, the scarcity of developable land, informal occupation of land, urban-spatial segregation, migration, social inequality and territorial, and socio-natural phenomena; among others.

In the same way, this organizational model must ensure a policy regarding the regulation of land, which reduces the informality indexes derived from the occupation, use and tenure of the same. This will help to improve the housing deficit; thus reducing social gaps and improving environmental risk management (levels of seismic hazard and vulnerability). This can only be possible if government entities guarantee the consolidation of an integral urban governance that allows, through the articulation and participation of territorial actors, the correct decision-making regarding the territory.

Finally, San José de Cúcuta must address a social policy with an urban development approach (linked to the unified physical-territorial organization model), which allows the establishment of tools for humanitarian assistance in response to the temporary needs of migrants and their impact on the territory as a host city. Likewise, in order to improve the sustainability of the territory, it is necessary to adopt strategies that favor employability and the strengthening of the technical and technological skills of the population. The foregoing when taking into account that qualification and access to education allows to enhance human resources and guarantee the diversification of the economy.

References


Ayala García, E. T (2020). Las funciones y los riesgos urbanos de la ciudad de Cúcuta: Una perspectiva crítica en Ciudad, Sostenibilidad y posconflicto en Colombia: Santa Marta, Cúcuta, Cali y Barranquilla. FESCOL, FNA.


Congreso de la República de Colombia (2020). Ley 2044 30 de julio 2020 “Por el cual se dictan normas para el saneamiento de predios ocupados por asentamientos humanos ilegales y se dictan otras disposiciones” https://www.senado.gov.co/index.php/documentos/senado-prensa/4320-ley-2044-del-30-de-julio-de-2020-asentamientos-humanos-ilegales/file

Congreso de la República de Colombia (2021) Ley Orgánica 2082 “por medio de la cual se crea la categoría municipal de ciudades capitales, se adoptan mecanismos tendientes a fortalecer la descentralización administrativa y se dictan otras disposiciones” https://dapre.presidencia.gov.co/normativa/normativa/LEY%202082%20DEL%2018%20DE%20FEBRERO%20DE%202021.pdf

Urban Management as a Pedagogical Tool. San José De Cúcuta: Causes, Phenomena and Impacts on Urban Growth


Luz Karime Coronel-Ruiz, Erika Tatiana Ayala-García, Magdiel Daviana Tami-Cortes


Ministerio de Minas y Energía (1999) Mapa de zonificación sísmica y valores Aa. INGEOMINAS

Ministerio de Vivienda, Ciudad y Territorio (2011). Decreto 4825 de diciembre 20 de 2011 “por el cual se reglamentan los artículos 2°, 4°, 6° y 7° de la Ley 1001 de 2005 y parcialmente el artículo 90 de la Ley 1151 de 2007, en materia de transferencia gratuita de bienes fiscales urbanos para el desarrollo de programas de vivienda de interés social y se dictan otras disposiciones” http://www.suin-juriscol.gov.co/viewDocument.asp?id=1552187


Programa de las Naciones Unidas para el territorio (S.F) Objetivos del desarrollo sostenible. https://www.undp.org/content/undp/es/home/sustainable-development-goals.html


Urban Management as a Pedagogical Tool. San José De Cúcuta: Causes, Phenomena and Impacts on Urban Growth

