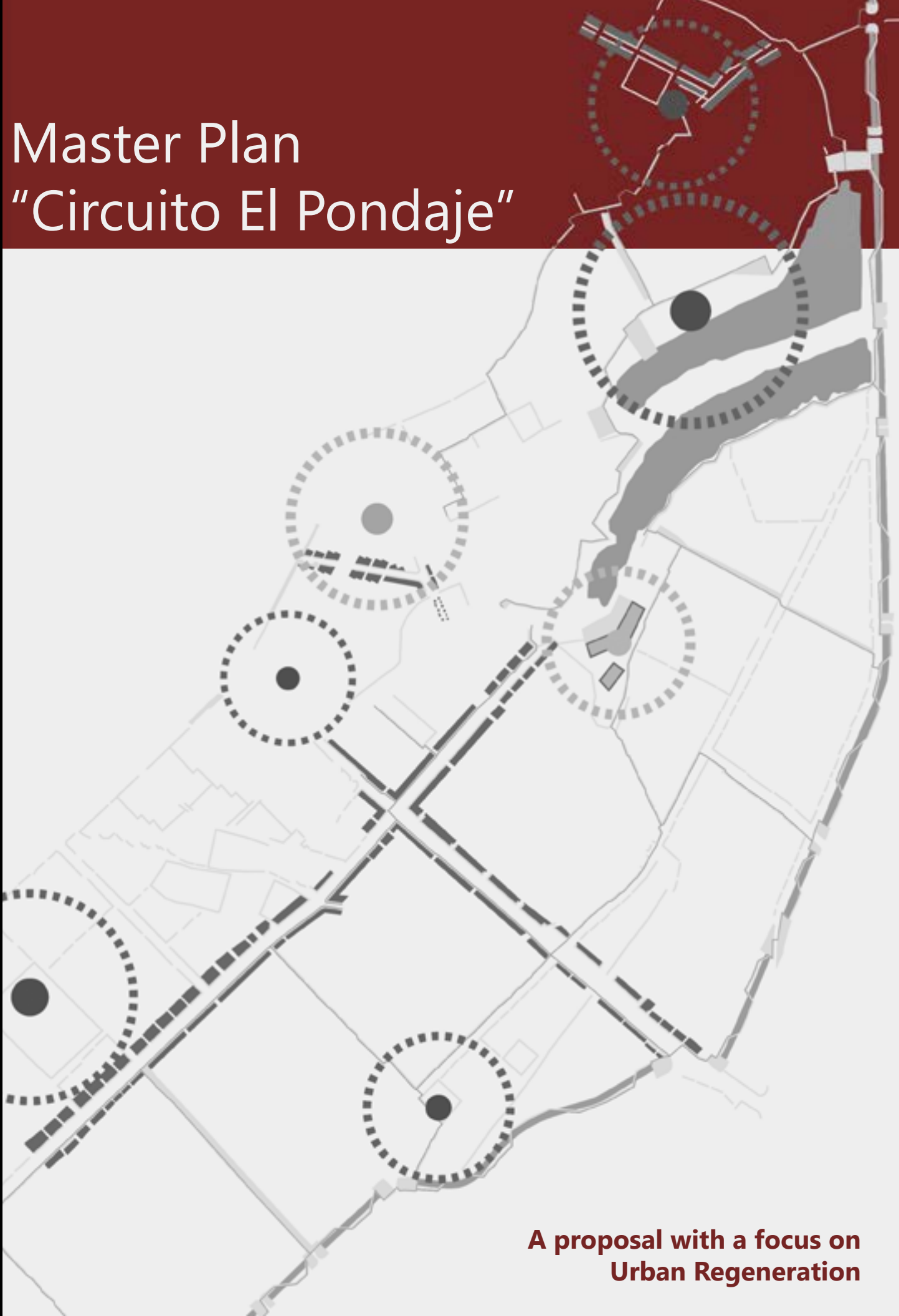


# Master Plan "Circuito El Pondaje"



**A proposal with a focus on  
Urban Regeneration**

*A mis profesores, Mario y Elisabetta por todo su apoyo y guía durante este proceso.*

*A mis amigos, a los que están en Colombia y en especial los que están aquí, que me acompañaron y me apoyaron durante estos años.*

*A mi familia, que me han apoyado en todo a pesar de estar al otro lado del mundo, y nunca han dejado de creer en mí.*

*A todos, simplemente gracias.*

## **ABSTRACT**

The thesis explores the development Master Plan in Cali, Colombia, specifically in Zone 13 (Comuna 13) one of the most marginal and vulnerable areas in the east of the city. The study begins with an in-depth analysis of the current situation of the city and the affected zone, its historical, economic, and social past, and an urban analysis to understand the actual situation. This analysis identifies critical challenges, including the lack of adequate public spaces, the neglect and abandonment of existing infrastructure, disconnection from the rest of the city, and elevated crime rates.

The proposal for the Master Plan is based on an urban study at the city scale and at the local scale of the zone (Comuna 13), and the study of different authors that addresses the main factors of public space, giving the guidelines to demonstrate how the public space can help to improve the quality of life of people and to end the urban fragmentation of the city, answering the two main questions of the thesis.

In the end, the thesis will present a proposal for a master plan for the affected area, which will provide an entire circuit of public space, new uses depending on the needs of the community, and new cultural facilities to meet the needs expressed by the inhabitants of the Comuna 13 (zone 13). The plan seeks to foster social cohesion, improve urban integration, and promote sustainable development in the area.



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Master Plan "Circuito El Pondaje"  
A Proposal with a focus on Urban Regeneration

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# CHAPTER 1

INTRODUCTION

## INTRODUCTION

Inequality and social fragmentation are among the many problems affecting Latin American cities. Poverty, insecurity, unemployment, and lack of infrastructure are some of the factors that generate this problem, especially in neglected areas of the town, marginalized neighborhoods, which are generally inhabited by low-income populations. In many Latin American cities, there is a visible contrast between public spaces built in business districts or luxury housing developments, and public spaces in peripheral urbanizations, characterized by lack of accessibility for their users and poor material quality in their implementation **(Schlack & Araujo, 2022)**.

In Latin America, this phenomenon is increasingly evident in cities such as Bogotá, Mexico City, Buenos Aires, Sao Paulo, Lima, and Medellín, affecting their residents' quality of life and limiting the entire city's economic and social development potential. One of the ways to address this problem has been through urban regeneration, which has served as a strategy to improve not only the city's public spaces but also people's quality of life through urban projects that seek common welfare for an entire community.

In this context, this study focuses on the city of Cali, Colombia, specifically on Comuna 13, an area facing serious urban challenges, such as inadequate public space conditions, lack of basic services, high crime rates, and a marked disconnection from the rest of the city.

To carry out an intervention, it is necessary to analyze the history of the zone and its current situation, but above all the community's needs. As mentioned before, urban regeneration seeks to improve the quality of life of the people. It often fails to achieve this goal because it does not consider the people affected by the problem, as in the case of many Latin American cities. This is why, as the main basis for proposing a Master Plan for the zone, we will first carefully analyze the people who live in the area, their main activities, and what they need to improve their quality of life.

The master plan will focus on urban regeneration, based on a comprehensive approach seeking social inclusion, revitalization of public space, mixed land use, environmental sustainability, a focus on mobility, economic boost, and citizen participation.

The proposal focuses on 6 key objectives:

1. Improve and create the pedestrian connection of the area, linking the new public spaces and the existing ones.
2. Connecting the city's bicycle lanes to a new circuit within the zone.
3. Build a network of facilities to meet the needs of the community.
4. Design hard areas such as plazas and small squares to connect the proposed network of facilities.
5. Create main axes to revitalize the area and activate the different activities of the area, attracting many populations.
6. Increase the percentage of green areas and pre-existing tree mass to generate recreational spaces.

In the end, this thesis will demonstrate how a Master Plan with a proposal for urban regeneration in Comuna 13 not only responds to urgent infrastructure and public space needs but also lays the foundation for sustainable and integrated development. The implementation of such a master plan can demonstrate the possibility of transforming vulnerable areas into areas of opportunity, where the built environment becomes an engine for social and economic change, improving the well-being of its inhabitants and contributing to the construction of a more inclusive, connected, and equitable city.

## METHODOLOGY

The thesis is divided into four main parts. First a study of different authors will be carried out to understand how public space, urban planning, and urban regeneration can help improve the quality of life of the inhabitants and end the fragmentation of a city, mostly in Latin American cases.

A case study of urban renovation in Cali, Colombia will be studied to see how the process of urban renovation helps through different interventions to improve the quality of life of people in places like the area where the final project will be proposed. Mostly in marginalized neighborhoods of Cali, which have the same social and economic context as the city. This analysis will help to understand the processes and results obtained and will serve as a basis for the development of the final proposal for the Master Plan in Comuna 13 (zone 13).

Considering the previous study, an analysis of the city and sector 13 will be made to know its historical past, and current situation in terms of uses, mobility, facilities, public space, and needs of the community to develop a proposal that meets the needs of the inhabitants of the area, solving the major problematic found in the analysis. These are with the support of documents made by the local government of Cali, the UPU (Unidad de Planeación Urbana) where they address these topics.

Finally, a master plan for the area will be proposed based on urban regeneration principles that will include different interventions aimed at improving urban infrastructure, existing public spaces, and urban facilities, to improve the quality of life for people and reduce urban fragmentation in this part of the city.

# CHAPTER 2

Can the quality of life of the inhabitants of a vulnerable area be improved by providing them with different public spaces that will encourage the development of new activities in the community?



People's quality of life is a concept that encompasses social, economic, environmental, and physical aspects, all of which are influenced by the environment in which they live. Public space plays an important role in acting as a means for social interaction, physical and mental health, mobility, and safety. Within this scope, when talking about a neighborhood or an area of a city in a vulnerable state, urban planning is of utmost importance to develop a master plan that orders the city or a specific location, thus providing a short or longterm vision for the management of the territory, the design of infrastructures and the creation and adequacy of public spaces.

Something that has become evident over the years is that public space is the major meeting point of a city. It is the place where citizens interact with each other, share experiences, and live their daily lives. For this reason, large cities worldwide are characterized by public space regeneration projects in important areas such as city centers, financial centers, and tourist sites to enrich the surrounding conditions.

Public spaces are areas that all citizens share, and their function is not only recreational, but they also play an important role in strengthening social ties and providing access to services. In the book "The Social Life of Small Urban Spaces" (**Whyte, 1980**) talks about how public spaces are vital to generating social interaction and community cohesion. A well-designed public space invites people to use it, encourages interaction between different social groups, and contributes to building a stronger social fabric. A city with effective public space can be safer, more inclusive, and livable. The active occupation of public spaces generates the notion that citizens are owners of their environment, generating a sense of responsibility for that space. In addition, busy streets and squares, with constant life, help reduce crime and create a safe environment, as explained by (**Jacobs, 1961**) in "Death and Life of Great American Cities".

In the book "Cities for People" (**Gehl, 2010**) says that designed environments that favor and prioritize the pedestrian and encourage cycling have a direct impact on the physical and mental health of the inhabitants. Cities such as Copenhagen and Melbourne have implemented urban policies based on Gehl's ideas, and other cities have developed master plans to improve the quality of life of the person and organize the urban territory.

In vulnerable areas with economic difficulties, characterized by social fragmentation, high levels of crime, and inequality, it is of utmost importance to implement projects that aim to improve the community's quality of life and break social fragmentation. Parks, plazas, community facilities, and improvements in public transportation and mobility serve as a primary way to develop a vulnerable area, providing the community with spaces to create social relationships and strengthen community unity, spaces to improve mental and physical health through green areas and recreation zones, spaces to generate new economic opportunities by establishing a market and public events zone, and spaces that allow the community to have a cultural identity through cultural activities.

When talking about a master plan for a specific area or city, it is a way to provide these spaces to communities. In vulnerable areas, a well-executed master plan can regenerate depressed areas, improving the quality of life of its inhabitants and promoting equitable economic and social development.

As mentioned before, a master plan is a tool to organize the territory of a city. The chaotic and disorderly expansion of urban areas led to the need for more structured planning. A clear example is the Georges-Eugene Haussmann's project in Paris in the 1850s which sought to transform the city through boulevards and parks, also improving circulation and urban sanitation. (**Jordan, 1995**).

The master plan concept was formalized with the Garden City Movement; led by Ebenezer Howard. In his book "Garden Cities of To-morrow" (**Howard, 1902**) proposed the creation of self-sufficient cities surrounded by green belts that would combine the best of urban and rural life. This influenced the idea of creating public spaces integrated into the urban landscape.

Today, a master plan has a more inclusive and sustainable approach, seeking to incorporate more of the affected community to generate a sense of belonging environmental sustainability, and social equity.

An important aspect to address in this thesis is urban regeneration, and how the master plan to be developed is a fundamental tool for this.

Urban regeneration aims to revitalize degraded areas through a broader approach that combines infrastructure renewal, public space creation, and economic and social development.

An example is Medellín, Colombia, where through the Integral Urban Intervention Plan, public libraries, parks, and cultural centers were built in highly vulnerable areas. In addition to the implementation of METROCABLE, a transportation system that connects these areas with the city center, guaranteeing access to jobs and services.

Access to public spaces can reduce violence and crime. The peaceful favela project in Rio de Janeiro demonstrated this by integrating these areas into a master plan where recreational and cultural areas were provided, providing more opportunities and new alternatives for the young population.

Urban regeneration arguably helps to improve the quality of life in a community, as long as it focuses on what matters. **(Jacobs, 1961)** says that regeneration should focus primarily on existing neighborhoods, preserving and revitalizing them. She also says that one of the ways to achieve this is to provide a diversity of land uses to encourage social interaction and to ensure that sidewalks are always in use so that there are eyes on the street and a sense of safety.



Fig. 1: Medellín River Botanical Park  
Source: Arquine (2008)

On the other hand, one of the biggest challenges when carrying out these projects in vulnerable areas is the maintenance that will be given in the future. In most cases, local governments make interventions in vulnerable neighborhoods, providing new spaces with different interests to what the community needs, generating zero sense of belonging to the different new spaces. That is why in the book "Cities in Civilization" is said that the key is to encourage community participation when making decisions for this kind of project and generate spaces that focus on education, culture, and local economic needs, achieving an in-the-use and care by the inhabitants of the area **(Hall, 1998)**.

Nor can we ignore the fact that when projects are carried out in vulnerable areas with economic interests, a phenomenon of gentrification is generated, forcing the community to move. **(Harvey, 2012)** mentions it when he says that "with urban regeneration come improvements in infrastructure and services, but generally with economic interests behind, ignoring the interests of the affected community" in his book "Rebel Cities". A clear example is the case of Shoreditch in London, where the desire to improve the industrial neighborhood that was in economic decline led to regeneration focused on attracting technology and creative companies, thus improving infrastructure, transport, and housing. Once this was done, the neighborhood's economy improved, but it was not mentioned that the displacement of residents was on a large scale due to the soaring real estate prices that arose when these companies arrived, making it impossible for the community to afford.

It is key that, at the time of urban regeneration, to provide new public spaces for a vulnerable community, the main objective should be to meet the needs of the community, and that the community should be involved in the process. It is also important that the new spaces have the function of generating new activities that help people's wellbeing by promoting education, cultural participation, recreation, among others.

How a master plan focused on urban regeneration in Latin America's slums can end the city's urban fragmentation?



Urban fragmentation in Latin America has persisted for several years. In the 1990s, the uncontrolled growth of cities, caused by migration from the countryside to the city in search of greater opportunities, generated areas of informal settlements formed without any urban planning, resulting in poor infrastructure.

In the book "The War of Places: The Colonization of Land and Housing in the Age of Finance" (**Rolnik, 2019**) studies neoliberal urban policies and says that urban fragmentation is not only due to the unequal distribution of services but also to a symbolic barrier that separates social classes, affecting cohesion and social mobility. This fragmentation has created divided cities, where people living in vulnerable areas lack access to the same rights and opportunities as people living in formal areas. This is explained by (**Satterthwaite, 1986**) in "Pre-Columbian and Colonial Cities of Latin America" mentioning that uncontrolled expansion has created an "urban mosaic" where formal and informal areas coexist without interaction.

The master plan acts as a tool to coordinate the interventions needed to regenerate marginal areas and overcome urban fragmentation. It must provide a long-term vision for the development of the city and ensure that urban interventions in vulnerable areas are not isolated projects from the rest of the city. In the book "The Image of the City" (**Lynch, 1960**) says how the different spaces of a city influence how citizens relate to each other. It is important that people can orient themselves and connect with their surroundings.

In the case of Latin America, it is important to involve different social actors, especially local communities. "A master plan should emerge from a process of co-creation with the affected communities" (**Harvey, 2012**). It is also important to have an environmental sustainability approach where the physical and ecological environment is improved. The concept of "green infrastructure" is introduced in the book "Green Urbanism: Learning from European Cities", where the importance of developing policies that promote the use of public space, and the development of a sustainable transportation system is highlighted. (**Beatley, 2000**).

Talking about a Master Plan focused on urban regeneration, it has been mentioned how this has managed to end the fragmentation of many cities through different projects and initiatives, especially by focusing on community needs and addressing social and economic issues, which are one of the reasons for the fragmentation. To further discuss how urban regeneration manages to connect, it is necessary to understand what urban fragmentation is.

Urban fragmentation reflects the structural inequalities of society, in most cases dividing where the rich live and where the poor live, urban policies perpetuate this segregation, and until urban planning is done with a fair and equitable approach these divisions will not cease to exist (**Harvey, 2012**).

Fragmentation of a city occurs when different areas of the city are isolated for different reasons, usually, physical barriers such as highways or railroad lines, inadequate infrastructure hindering easy access to these areas, or social inequality leading to a lack of social interaction between different communities, few job opportunities and services, resulting in a concentration of poverty.

As mentioned before, urban regeneration can help to break this fragmentation, if it focuses on solving the main problems that generate the rupture, through appropriate strategies. The community must be involved in the planning process, ensuring that it has a broad knowledge of the needs of the place and the users, at the same time this will create a sense of ownership of the projects carried out. It is also important to consider how the inhabitants get there, that is, it is necessary to have an effective integrated transport connection that provides all the services to connect an isolated area with the rest of the city. This includes an effective public transport system connecting financial centers, and service centers, schools, and city centers with the isolated area. An infrastructure for pedestrian and bicycle mobility that connects different areas through public space, with the understanding that pedestrians and bicycles have a higher priority than automobiles, will make the connection and transit between zones more pleasant and safe for residents.

To propose a mixed-use development to ensure that the community has access to different services in the area, while at the same time demonstrating how in different cases, neighborhoods immersed in poverty, with a single predominant use, have managed to change their image and improve their socioeconomic situation by reforming their uses, attracting new users and encouraging social cohesion.

In the book "The Rise of the Creative" it is said that the way to improve the quality of life of a community in fragmented areas is to attract the creative class **(Florida, 2002)**. Urban environments that offer cultural diversity and opportunities for innovation promote social cohesion and the revitalization process will be faster.

If regeneration focuses on these points, it will arguably be successful in revitalizing and breaking down the fragmentation of any affected area, but it is also necessary to understand that it is not enough to focus only on public space, and the different uses. There have been many cases where urban regeneration has not fulfilled its objectives, or also cases where the phenomenon of gentrification has forced residents to move to other areas, by not considering plans for the development of inclusive housing, creating the same problem of fragmentation.

But there are also somewhere it has worked, such as the case of "Loma Linda" in Medellin, where the "Integral Urban Projects" initiative transformed the area with social housing, libraries, parks, and community centers, improving the quality of life of residents by reducing crime and fostering social cohesion.




Fig.2: Parque Libreria Tomas Carrasquilla  
Source: El Colombiano (2015)

An inclusive and equitable approach to planning can be the key to combating urban fragmentation. Focusing on community needs and diversity of use will help transform marginalized areas and connect them to the rest of the city.

Numerous case studies and authors have shown that urban regeneration can help end the fragmentation of a city and improve the quality of life of affected communities if it focuses on equitably solving real problems for the residents.

Private competition - Development of public space in P. P El Hoyo - Piloto  
Colectivo 720 + DARP



*"The Hoyo and Piloto sector was developed at the time from spontaneous occupations on the banks of the Cali River as a home for the working community of the city's large industries. Nowadays, with the "Partial Plan Hoyo and Piloto" the space is opened towards a new clear, responsible and sensitive planning with the territory. Thus, the urban and landscape design represents a key opportunity to achieve an integration not only with its context and the surrounding urban plans, but also to consolidate a relationship between the city and its history, its inhabitants, and its character in this historic "crossroads".*

*In spite of the great cultural, environmental and landscape richness of the Cali River as it passes through the city, some sectors, as a result of an unconscious occupation of its banks, produce a closed relationship and a "butt" effect, generating a scenario conducive to pollution, consumption points, drug sales, violence and urban segregation. Although in the "Hoyo and Piloto" sector this situation is not so acute, its occupation on the roads limits the public space; likewise, the predominance of the commercial sector means that the river has lost its visibility with the neighboring sectors and finally there is very little relationship between both sides along the river and a not very well defined limit with the downtown area on all sides.*

*In terms of vehicular mobility, the sector has a large supply of public transportation with three MIO stations, direct connection to the city through Carrera 1ra, Calle 15, Calle 21 and Calle 26; however, these same vehicular connections cause pedestrian flow to generate conflicts, and therefore it is essential to review connectivity from the perspective of pedestrians, bicycle users, and the elderly through an alternative mobility system that enhances scenic routes that take advantage of the environmental, cultural and memory values that converge in the place."*

**(Partial Plan Hoyo and Piloto: Urban and landscape design for integration.  
Colectivo 720., 2021)**



Fig. 3: Sector del Hoyo y Piloto  
Source: Colectivo 720

The project was born as an initiative to transform the city by focusing on its degraded urban areas to turn them into revitalized spaces, with the objective of improving the quality of life of its inhabitants and encouraging economic development and social cohesion.

## BACKGROUND HISTORY

The Hoyo neighborhood emerged in the early twentieth century as an informal settlement made up of low-income people seeking to be close to the city's labor and service industries. In contrast, the Piloto neighborhood originated in the 1950s as part of an urbanization project to relocate displaced persons and provide housing solutions for low-income families.

Today the two neighborhoods are among the most marginalized in the city, facing the same problems of population density, deterioration and lack of maintenance, insecurity, concentration of poverty, and disorderly expansion. This has resulted in serious stigmatization by residents of other areas of Cali and by the authorities themselves, leading to urban fragmentation and hindering the integration and development of both neighborhoods.



Fig. 4: Aerial view of El Y Pilto, Cali Colombia. / Source: Google Earth (2024)

El Hoyo

El Piloto



Fig. 5: Sector de El Hoyo y Pilto. / Source: Google Earth (2024)



Fig. 6: Sector de El Hoyo y Pilto / Source: El Pais (2022)



## KEY OBJECTIVES

The project has several key objectives to solve the problems of both neighborhoods, seeking to transform the area into a dynamic space integrated with the rest of the city.

### Physical Rehabilitation

Improving the existing urban infrastructure and proposing new ones, regenerating streets, public space and service networks. We also propose housing projects and areas to promote commerce and culture.

### Social Integration

Foster social inclusion by creating educational and economic opportunities to avoid displacement of inhabitants.

### Economic Revitalization

Create new employment opportunities and boost economic and tourism activities to promote economic development in the area.

### Environmental Sustainability

Regeneration of existing green areas, proper waste management and promoting mobility where pedestrians are the priority as well as non-motorized vehicles.



Fig. 7: Master Plan El Hoyo y Piloto  
Source: Colectivo 720



To achieve the objectives, the project proposes different interventions focused on essential aspects to respond to all needs: improving urban infrastructure through the renovation of roads, new service networks and regeneration and recovery of existing public space; construction of social housing while respecting cultural identity in order to avoid gentrification; and construction of new public spaces and community facilities to encourage community participation and generate social cohesion.



Fig. 8: Proposal for the public space / Source: Colectivo 720



Fig. 9: Proposal for the public space / Source: Colectivo720

The interventions in the El Hoyo neighborhood seek to improve the urban infrastructure of the area and generate positive social and economic impacts. It is expected that the marginality of the community can be reduced, and thus that the rest of the city no longer ignore this area of Cali, and at the same time end the social fragmentation through new spaces for different cultural activities that promote social cohesion. Also, during the construction phase the proposed new activities will bring new employment opportunities to stimulate the economic growth of both the neighborhood and the city.

The urban renewal project of both neighborhoods seeks to bring an opportunity to transform an area that has been marginalized for several years into a dynamic and integrated area to the rest of the city improve its urban infrastructure and make it more attractive to the citizens of Cali. It is important to mention that the intervention presents some challenges that could affect the objectives of the project, and they can only be met if the responsible authorities manage the resources adequately and carry out activities to involve the community at the time of planning.

The similarity of conditions of the neighborhoods intervened in the renovation project of El Hoyo and Piloto. The purpose of urban regeneration of the El Pondaje neighborhood that is sought to be proposed in this thesis, makes it serve as a reference for some aspects of planning, however, understand that the purposes could be a little different, the first focused on urban renewal where mainly seeks the physical rehabilitation of deteriorated areas, in urban infrastructure; and the one proposed for the El Pondaje neighborhood is an urban regeneration where, apart from the rehabilitation of the urban infrastructure, it also seeks to solve broader community problems, especially social problems, through interventions at different scales.

# CHAPTER 3

CALI , COLOMBIA

## GENEREAL INFORMATION

Santiago de Cali, located in Colombia, is the third largest city in the country and the capital of Valle del Cauca. Its population is approximately 2.3 million, the third most populated city in Colombia after Bogota and Medellin. Its population growth has slowed in recent years due to migration to other cities or outside the country. Its population density is 5100 inhabitants per square kilometer, which varies according to the area but is higher in central and highly urbanized neighborhoods.

Cali is currently an industrial and service center, with sectors such as manufacturing, commerce, and technology, and a strategic point for international trade due to its proximity to the port of Buenaventura on the Pacific. However, despite being an important economic center for the country, inequality is one of the main problems facing the city, especially in the distribution of access to basic services among different sectors of the city, marginalizing and isolating entire neighborhoods from society.

Violence by illegal groups has caused crime rates in Cali to rise in recent years, classifying the city as one of the most dangerous in Colombia, resulting in fear among its citizens of being able to "live the city" and a low quality of life in vulnerable areas.



Fig. 10  
Source: Vecteezy

Colombia



Fig. 11  
Source: Vecteezy

Cali

## HISTORICAL BACKGROUND

Cali, founded in 1536, began as a small agricultural settlement in the valley of the Cauca River, one of the most important in Colombia. It was characterized during colonial times by its important location between Popayan and the port of Buenaventura, making it a key point in the trade routes in the country.

In 1810 the city joined the Latin American independence movement and experienced a slow economic growth based on agriculture. But in the second half of the 19th century, with the arrival of industrialization, a time of transformation began for Cali.



Fig. 12: Cali 1882 - 1884  
Source: Atlas Historico de Cali (2022)



Fig. 13: Cali 1913 / Source: Atlas Historico de Cali (2022)

In 1915 the railroad was built to connect Cali with Buenaventura, facilitating economic development. Between the 1930s and 1940s, industrial growth attracted immigrants from other regions of the country, causing great urban growth that would mark the city. By the 1970s, Cali became the site of the 1971 Pan American Games, promoting the construction of infrastructure and urban improvement in the main areas of the city, marking a before and after. However, the city's image was affected between 1980 and 1990 by violence related to drug trafficking, especially by the presence of the Cali Cartel, affecting the safety of its inhabitants.

Today, Cali has tried to overcome the problems of the past by building new infrastructure and focusing on economic and social growth, but crime and social inequality have become the main problems it seeks to end.

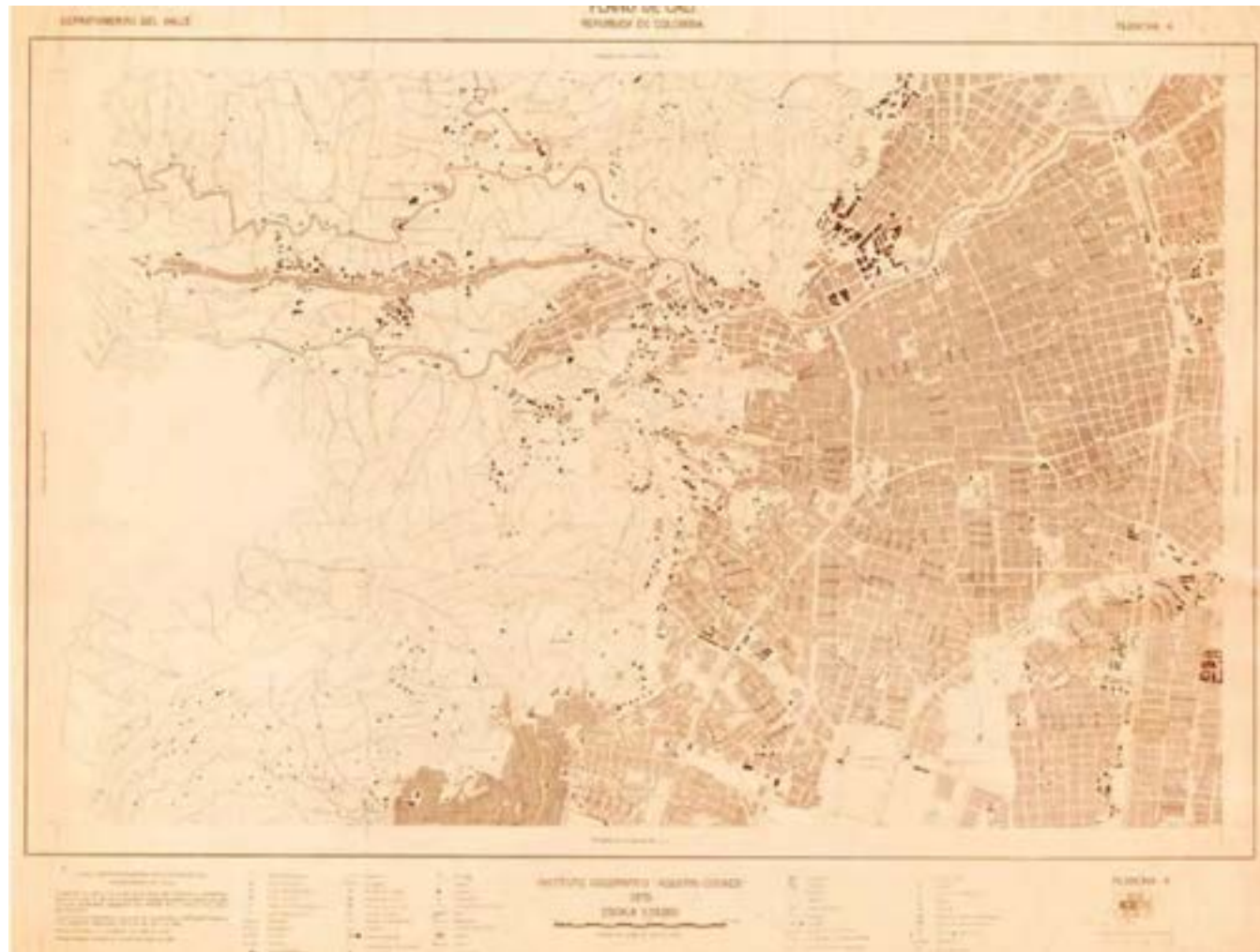


Fig. 14: Cali 1970  
Source: Atlas Historico de Cali (20220)

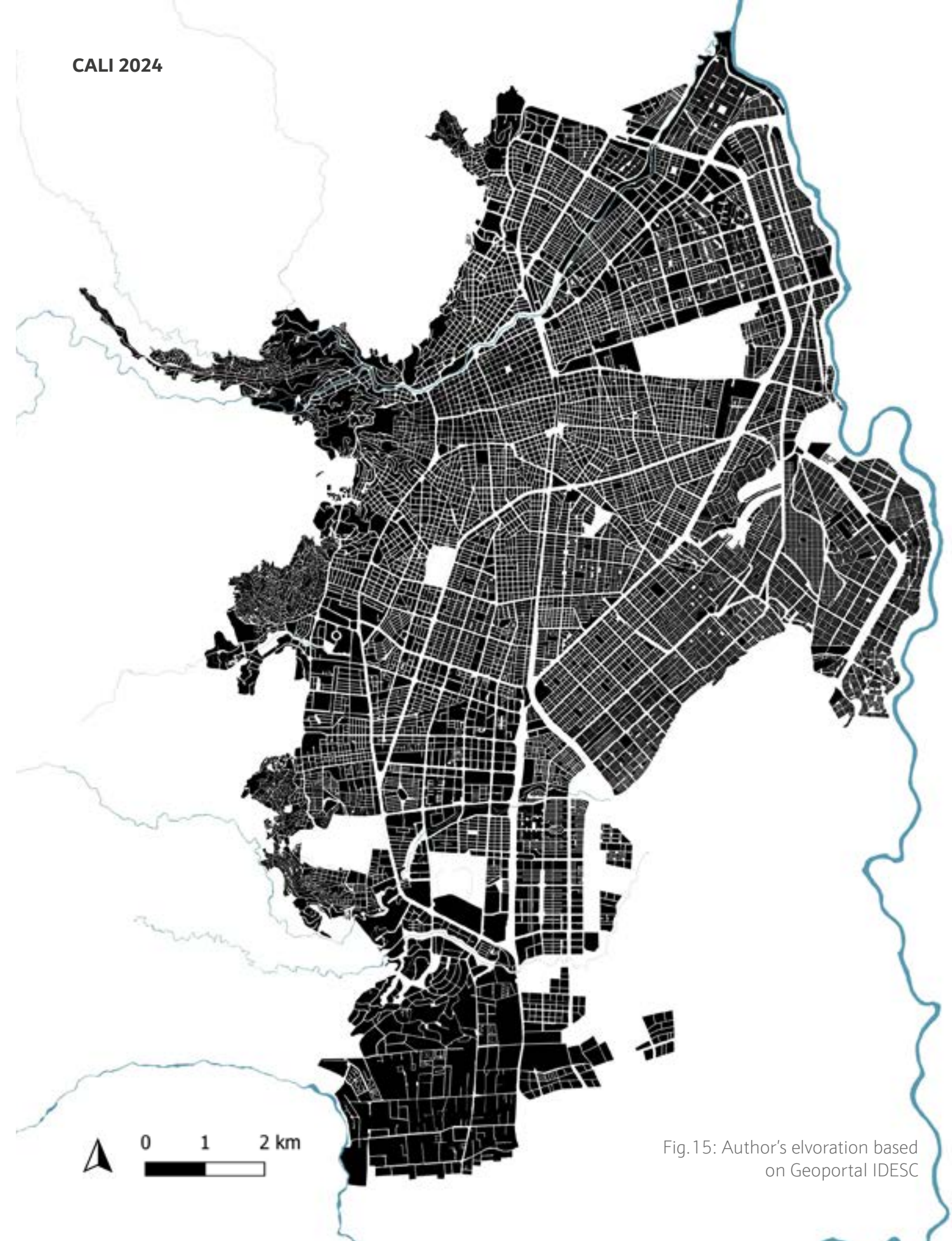
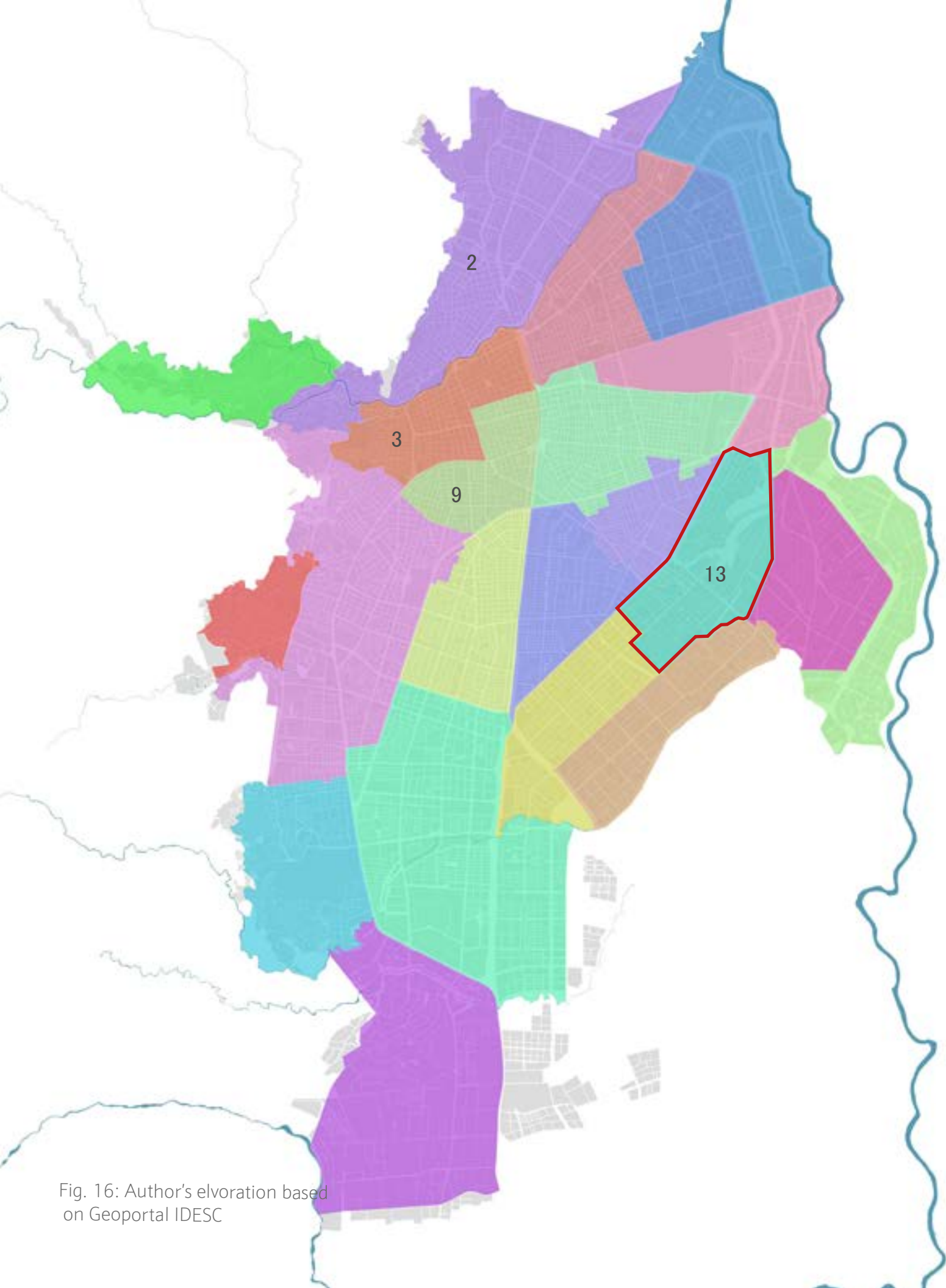


Fig.15: Author's elvoration based on Geoportal IDESC





### Administrative Boundaries

<span style="color: green;">■</span> Sector 1	<span style="color: purple;">■</span> Sector 12
<span style="color: purple;">■</span> Sector 2	<span style="color: teal;">■</span> Sector 13
<span style="color: orange;">■</span> Sector 3	<span style="color: magenta;">■</span> Sector 14
<span style="color: pink;">■</span> Sector 4	<span style="color: brown;">■</span> Sector 15
<span style="color: blue;">■</span> Sector 5	<span style="color: yellow-green;">■</span> Sector 16
<span style="color: blue;">■</span> Sector 6	<span style="color: light-green;">■</span> Sector 17
<span style="color: pink;">■</span> Sector 7	<span style="color: cyan;">■</span> Sector 18
<span style="color: light-green;">■</span> Sector 8	<span style="color: magenta;">■</span> Sector 19
<span style="color: olive-green;">■</span> Sector 9	<span style="color: red;">■</span> Sector 20
<span style="color: yellow-green;">■</span> Sector 10	<span style="color: light-green;">■</span> Sector 21
<span style="color: blue;">■</span> Sector 11	<span style="color: purple;">■</span> Sector 22

Santiago de Cali is divided into 22 communes (sectors), which aim to improve administrative management and urban planning to facilitate the organization and distribution of services.

Urban growth after the second half of the 20th century led to the decision to divide the city into smaller zones in order to efficiently manage resources and services. On the other hand, one of the great opportunities of this division is that each zone has a Community Action Board, facilitating decision making and citizen participation by its own inhabitants, focusing on the most important local problems.

Each sector is made up of neighborhoods with similar demographic and socioeconomic characteristics, and the zones that currently have the highest concentration of services and infrastructure are zones 2, 3, and 9.

### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>

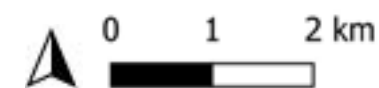
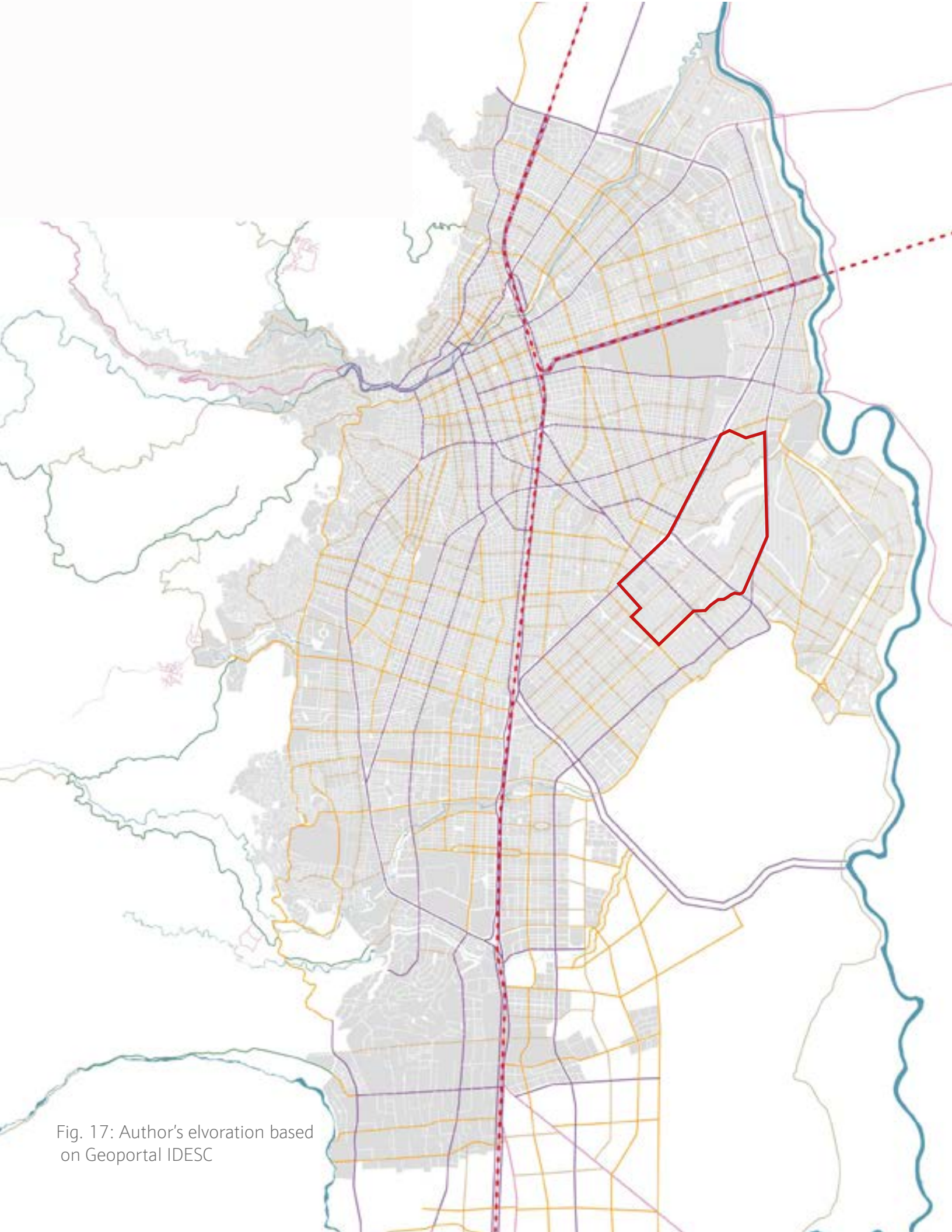


Fig. 16: Author's elvoration based on Geoportal IDESC



### Road hierarchy structure

- |                    |                        |
|--------------------|------------------------|
| - - - Railway      | — Rural Collector Road |
| — Main Artery      | — Interegional Road    |
| — Secondary Artery | — Rural Road           |
| — Collector Road   | — Local Road           |
|                    | — Local Rural Road     |

Cali's mobility road system seeks to connect and optimize traffic flow at different points in the city. The main arterial roads allow mobility over long distances and cross most of the city, either from north to south or east to west. One example is "Avenida Simon Bolívar" which crosses the city from north to south. These are connected to secondary arteries to collect from secondary areas.

A railway line crosses the city and connects with other municipalities, but it is currently unused. The mayor's office is preparing the railroad line for future urban development plans in Cali that will be implemented in the next few years.

Although the city has a road system, it is not sufficient for the number of vehicles that travel through the city, nor are they in good condition, causing a collapse in vehicular mobility in the city.

### DATA SOURCE

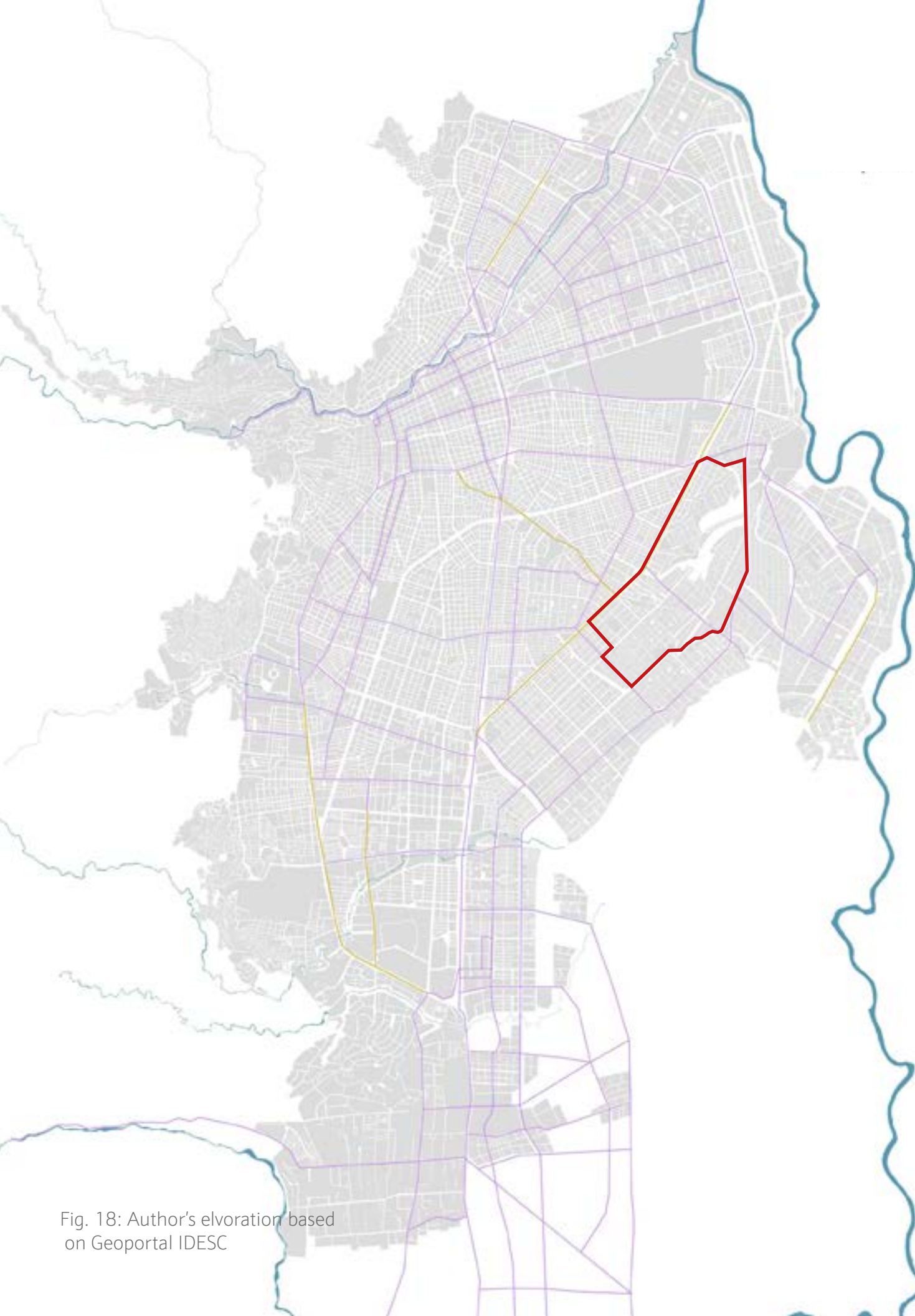
Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>



Fig. 17: Author's elvoration based on Geoportal IDESC





## Bikeways Structure

### Bikeways

- Actual
- Proposed

Cali has exclusive and shared roads for bicycle mobility, but these are not all over the city. Currently, few areas are covered, so the local government has a specific plan to develop more of them and integrate them into the road infrastructure, connecting residential areas with the different centralities of the city.

### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
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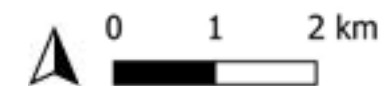
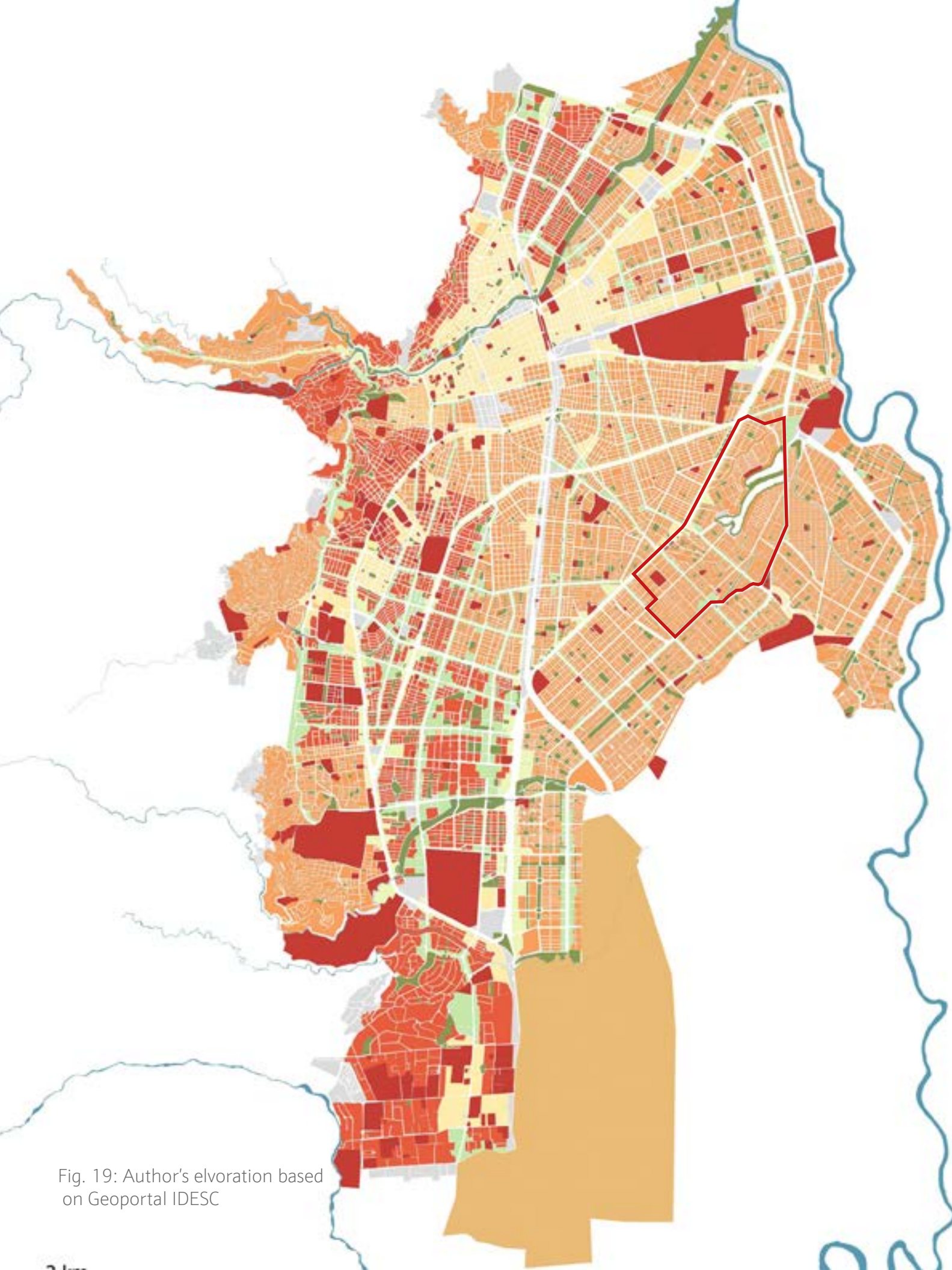


Fig. 18: Author's elvoration based on Geoportal IDESC



## Landuses

### Main use

- Exoansion area
- Residencial area
- Predomentaly Residential Area
- Heritage Areas
- Commercial Areas
- Strategic Corridors
- Urban Corridors
- Urban Facilities
- Public Space

Cali has a diverse urban structure in terms of land use. It can be observed that most of it is predominantly residential, which is mixed-use, mostly with commerce. The difference in land uses between the south of the city and the east is quite evident, with the south being made up mostly of purely residential neighborhoods of a high socioeconomic level, and expansion zones that are generally used for new residential projects.

Land uses in Cali are regulated by the "Plan de Ordenamiento Territorial" (POT), a zoning plan; and reflect the dynamics of growth and development of the city, as well as inequalities when observing the centralities and their distances from certain areas of the city.

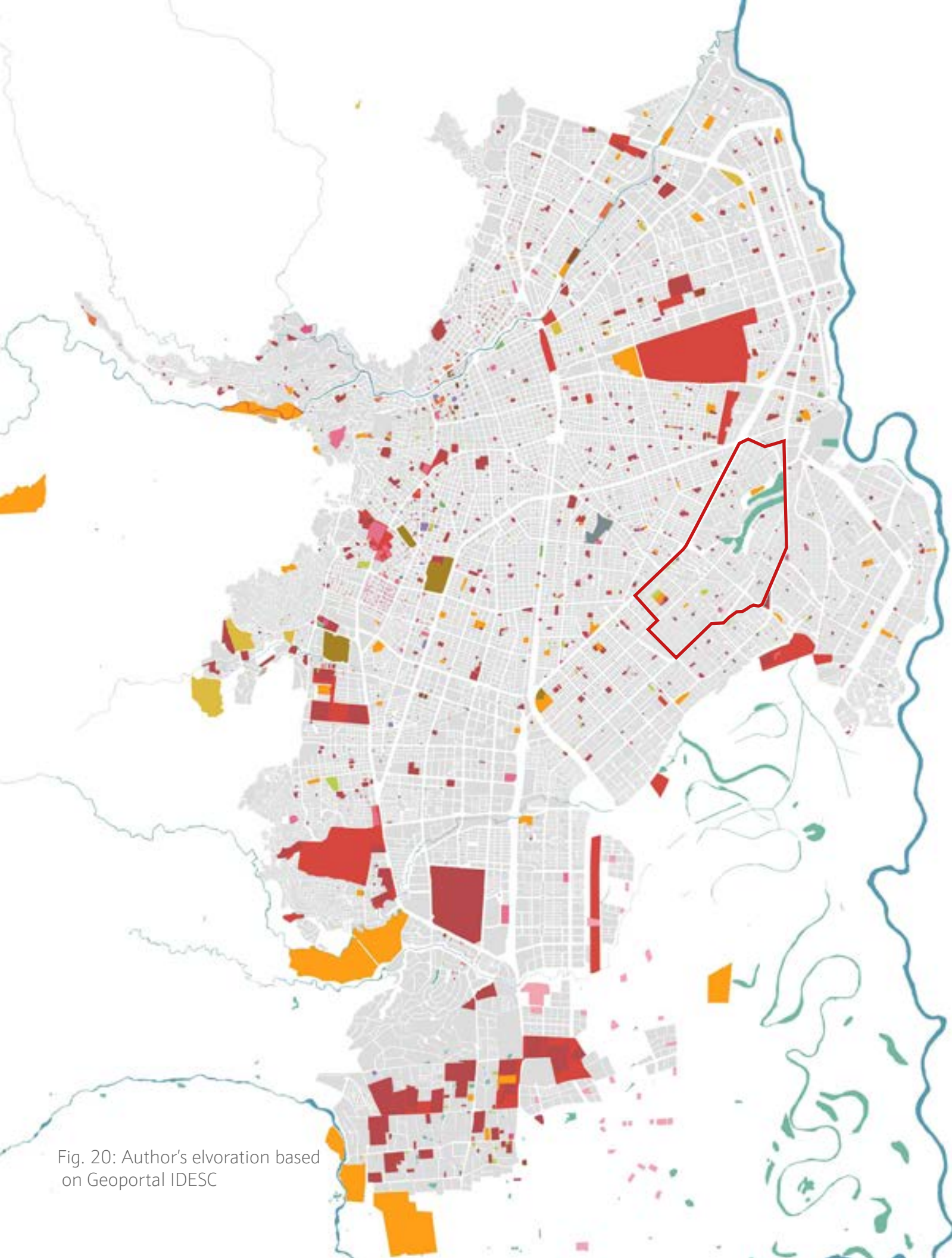
### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>



Fig. 19: Author's elvoration based on Geoportal IDESC



### Urban Facilities

- Urban Basic: Food Supply
- Urban Basic: Administration of Justice
- Urban Basic: Public Administration
- Urban Basic: Attention to Fauna and Flora
- Urban Basic: Cemeteries
- Urban Basic: Sports Centers
- Collective Urban: Social Well-being
- Collective Urban: Religious
- Collective Urban: Culture
- Collective Urban: Education
- Collective Urban: Recreation
- Collective Urban: Health

Most of the facilities in Cali are educational, health, and recreational. Although it is known that these are necessary for a city to allow access to different services, the city does not have enough for all its inhabitants, at the same time its distribution is not homogeneous, usually concentrated in a single area, reflecting the social and economic inequality of the city.

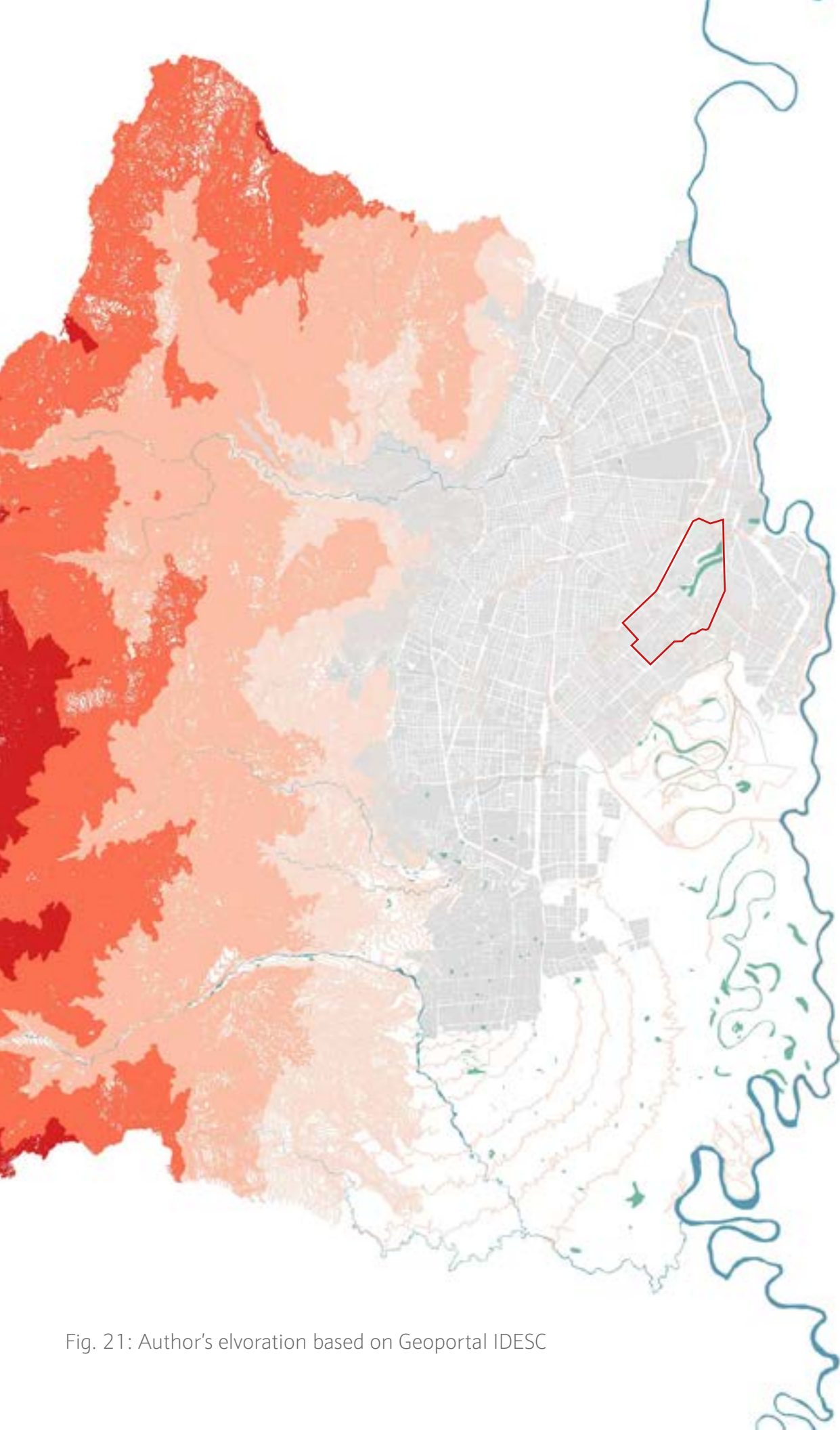
The south and center of the city have developed infrastructures for the provision of services, in contrast to the east (work area) where there is a lack of urban facilities.

### DATA SOURCE

- Geoportale IDESC (Santiago de Cali)
- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
  - [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
  - <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>



Fig. 20: Author's elvoration based on Geoportal IDESC



### Elevation Map

#### Elevation lines (meters)

- 0 - 1230
- 1230 - 1700
- 1700 - 2140
- 2140 - 3080
- 3080 - 4070

The city's topography is quite characteristic for its urban landscape. To the west, the elevation of the "Cordillera Occidental," part of the Andes, is evident. To the east, reaching the Cauca River, the flatness of the valley is noticeable, covering most of the city's area.

Urban development has been planned in the valley, and the city's morphology has been marked by natural barriers such as the river and the mountain range.

#### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
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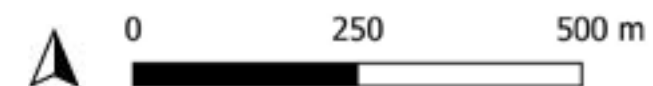
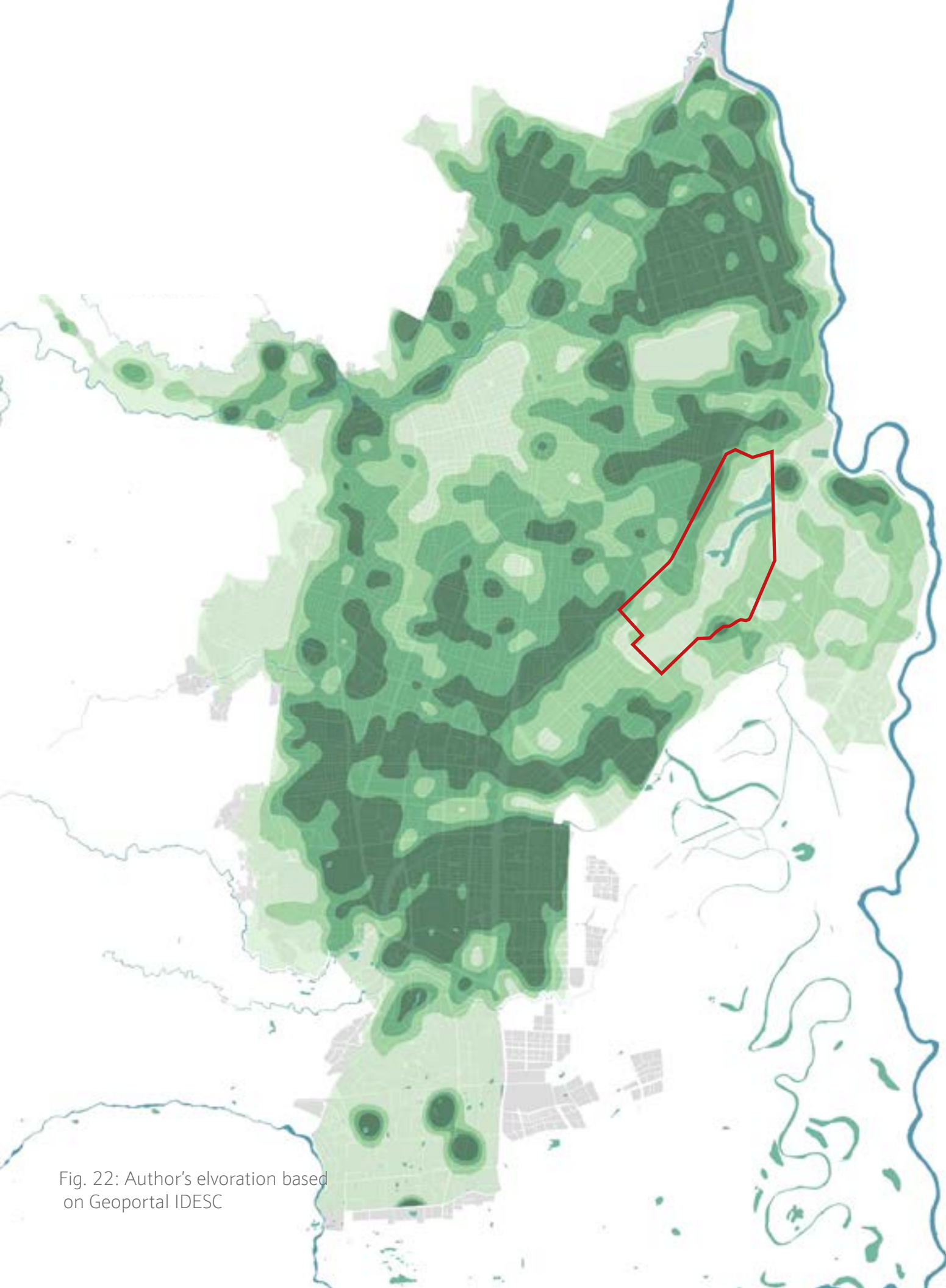


Fig. 21: Author's elevation based on Geoportal IDESC



### Tree Cover Density

- Very High
- High
- Medium
- Low
- Very Low

Cali is characterized by its high tree density, however, it is evident that this is not homogeneous throughout the city. Some areas of the city have a fairly high density, but others such as the east or the center of the city have a great lack not only of tree mass, but also of green areas accessible to the community.

The lack of tree mass in certain areas results in a heat island effect within the city, where temperatures in urban areas with high rates of construction are higher than in areas with more vegetation in the city.

### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>

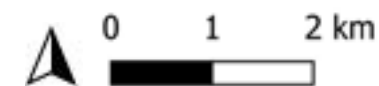
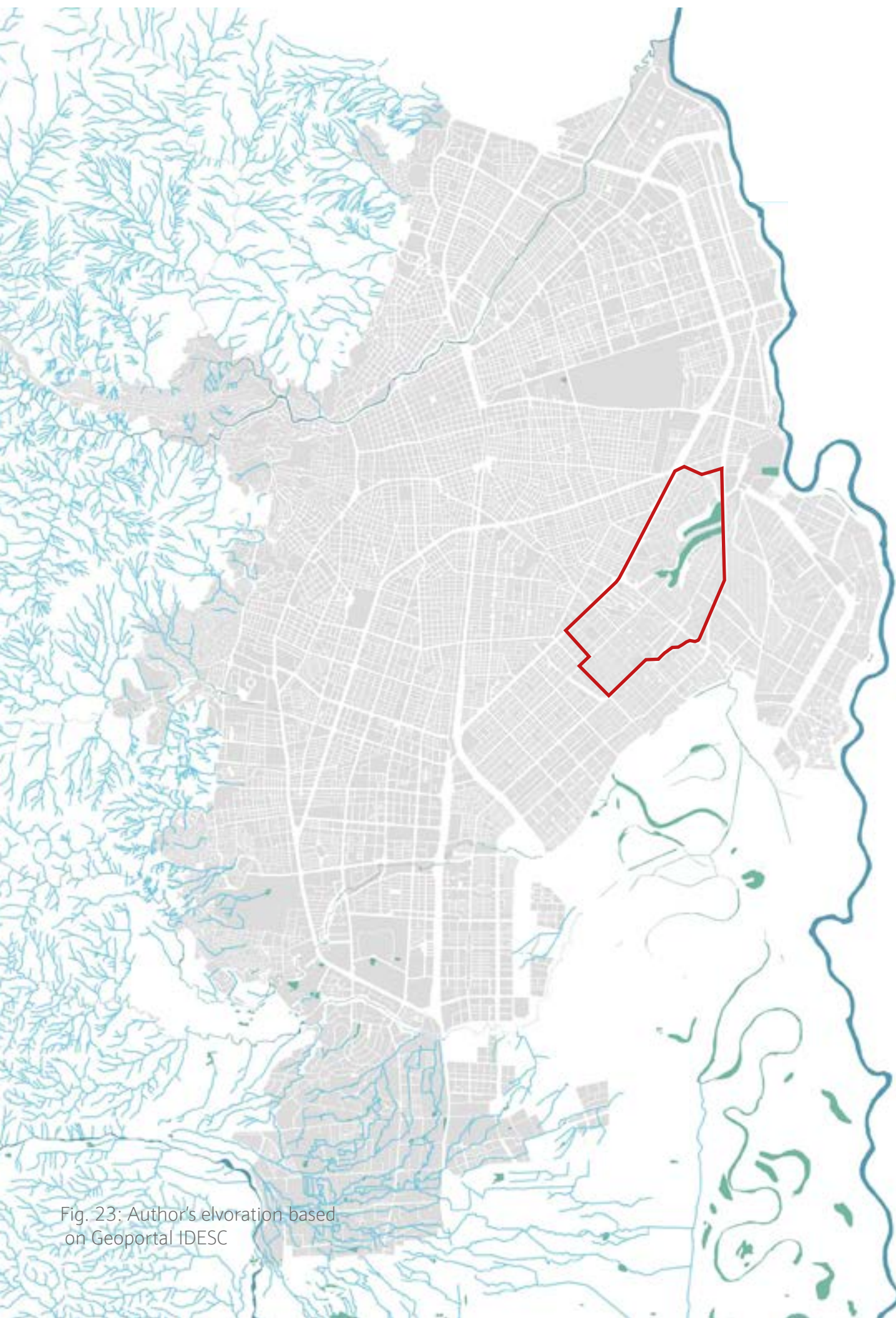


Fig. 22: Author's elvoration based on Geoportal IDESC



## Hydrological Structure

### Hydrology

-  Rivers (Rio Cauca)
-  Wetlands
-  Creeks

The hydrological structure of Cali is quite marked by the presence of water bodies that cross the city. These are fundamental for water supply, biodiversity and environmental dynamics.

The main bodies of water in Cali are the Cauca River, the second most important river in Colombia, the Cali River that runs through the center of the city and has been key to shaping the urban landscape, the Pance River to the south of the city, and the Meléndez River to the south of the city, which has been affected by the growth of pollution.

### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>

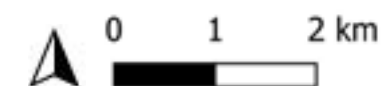
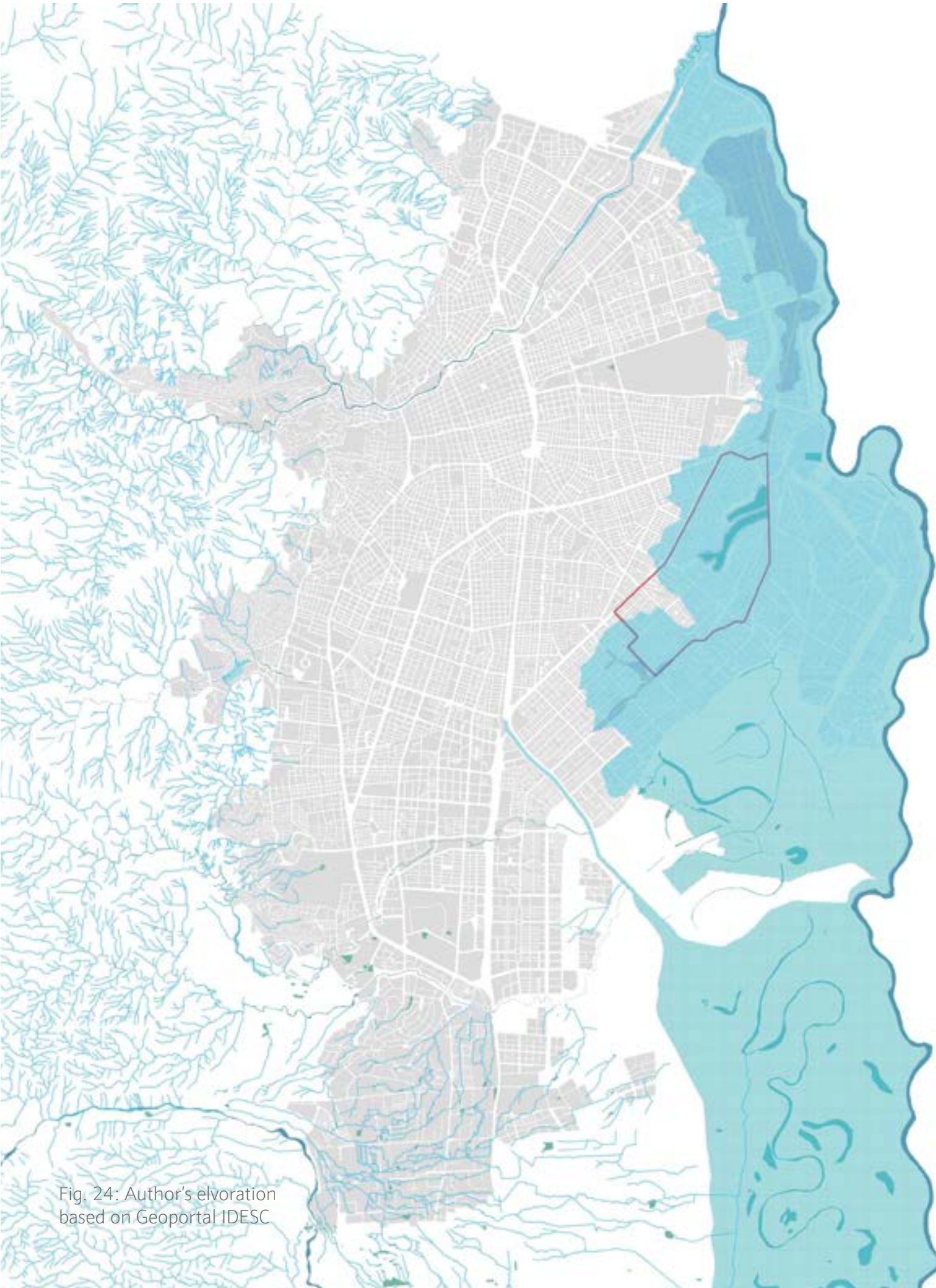


Fig. 23: Author's elevation based on Geoportal IDESC



### Risk of Flooding

- Threats and risks: Pluvial Flooding
- Threats and risks: River Flooding

### Hydrology

- Creeks
- Rivers
- Wetlands

### Administrative Limits

- Zone 13

The risk of flooding in Cali is one of the environmental problems facing the city, especially in the east because of its proximity to the Cauca River. Unregulated urban growth and flat topography are among the factors that make water management difficult.

### DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>



Fig. 24: Author's elvoration based on Geoportal IDESC



Fig. 25: Author's elvoration based on Geoportal IDESC

### Urban Greenery

### Environmental Structure

- Green Belt
- Forest and Guadals
- Wildlife Corridor
- Green Areas
- Green public Space

### Hydrology

- Rivers (Rio Cauca)
- Wetlands
- Creeks

2,65 m<sup>2</sup>

**Public Space per inhabitant**



Fig. 26

The UN says that the standard of green areas per person should be 16 m<sup>2</sup>, and the World Health Organization says it should be 9.2 m<sup>2</sup>. In Cali, the outlook is discouraging, despite being a city full of green resources that could be exploited, inequality, uncontrolled expansion and lack of planning have generated that the rate of public space per person is only 2.65 m<sup>2</sup>.

### DATA SOURCE

- Geoportale IDESC (Santiago de Cali)
- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
  - [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
  - <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>





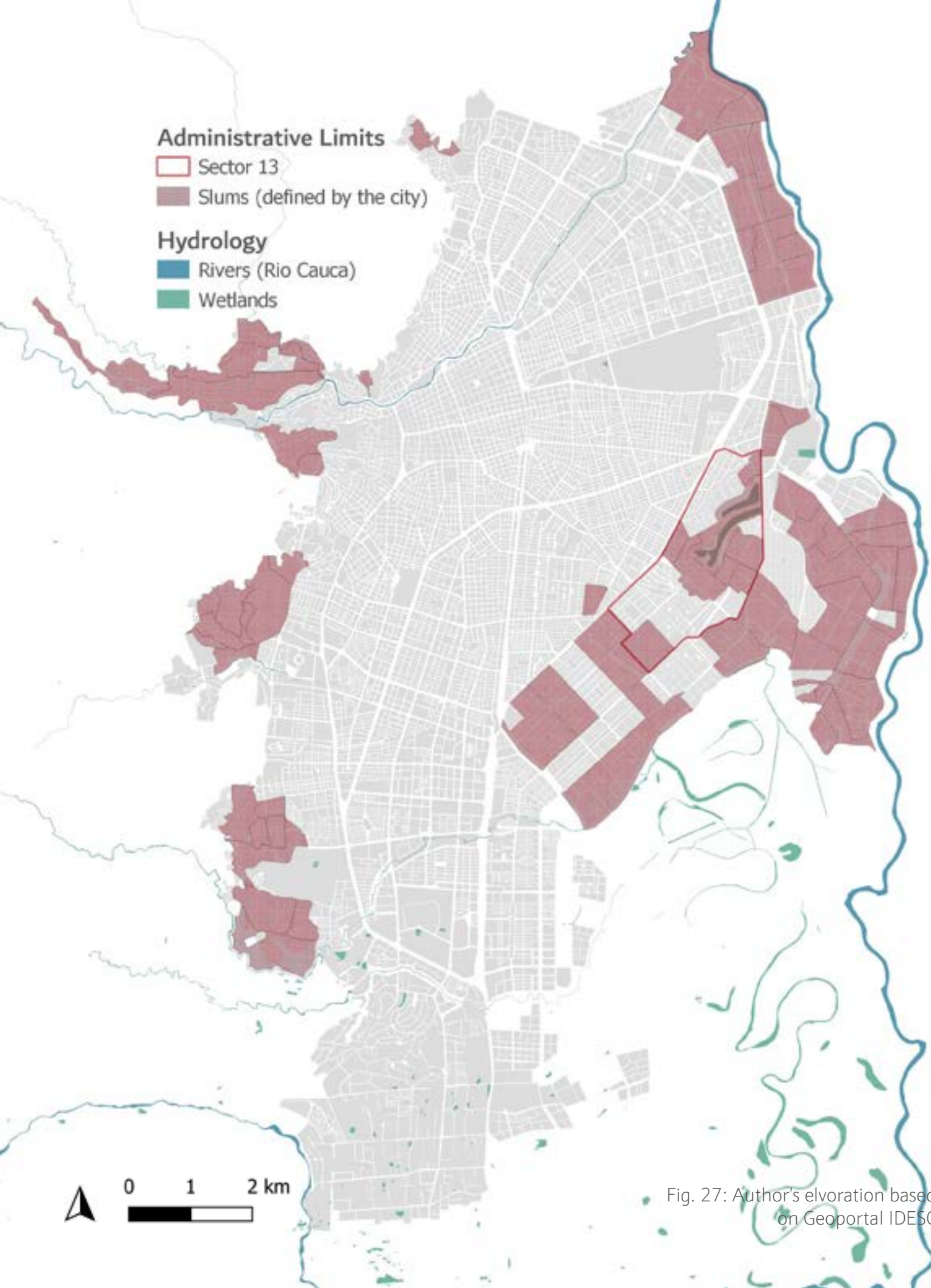


Fig. 27: Author's elvoration based on Geoportal IDESC

After the urban analysis made at the city scale, there are several evident points that show different problems in Cali.

First, the expansion of Cali had an accelerated and disorganized growth for a few years, causing informal settlements and entire neighborhoods without basic services. On the other hand, the city faces a deficiency of infrastructure and public services, although they have a public transport system that seeks to connect the entire city, there are some points that have not been able to reach, as well as the great lack of infrastructure for bicycle mobility throughout the city, although there are certain areas with adequate lanes for this use, most of the city is without a network of lanes that manages to connect.

But one of the problems that most affects the city is socio-spatial segregation, where the difference in access to basic services and infrastructure is clear between developed areas and marginalized neighborhoods, resulting in social and economic inequality. At the same time, insecurity has increased in recent decades for the same reason, especially in neighborhoods of low socioeconomic status, creating a stigma towards these areas of the city, giving way to social fragmentation on the part of citizens.

It should also be mentioned that, although Cali has good green infrastructure in some areas of the city, the city has a clear lack of public space, it lacks parks, squares, and green areas that are suitable for the recreational use of citizens. The lack of planning has caused the few that exist to be concentrated only in certain areas of the city, in addition to the risk of natural disasters such as flooding due to rain or river overflows, the latter specifically in the east of the city, due to its proximity to the Cauca river.

All these urban problems are the ones that prevent the city from becoming a sustainable and equitable city, being the reason why it is now that urban planning and regeneration projects must be implemented in the most affected areas to achieve an improvement in the quality of life of the citizens of Cali.

# CHAPTER 4

COMUNA 13 (sector 13)

## GENERAL INFORMATION

The city is divided into 22 sectors for administrative and governmental reasons. In this case, the main focus of the project will be commune 13, specifically in the Pondaje neighborhood.

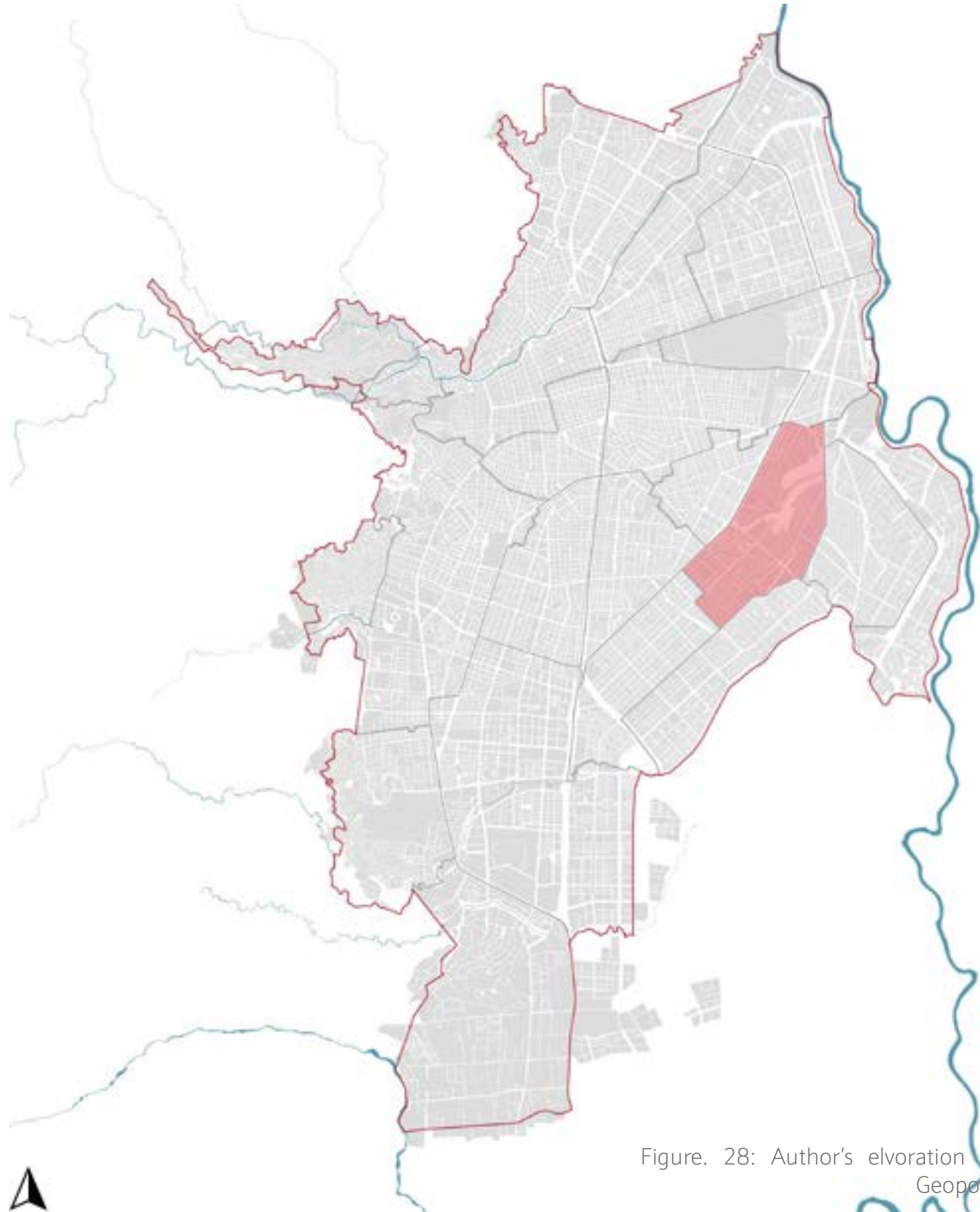


Figure. 28: Author's elvoration based on Geoportail IDESC

It is located southeast of the city, bounded to the east by the Cauca River. An area mostly residential, composed of 22 neighborhoods of socioeconomic level 1 and 2. It has experienced urban growth in recent years, bringing social, economic and urban problems.

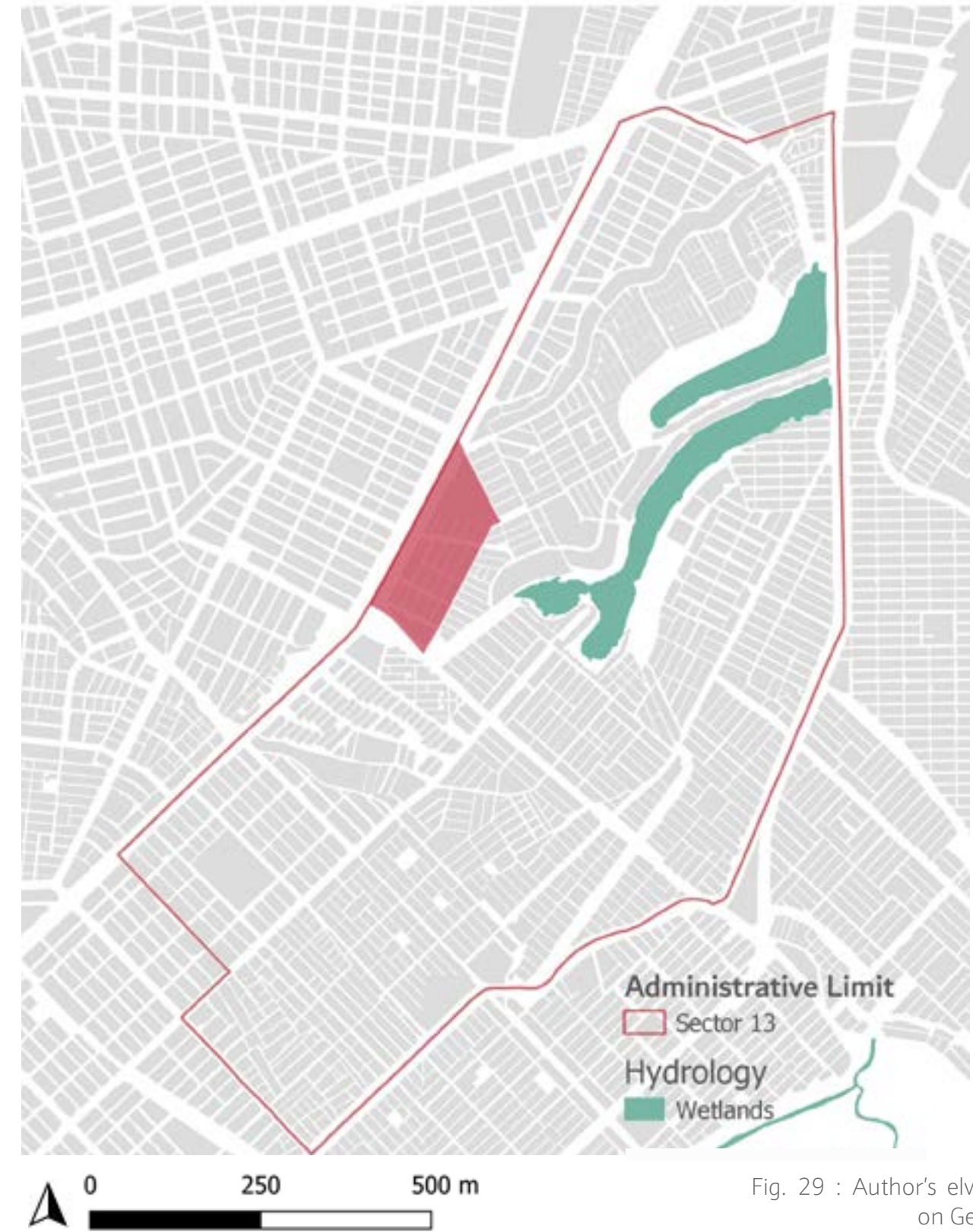


Fig. 29 : Author's elvoration based on Geoportail IDESC

## HISTORICAL BACKGROUND

The area that today corresponds to the sector 13 was developed during a period of expansion in the middle of the 20th century by people from the countryside who began to move to the city in search of work opportunities and, who at the same time were fleeing the violence that plagued the country at that time.

But during the 1970s and 1980s, the southeast of the city suffered accelerated urban growth without any planning. Informal settlements were built on land that lacked basic services and adequate planning. Over the years, the lack of infrastructure and services led to social and economic inequality, problems still present in most of the neighborhoods of Commune 13.

Security and violence are factors that have affected the area since the 1980s, when drug and gang-related problems in the city began to emerge, especially in marginalized and low socioeconomic neighborhoods. This caused crime rates to rise, increasing insecurity and affecting the inhabitants' quality of life.

■ Urban Fabric

□ Sector 13 delimitation

## DATA SOURCE

Geoportale IDESC (Santiago de Cali)

- <https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>
- [https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)
- <http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>

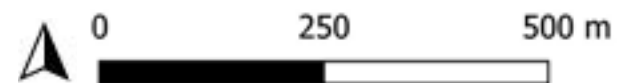


Fig. 30: Author's elvoration based on Geoportal IDESC

## DEMOGRAPHIC DATA

Located to the southeast of the city, it has 171,646 inhabitants, composed of 22 neighborhoods, most of which are of a social economic level 2 or lower. In this commune is the “Laguna del Pondaje” whose area has become the site of a large number of subnormal settlements.



**171,646**  
Inhabitants

### General Data

Variables	Unit	Value
Gross area	ha	474
<b>Population</b>	People	145,809
Gross density	Hab/ha	307.6
<b>Housing</b>	Units	46,091
Gross density	Viv/ha	97.2
Social Economic Level	Number	3
Neighborhoods	Number	15
Urbanizations and sectors	Number	15
Blocks	Number	994
<b>Built properties</b>	Number	51,385
Appraisal	Millions of \$	1,654,513
Lots	Number	1,289
Appraisal	Millions of \$	333,646

Table 1: General Data for Zone 13  
Source: (IDESC, 2021)

The total area is 474 hectares and is home to 145,809 people, giving a density of 307.6 inhabitants per hectare. In terms of housing, there are 46,091 units, with a density of 97.2 dwellings per hectare.

The area is classified in socioeconomic level 3 and is divided into 15 neighborhoods, which in turn are organized into 15 urbanizations and sectors, with a total of 994 blocks. The number of built properties amounts to 51,385.

### Cultural Data

Variables	Unit	Value
Hotels and similar		
Quantity	Number	
Rooms	Number	
Beds	Number	
Conference rooms	Number	
Capacity	Number	
Cinema	Number	
Chairs	Number	
Theaters	Number	1
Chairs	Number	60
Theater groups	Number	2
Conference rooms	Number	
Capacity	Number	
Exhibition halls	Number	
Libraries	Number	4

Within Zone 13, there are a number of facilities that contribute to the cultural. However, there is currently no specific data on the number of hotels and similar, including the number of rooms, beds, conference rooms, and their capacity. In terms of entertainment and cultural facilities, the area has a movie theater that offers a considerable amount of seating and a theater with a capacity of 60 people. This theater houses two local theater groups, which enrich the cultural life of the community. In addition, there are several exhibition halls and libraries (four in total) that offer educational and cultural services to residents and visitors, promoting access to art and knowledge.

Table 2: Cultural Data for Zone 13  
Source: (IDESC, 2021)

## Education Points

Variables	Unit	Value
<b>Preschool education</b>		
Establishments	Number	55
Enrollment	People	2,572
<b>Primary education</b>		
Establishments	Number	67
Enrollment	People	9,958
<b>Secondary and middle education</b>		
Establishments	Number	54
Enrollment	People	10,047

Table 3: Education Point for Zone 13  
Source: (IDESC, 2021)

Within Zone 13, the educational infrastructure comprises a total of 176 schools, distributed at the preschool, elementary, secondary, and middle school levels, with an overall enrollment of 22,577 students.

At the preschool education level, the zone has 55 establishments, serving 2,572 children, providing a fundamental initial educational base. Primary education concentrates on the largest number of institutions, with 67 establishments and an enrollment of 9,958 students, reflecting a high demand at this crucial stage of basic education.

At the secondary and middle school level, there are 54 establishments, which together house 10,047 students, covering the needs of young people moving on to higher levels of education and preparation for working life or higher education.

### Health Points

Variables	Unit	Value
Health posts	Number	8
Health centers and CAB	Number	1
Hospital center	Number	1

Table 4: Health Point for Zone 13  
Source: (IDESC, 2021)

The area has a basic health care network comprising 10 facilities, distributed at different levels of care. Of these, 8 health posts provide decentralized coverage, focusing on primary care and prevention in local communities. In addition, there is a health center with outpatient care (CAB), which offers specialized services and greater capacity to handle cases of intermediate complexity. Finally, there is a hospital center, which is essential for emergency care and cases requiring hospitalization or more complex interventions.

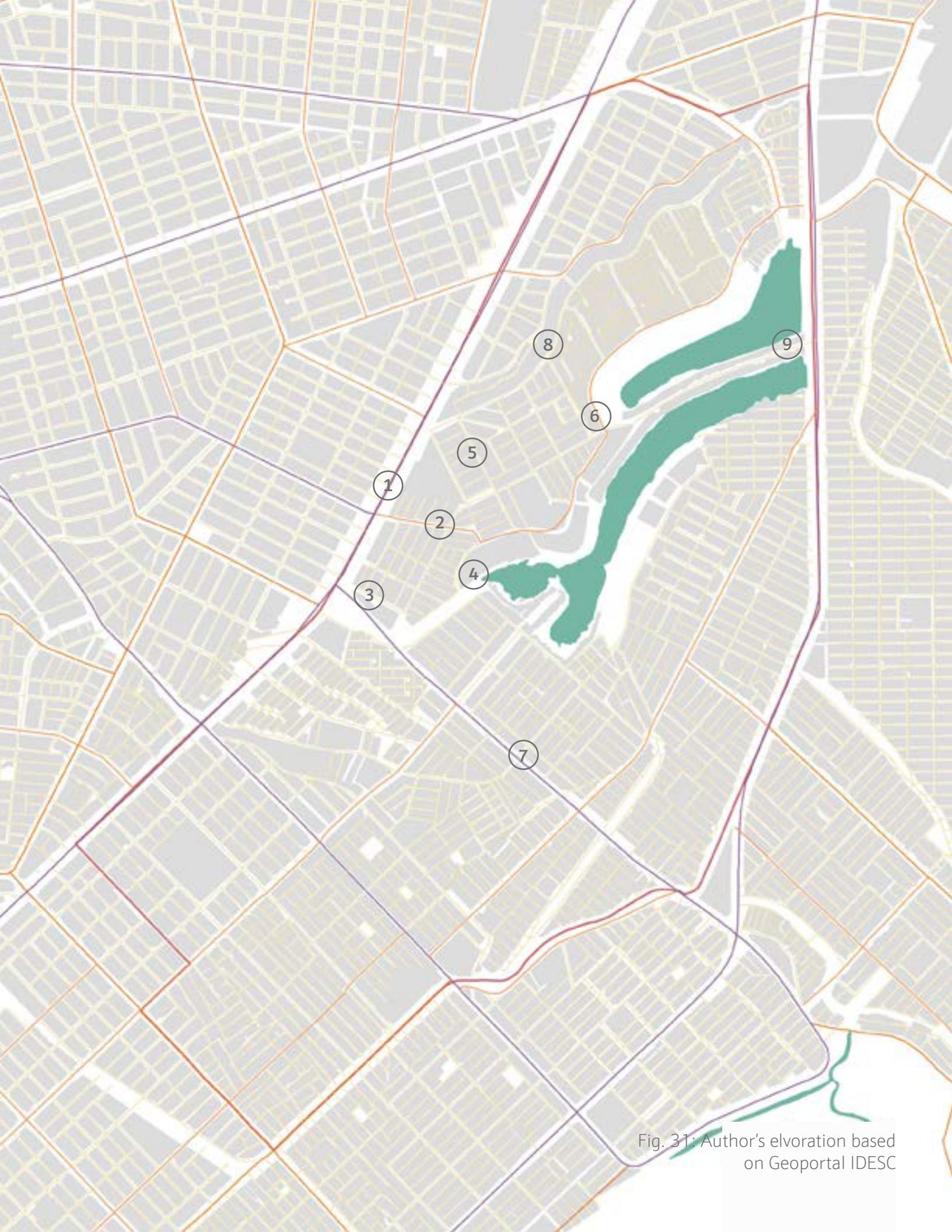


Fig. 31: Author's elvoration based on Geoportail IDESC

**Administrative Limit**

□ Sector 13

**Road Hierarchy structure**

- Main Artery
- Secondary Artery
- Collector Road
- Rural Collector Road
- Interegional Road
- Rural Road
- Local Road
- Local Rural Road

Observing the current state of the roads in the area, it can be noted that, for the most part, the streets are in critical condition, with a serious condition that hinders traffic.

In addition, numerous roads are not even paved, which represents an additional challenge for transportation and mobility in the area.

**State of Roads**



1 Fig. 32 / Source: Google Earth



2 Fig. 33 / Source: Google Earth



3 Fig. 34 / Source: Google Earth



4 Fig. 35 / Source: Google Earth



5 Fig. 36 / Source: Google Earth



6 Fig. 37 / Source: Google Earth



7 Fig. 38 / Source: Google Earth



8 Fig. 39 / Source: Google Earth



9 Fig. 40 / Source: Google Earth



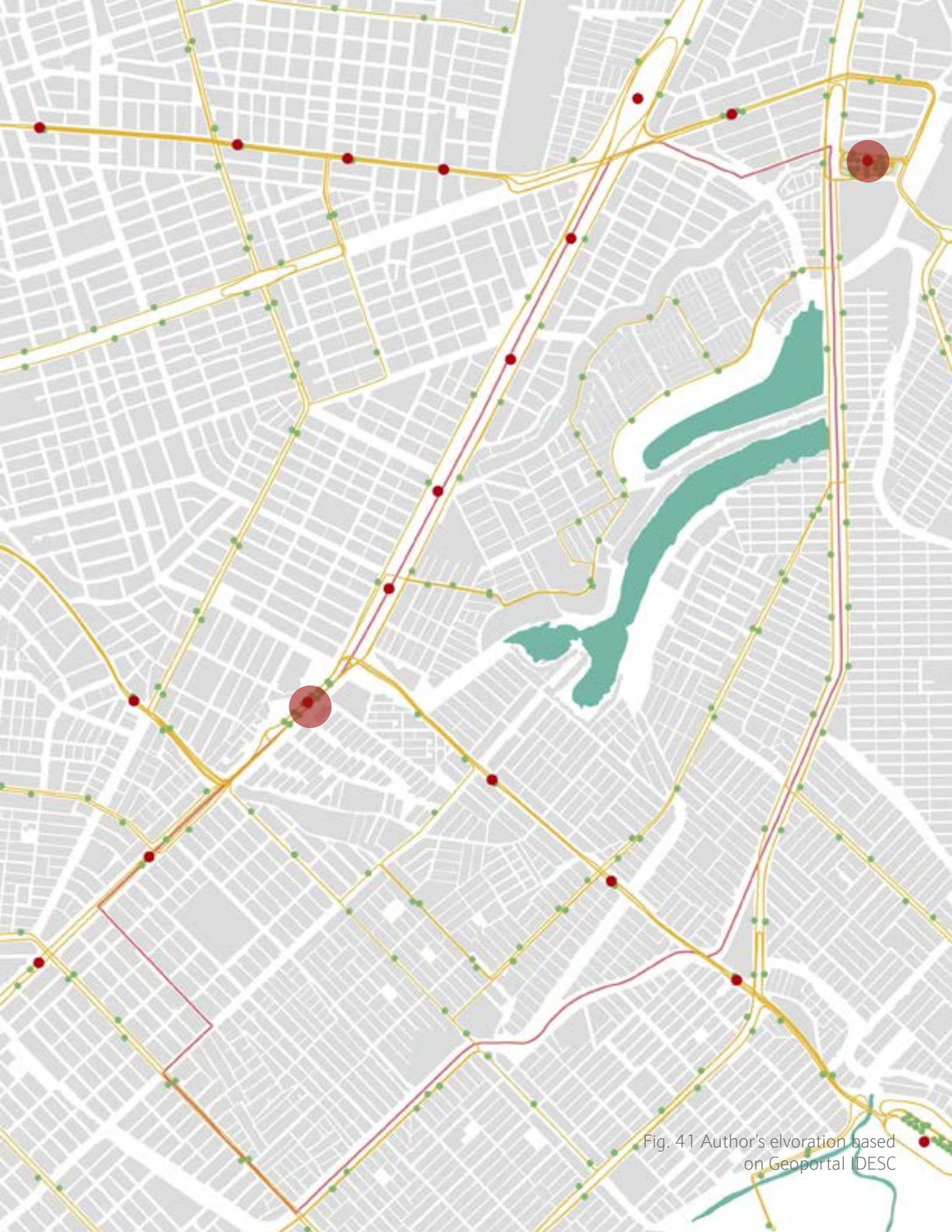


Fig. 41 Author's elvoration based on Geoportall IDESC

These two stations constitute the most relevant transportation points in the area. The Calipso Terminal is located approximately 10 minutes away from the work area, while the Andres Sanin Terminal is about 15 minutes away on one of the secondary routes connecting the terminal.

Due to their strategic location, they are the most frequent stations and play a fundamental role in the city's connectivity, efficiently linking the city's main areas and facilitating access to the areas of greatest economic and social activity.



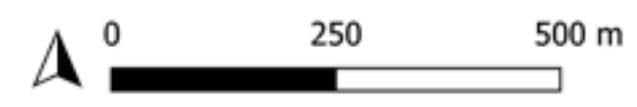
Terminal Andres Sanin

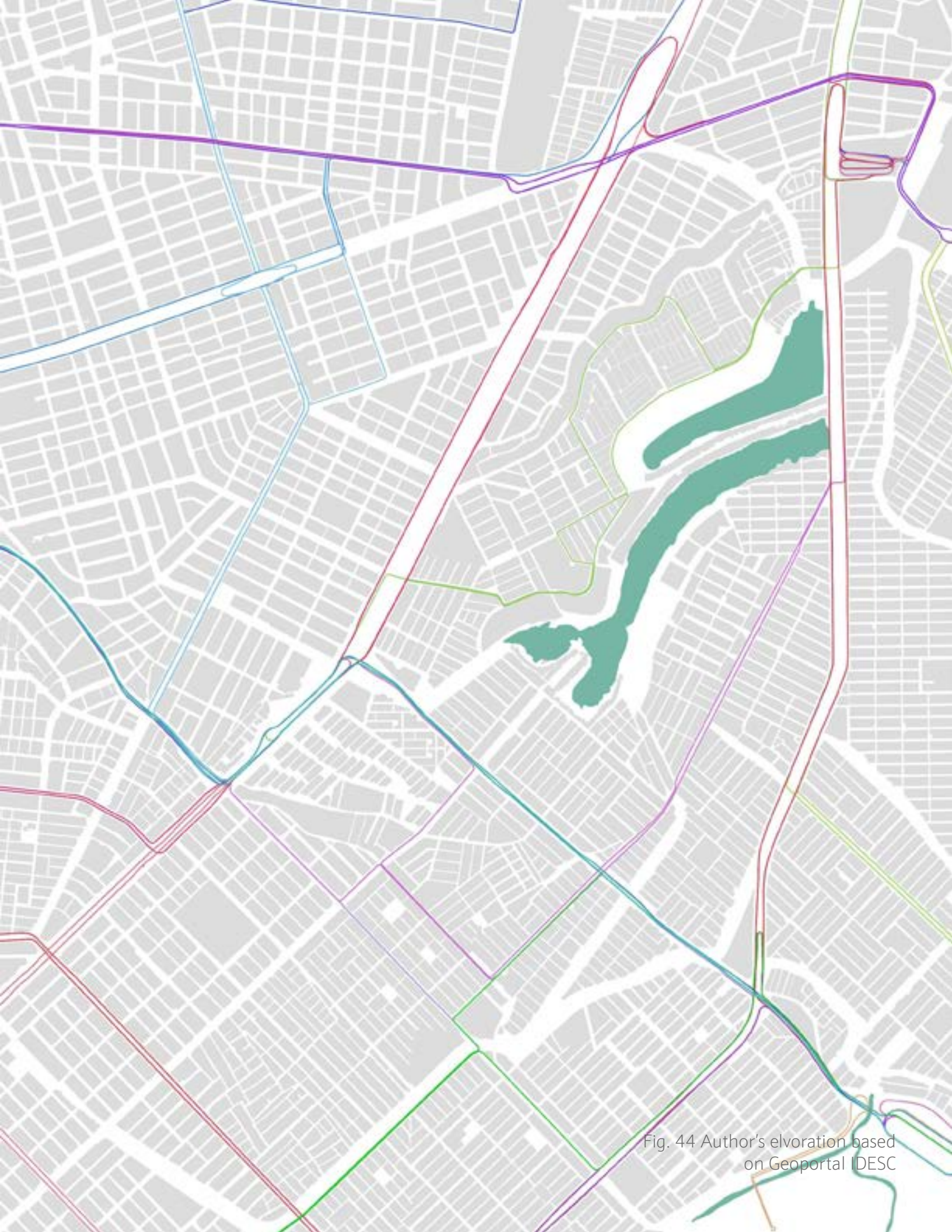
Fig. 42 / Source: Alcaldia Santiago de Cali (2015)



Terminal Calipso

Fig. 43 / Source: Alcaldia Santiago de Cali (2015)





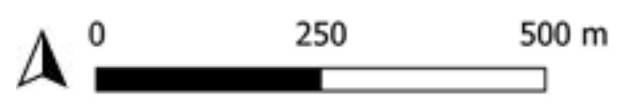
**Metro Cali - SITM: Secondary Bus Routes**

- A01A
- A01B
- A02
- A05
- A06
- C302
- C320
- E21
- E27
- P21A
- P21E
- P24B
- P27D
- P40A
- P40B
- P60B
- P62A
- P62D
- P82
- P83
- T31
- T40
- T50
- T52
- T53

Despite the fact that the area of zone 13 has some of the most marginalized neighborhoods in the city, Cali's public transportation system has several important routes that connect zone 13 with strategic points in the city.

Some of these are the T31, connecting the Capri station with the Menga Terminal in the north of the city (industrial zone), passing through stations such as Universidades, San Bosco, and Versailles (educational zone). Others are routes E27 and E21 connecting the south and center of the city with commune 13.

Fig. 44 Author's elvoration based on Geoportail IDESC





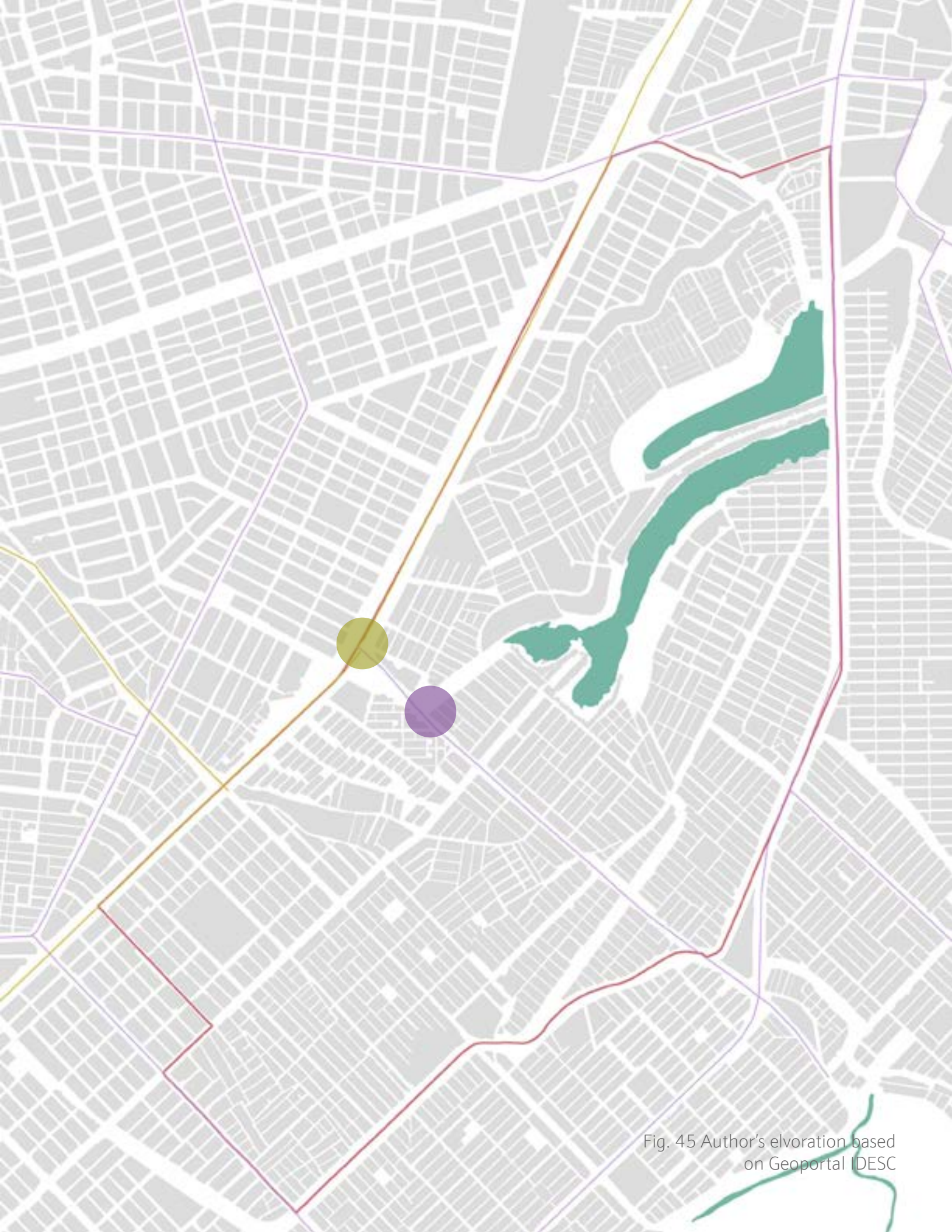


Fig. 45 Author's elvoration based on Geoportall IDESC

**Administrative Limits**

□ Sector 13

**Bikeways Structure**

— Actual

— Proposed

The area has an existing route that runs along the entire Simon Bolivar Highway, most of which can be said to be in stable conditions that could be improved.

The city proposes new routes that go through secondary roads within the neighborhoods to connect with the main one that goes along the highway.



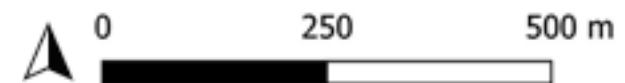
Fig. 46 / Source: Google Earth (2024)

● Existing Route



Fig. 47 / Source: Google Earth (2024)

● Secondary Road to proposed a bikeway



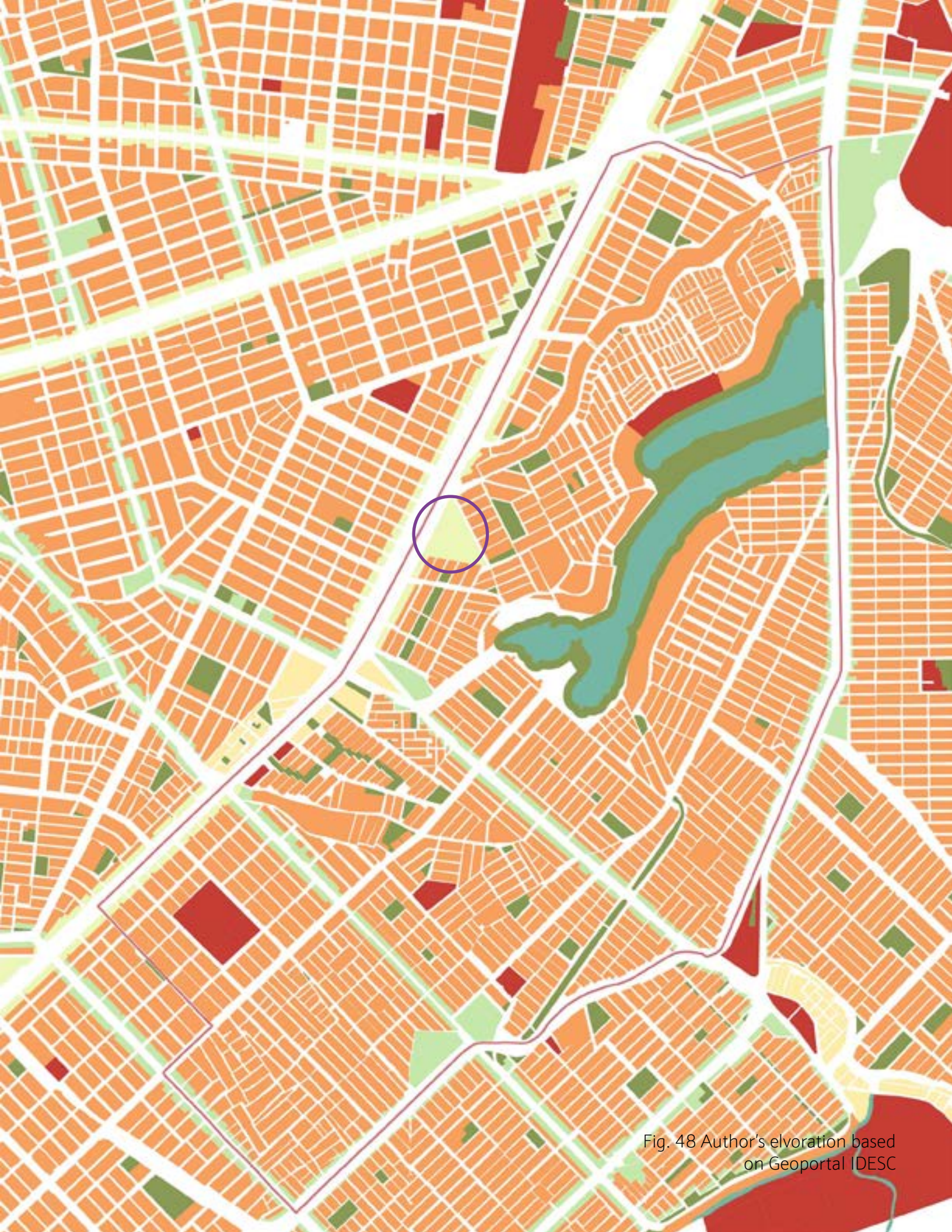


Fig. 48 Author's elvoration based on Geoportall IDESC

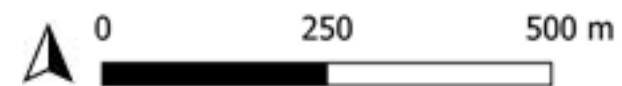
The predominant use of the area is mixed residential, characterized by a combination of housing and local businesses that provide services to the area's inhabitants. In addition, this zone has a strategic corridor defined by the city, located along one of the main highways. This strategic corridor is essentially an area where commerce is the main use, and it is designed to boost the area's economic activity and attract investment.

Currently, there is a lot in this area that is used as a parking lot. However, according to a study conducted by the planning office, this lot has been identified as a strategic point for an urban renewal project. The proposal seeks to transform this underutilized space into a development engine that will help revitalize the area, improve infrastructure, and enhance commercial and residential opportunities, aligning with the city's growth and modernization objectives.



Strategic lot

Fig. 49 / Source: Google Earth (2024)





**Administrative Limits**

- Sector 13
- Wetlands - (Laguna El Pondaje)

**Urban Facilities**

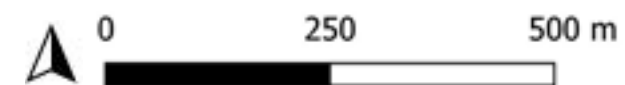
- Urban Basic: Food Supply
- Urban Basic: Administration of Justice
- Urban Basic: Public Administration
- Urban Basic: Attention to Fauna and Flora
- Urban Basic: Cemeteries
- Urban Basic: Sports Centers
- Collective Urban: Social Well-being
- Collective Urban: Religious
- Collective Urban: Culture
- Collective Urban : Education
- Collective Urban: Recreation
- Collective Urban: Health Centers

- Public Library Cultural Entrepreneurship Center
- Education Centers (Elementary school, Technology Education Center SENA)
- Sport Center Ricardo Balcazar

The area has a notable lack of cultural facilities, which limits the options for cultural and artistic development of the community. However, there is a public library that provides essential services, such as access to books, reading spaces, and educational programs, contributing to the intellectual enrichment of the inhabitants. In addition, the area is home to two education centers, one of which is SENA, one of the most important technological education centers in Colombia. SENA provides technical and technological training with a focus on employability, offering its services with easy access for the entire population, and promoting the inclusion and professional development of the community.

In addition, the area has a sports center that, despite being in precarious conditions, is considered a strategic point for an urban regeneration proposal. This space has the potential to be renovated and transformed into a center for sports and community activity, contributing to the social well-being and integral development of the inhabitants, and promoting a more dynamic and cohesive environment.

Fig. 50 Author's elvoration based on Geoportail IDESC



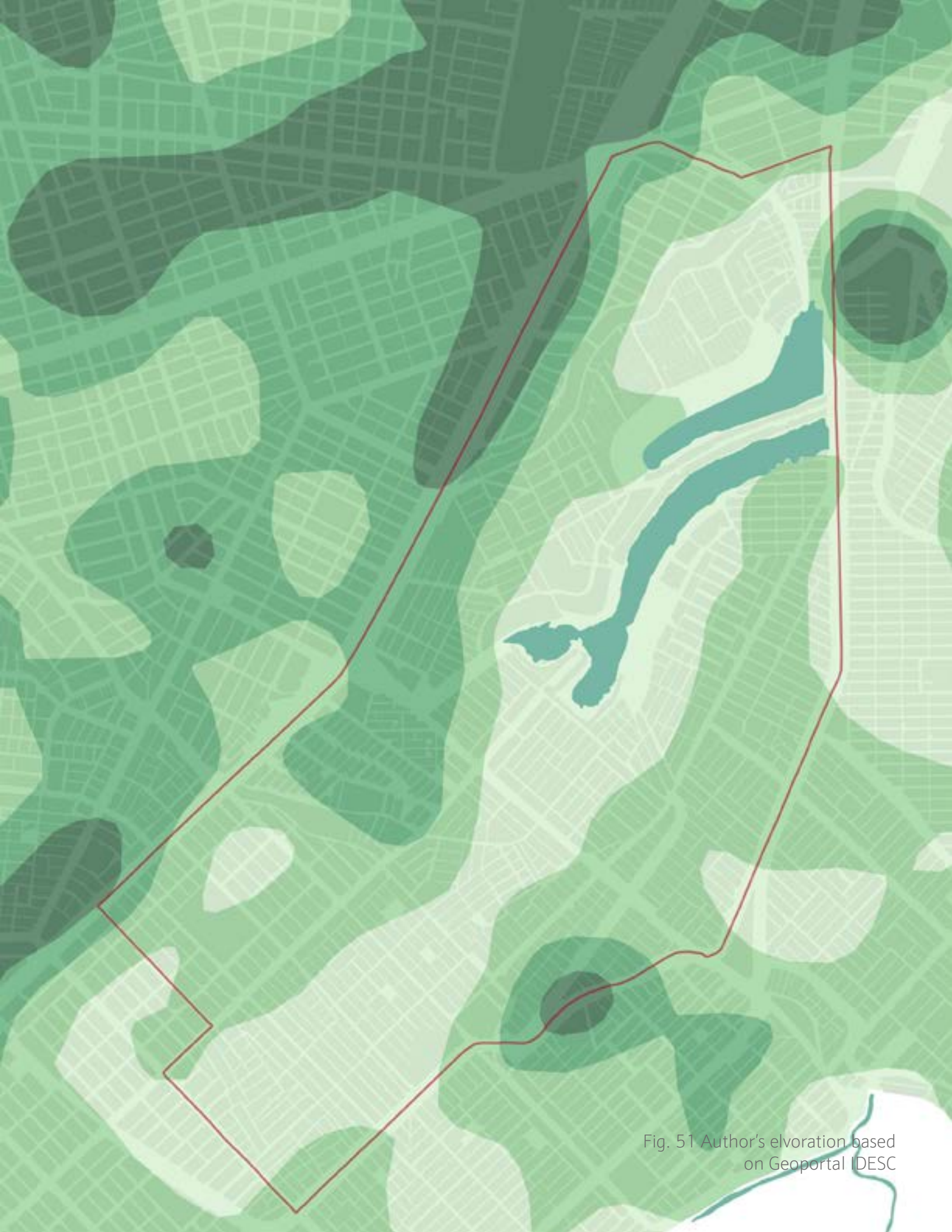


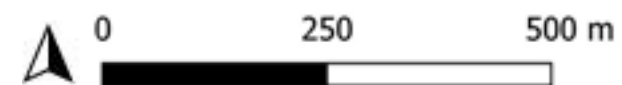
Fig. 51 Author's elvoration based on Geoportail IDESC

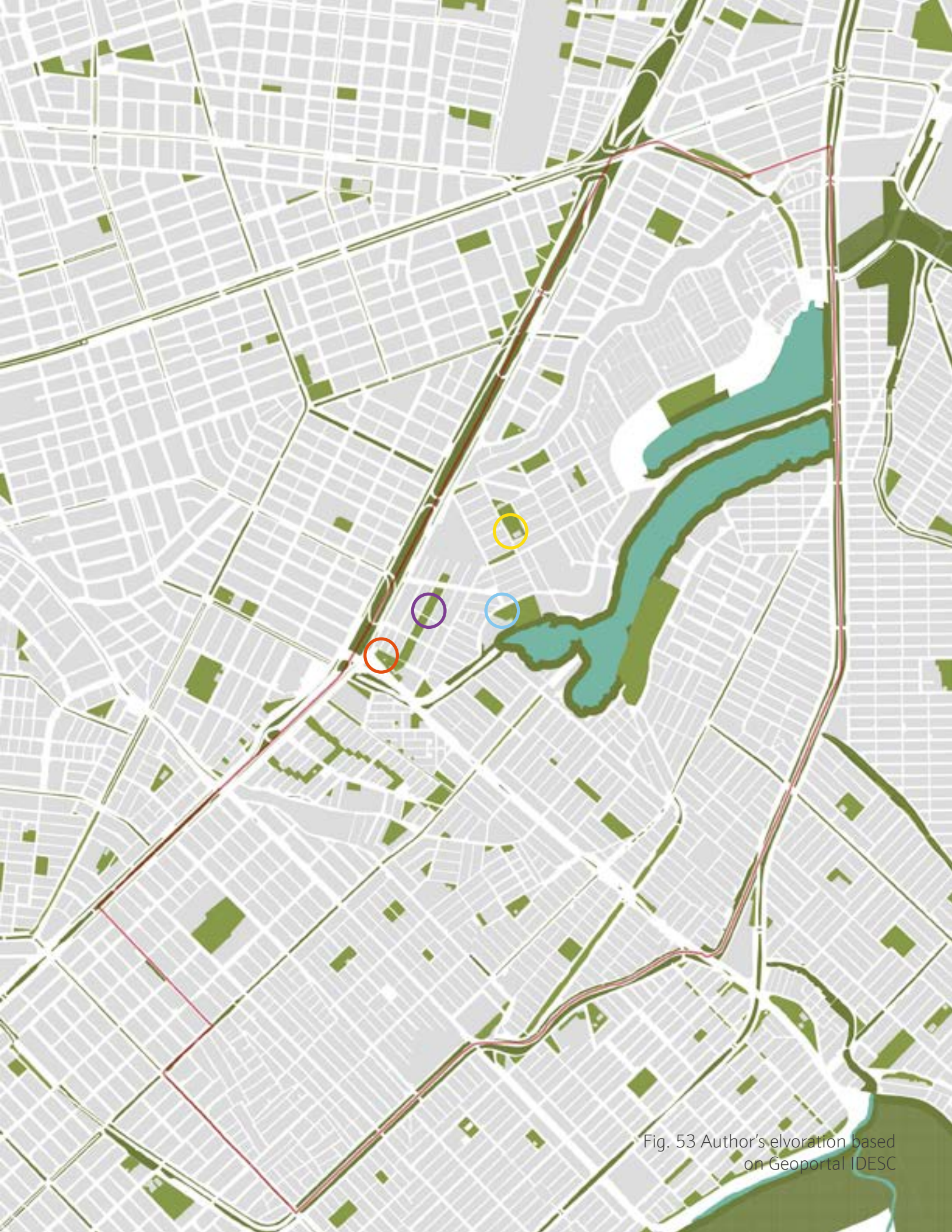
The sector is characterized by limited tree density compared to other areas of the city. Although some areas of the sector have scattered trees in public and residential areas, tree cover is insufficient to provide the necessary environmental and social benefits. The lack of trees in the area contributes to problems such as increased urban temperatures, reduced air quality, and a decrease in green spaces for recreation and the well-being of residents.



Arieal view

Fig. 52 / Source: Google Earth (2024)





**Administrative Limits**

□ Sector 13

**Environmental Structure**

- Green Belt
- Forest and Guadals
- Wildlife Corridor
- Green Areas
- Green Public Space
- Wetlands - (Laguna El Pondaje)

There is a clear lack of effective public spaces and green areas in the area, which has a negative impact on the quality of life of the inhabitants. Green areas, essential for physical and mental well-being, are scarce or nonexistent.

In addition, the little public space available is mostly in a neglected condition, with deteriorated facilities, lack of maintenance, and accumulation of garbage. This situation not only discourages the use of these spaces, but also converts them into places of insecurity.



Lineal Park ○

Fig. 54 / Source: Google Earth



Sport Center ○

Fig. 55 / Source: Google Earth



Square ○

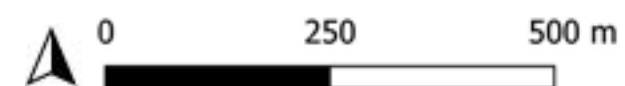
Fig. 56 / Source: Google Earth

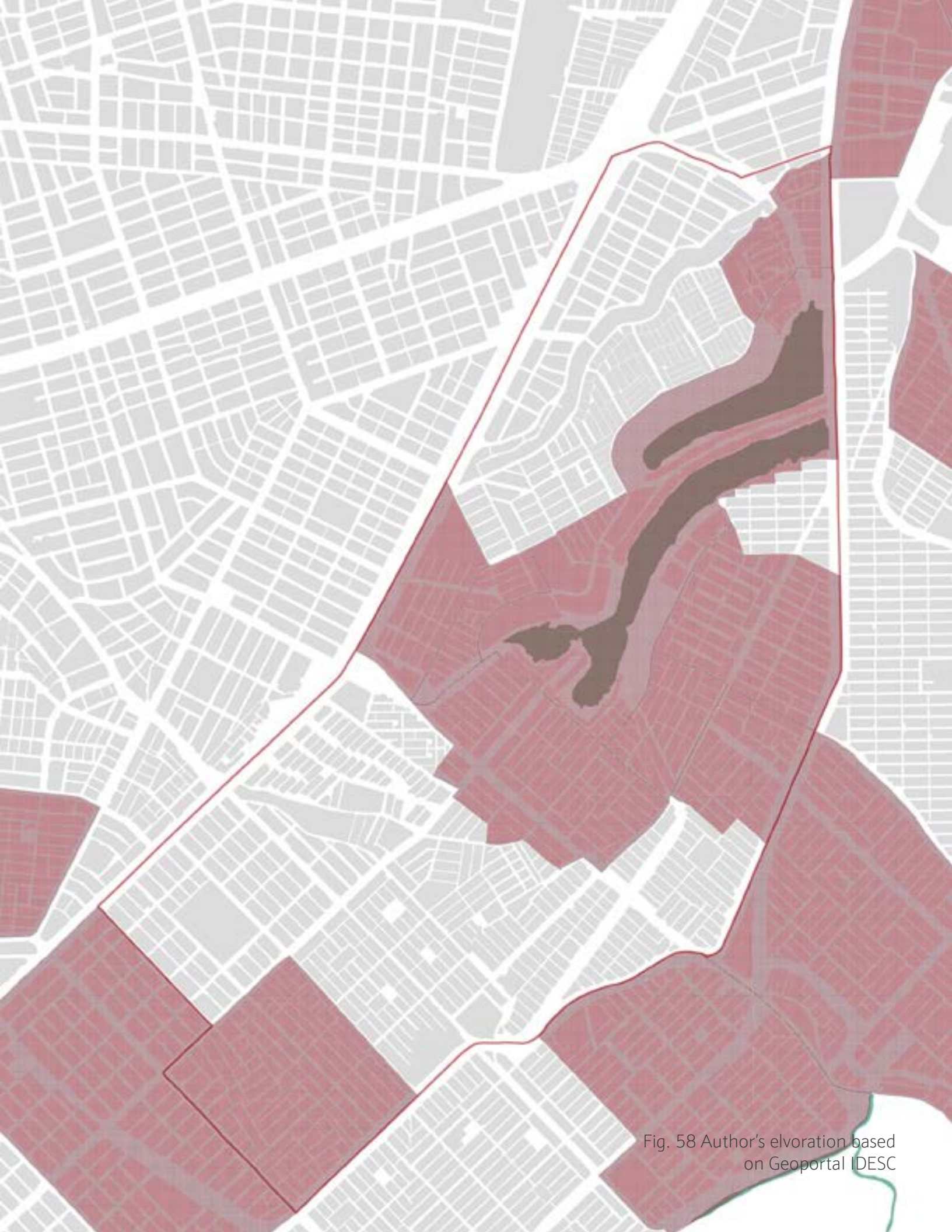


Abandoned space ○

Fig. 57 / Source: Google Earth

Fig. 53 Author's elvoration based on Geoportat IDESC





### Administrative Limits

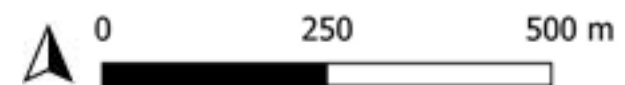
- Sector 13
- Slums (defined by the city)

### Hydrology

- Rivers (Rio Cauca)
- Wetlands

Within sector 13, several neighborhoods have been affected by the security of the area, the increasing lack of economic and social opportunities, and the lack of infrastructure and basic services, creating a stigmatization towards this area of the city perpetuating poverty and social exclusion.

Fig. 58 Author's elvoration based on Geoportat IDESC



## UPU

In order to reach a deeper analysis of the area, in Cali there is the UPU (Urban Planning Unit), an urban planning instrument that was created to organize and manage the development of the territory. The UPU mainly seeks to guarantee development by taking into account factors such as population density, land use, infrastructure, public services and mobility.

The POT (Plan de Ordenamiento Territorial) divided the city into 15 groups of neighborhoods (UPU) in order to further address the factors that guarantee development, and to understand the needs of the community corresponding to each group, how they perceive their territory and what they should do in order to achieve sustainable development and improve their quality of life.

The UPU were regulated as a mandatory pact, where the corresponding zone will be studied, programs and integral projects that seek the improvement of the zone will be presented, and that are connected with the planning plans of the mayor's office for the whole city.

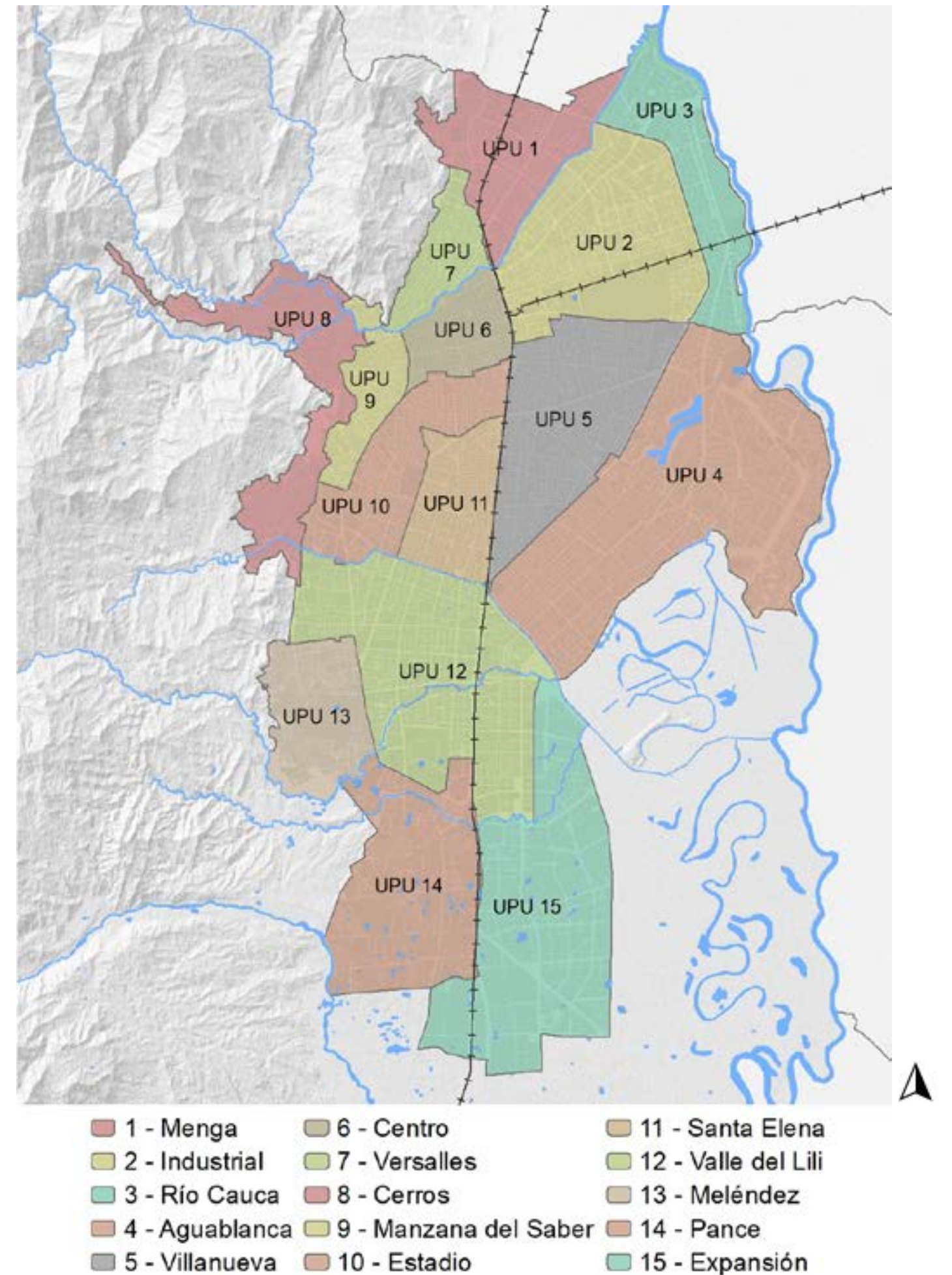


Fig. 59 / Source: Alcaldia Santiago de Cali (2024)

The neighborhoods of Zone 13 are part of UPU Group 4, specifically the central zone. UPU 4 presents different problems that were identified by the inhabitants of the area during a citizen participation workshop for territorial planning. The community expressed problems in different aspects such as environment, facilities, green areas and public space, mobility, land use and zonal corridors, public services, housing, and hazards and risks.

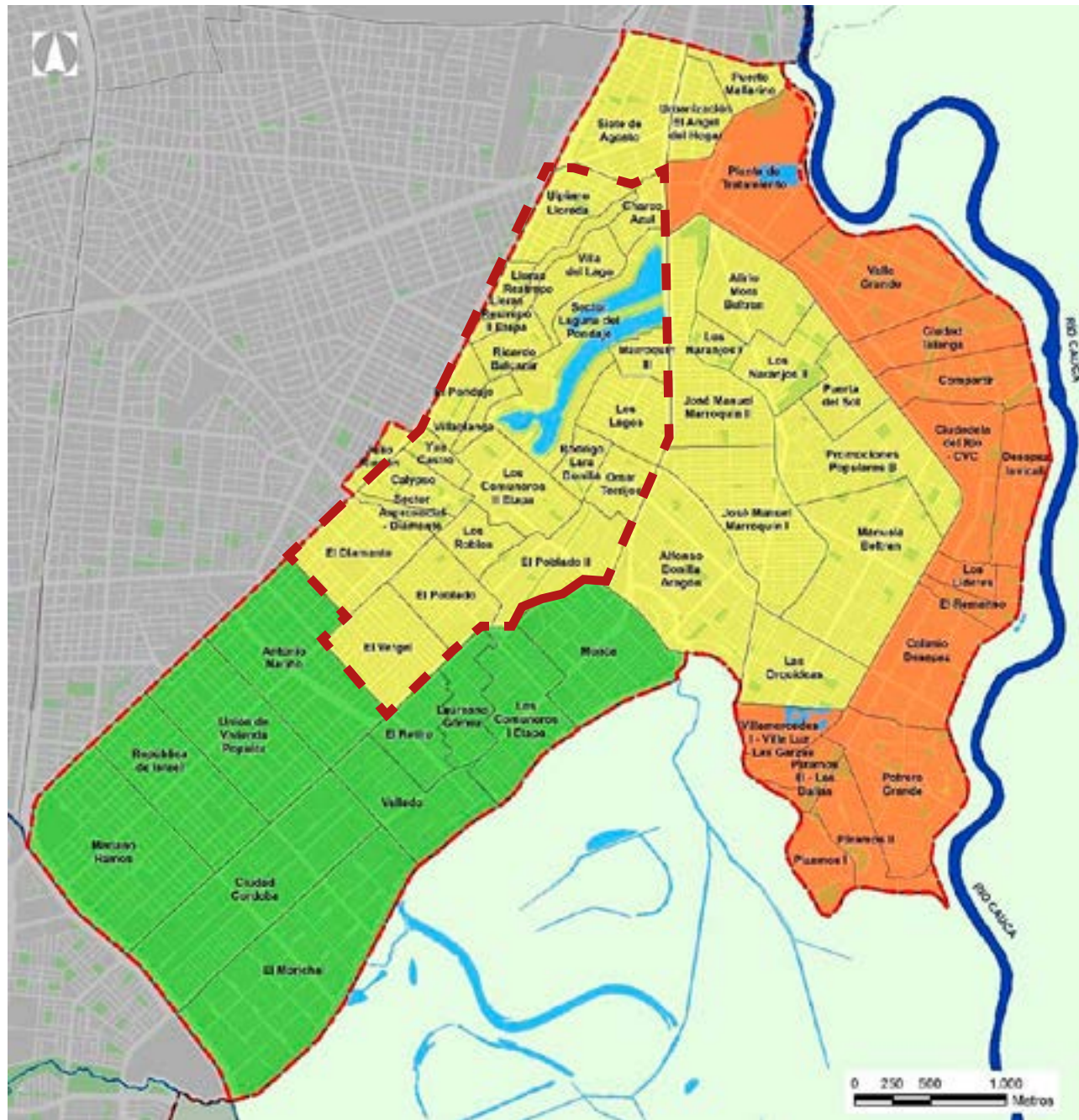


Fig. 60 / Source: Alcaldia Santiago de Cali (2024)

 Master Plan Focus Area

### Specific problems identified by the community

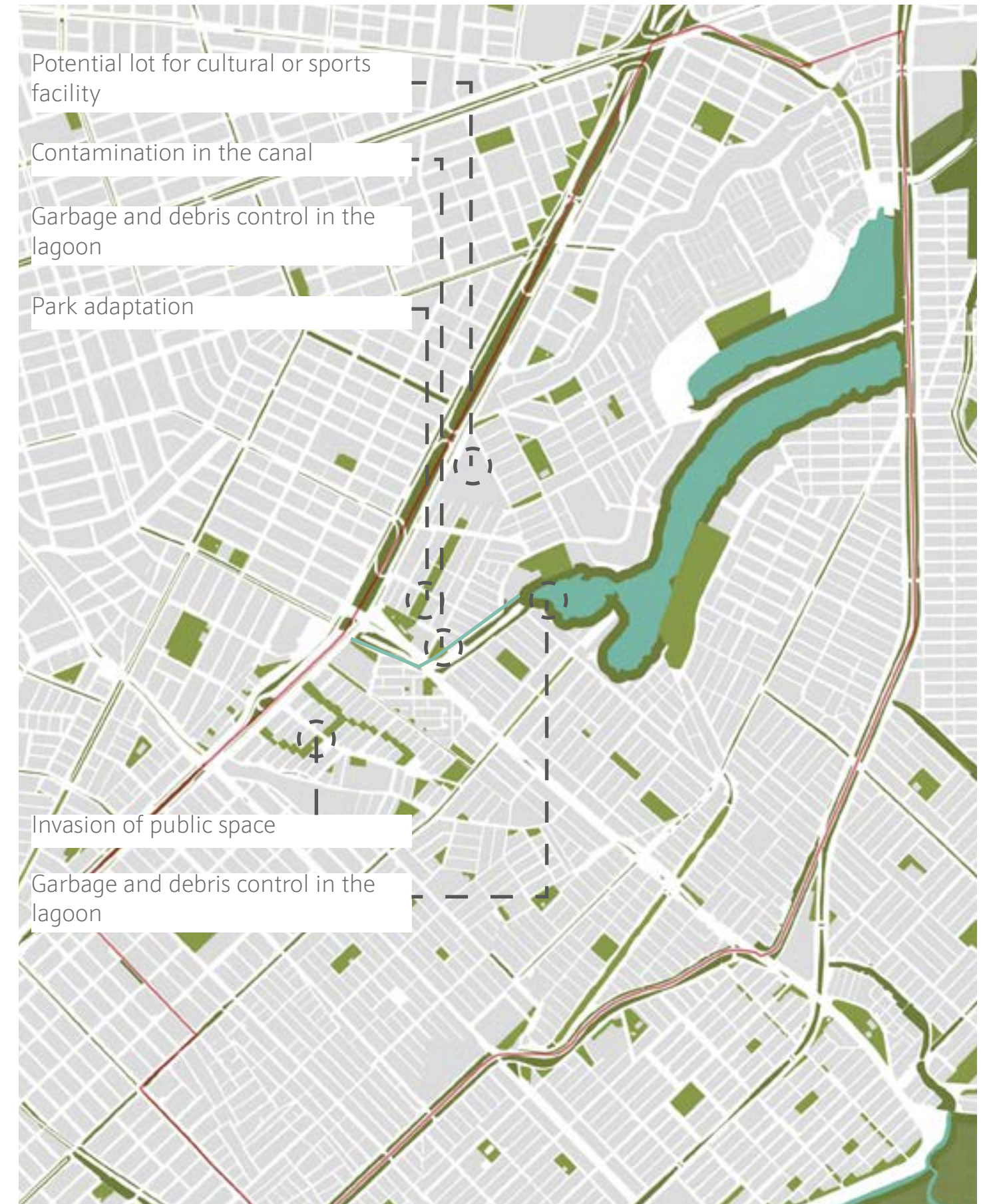


Fig. 61: Source: Alcaldia Santiago de Cali (2024)





## Problems identified by the community

- Facilities: There is a lack of social welfare, early childhood care, recreation, and cultural facilities.
- Mobility: some streets are in very poor condition or even unpaved, mobility for pedestrians is affected due to the poor condition of the sidewalks, evident lack of road connectivity, and several conflictive intersections leaving aside the pedestrian and bicycle mobility.
- Public services: presence of garbage and debris in spaces with the potential to be effective public spaces for the community, contamination of rain drainage channels.
- Public space: lack of green areas and parks, abandonment of existing parks in the area, and invasion of public space by vehicles, commercial businesses, and informal settlements.
- Environment: low tree density, deterioration of the ecological belt, and protected green areas.



Fig.63: Abandoned Green Areas  
Source: Google Earth (2024)



Fig.62: Deterioration of Ecological Belts  
Source: Google Earth (2024)



Fig.64: Invasion of Sidewalks  
Source: Google Earth (2024)

## Guidelines of the zoning model

1. Consolidate the zone as a residential area by increasing equipment, adapting public spaces and improving road infrastructure in terms of vehicular, pedestrian and bicycle paths.
2. To promote the concentration of commercial activities in urban and zonal corridors.
3. Promote and incorporate new areas for education, health, recreation, sports and cultural facilities, in accordance with the areas prioritized in the zone.
4. Decrease the deficit of public space through environmental elements to be recovered such as canals and roads.

**(Cali, 2017)**

## Permanents programs in the UPU 4

1. Controlling the occupation of public space.
2. Control land use.
3. Regulate parking areas in the zone.
4. Replacing water and sewage networks. Maintenance of roads in poor condition.
5. Encourage citizen culture for the proper management and disposal of solid waste and debris.
6. Maintenance and replacement of lighting infrastructure.
7. Implementation of road signs and information on tourism and culture.
8. Control of human settlements in public spaces and Navarro's ecological belt.

**(Cali, 2017)**

## Integrated projects in the UPU 4

The UPU proposes three comprehensive projects to address the area's problems, focusing mainly on the environment, the lack of public space and facilities, and the recovery of abandoned areas:

1. Environmental recovery and housing development in Laguna del Pondaje and Charco Azul, connecting sectors 13 and 14.
2. Qualification of public spaces, reduction of the deficit of equipment, and articulation of sectors 15 and 16.
3. Connection of sector 21, the Secondary Canal's recovery, and the Aguablanca Beltway's adequacy.

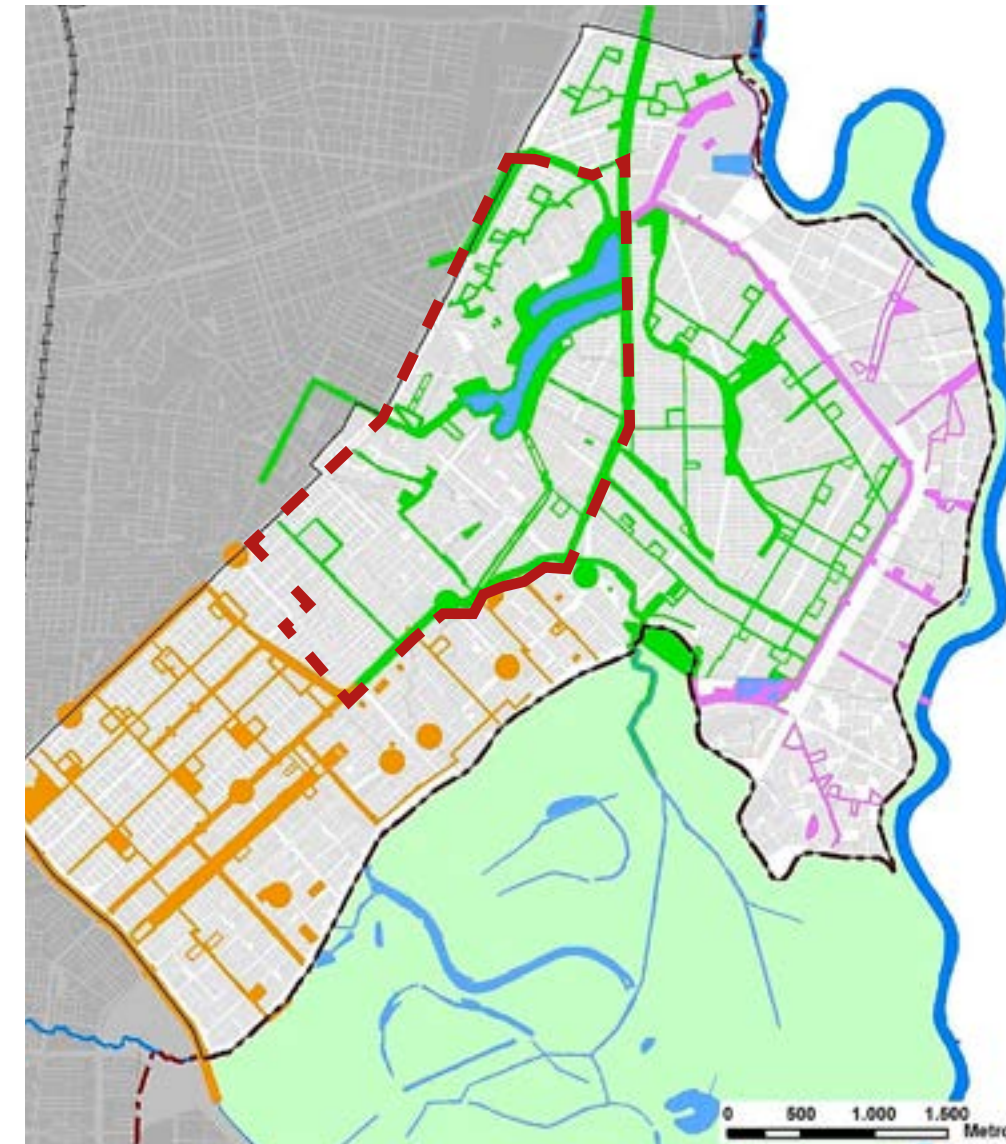


Fig.65: UPU Integrated Projects  
Source: Alcaldia Santiago de Cali (2024)

## Environmental recovery and housing development in Laguna del Pondaje and Charco Azul, connecting sectors 13 and 14

The potential area for the urban regeneration proposal is located within the limits where UPU 4 has proposed one of its integrated projects.

The objective of this project is to recognize the lagoons as articulating elements of the storm drainage system, improve the road structure, and complement the public spaces and equipment in order to achieve an articulation of the territory.

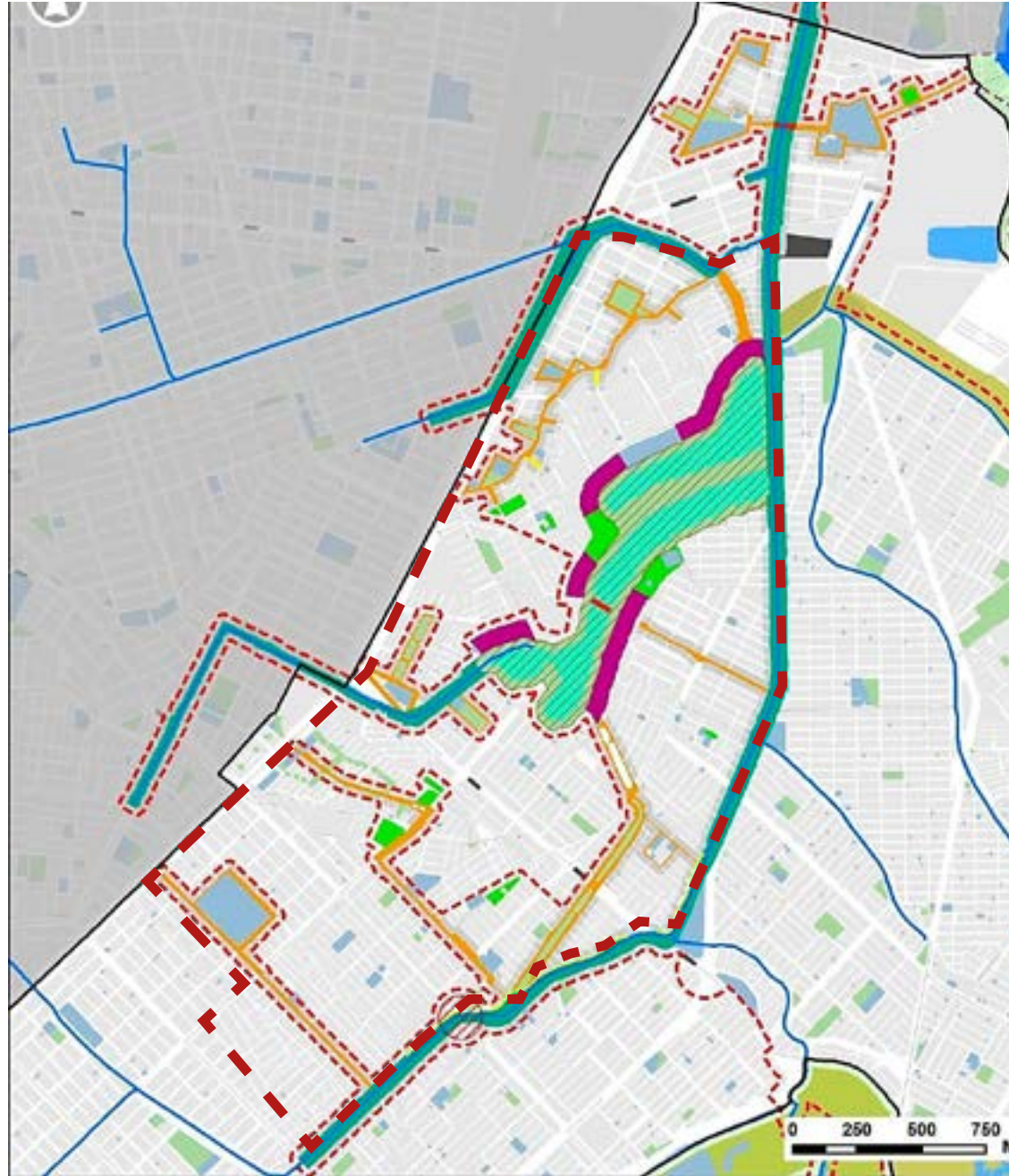


Fig.66: UPU Integrated Projects  
Source: Alcaldia Santiago de Cali (2024)

Within the interventions proposed for the area by the UPU 4, some key points are:

- Adequacy of green areas.
- Recovery of rainwater channels and construction of bridges - small square.
- Adequacy of pedestrian routes.
- Improvement of health centers.
- Paving of the perimeter roads to the canals.
- Construction of the bicycle paths proposed by the city's Land Use Plan.

**(Cali,2017)**

Due to the presence of abandoned canals in the abandoned canals in the area, one of the objectives proposed by proposed by the UPU 4 is to recover and take advantage of these canals to propose new public space and provide the community with new areas for recreation and leisure, and at the same time to take care of the ecological structure of these affected neighborhoods.

Today

Proposal



Fig.67: CAU Melendez River / Source: Alcaldia Santiago de Cali (2024)



## SYNTHESIS MAP

After analyzing sector 13, and reviewing UPU 4 (corresponding to the zone), it is evident that the area faces several urban problems that have led to the appearance of different social problems that affect the city, especially the inhabitants of the neighborhoods in sector 13.

The lack of adequate infrastructure, the lack of public spaces and facilities, the poor condition and abandonment of main and secondary roads, and the fact that most of the houses have been settled informally without any planning are some of the urban problems that affect zone 13, increasing the fragmentation and stigmatization of the entire area.

The lack of job opportunities is few, often leading the inhabitants to opt for informal economies, increasing insecurity and violence by street gangs. At the same time, the lack of education centers affects many of the inhabitants, especially the child population, since the difficulty of accessing a good education in the area limits the possibilities of a good future. The same happens with the lack of health centers since the few that exist do not have sufficient resources or facilities to provide a decent service, forcing the inhabitants to move to other areas of the city.

All these conditions are the result of a social inequality that affects the entire city, creating a social stigmatization towards vulnerable areas such as these, which have been generally excluded by the city for urban renewal plans that seek to provide a solution. Zone 13 faces a complex panorama, which requires urban interventions that have as main objective the welfare of the inhabitants, to improve the quality of life of the entire population belonging to these areas, providing them with basic services and a decent infrastructure for the realization of different activities.

- Sector 13 delimitation
- Water channels to recover
- Informal settlements
- Abandoned green areas
- Lack of facilities
- Roads in poor condition



Fig. 68 Author's elvoration. Base map based on Geoportal IDESC

# CHAPTER 5

**URBAN REGENERATION PROPOSAL**  
**Master Plan**

It is evident that the neighborhoods of zone 13 face a series of urban, social and environmental challenges that require urban intervention to provide a solution to these problems. The lack of infrastructure, basic services, and the abandonment of green areas have generated a fragmentation and social stigmatization that increasingly affects the inhabitants. Therefore, the Master Plan proposed below should achieve an integral solution that not only focuses on transforming the physical space of the area, but also improve the quality of life of the inhabitants through different strategies that facilitate social and economic development, promote community participation, provide new activities to the area and manage to break the stigmatization and end fragmentation towards this area of the city.

This will focus on the zone 13 area, taking advantage of the existing public space, the abandoned lot located on the main highway, the existing facilities, and the proximity to the water channel, to propose a circuit of varied spaces and uses that will serve as a welcoming project to the area, connecting it with the rest of the city.

 Sector 13 delimitation

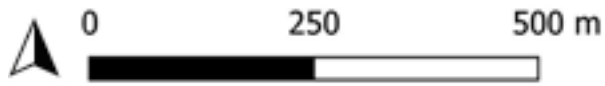


Fig.69 Author's elvoration. Based on Geoportal IDESC

The master plan for Zone 13 of Cali seeks an urban regeneration focused mainly on the exploration of public space and thus improve connectivity with the main areas of the city. This plan was developed taking into account the needs of the local community, which were studied during an extensive urban analysis taking into account the guidelines established by the UPU (urban planning unit) number 4 and the road problems that have historically affected the area. The objective of this plan is to contribute to solving social and road infrastructure problems in order to generate opportunities for the creation of spaces that improve the quality of life of the inhabitants and environmental quality.

One of the main pillars of the plan is the incorporation of the "15 minute city" concept, an urban planning model that focuses on guaranteeing residents that all essential services can be accessed within a 15 minute minimum walk or bicycle ride. These essential services such as health care, education, public transportation, retail and recreational areas would be decentralized, reducing the long commutes of Zone 13 residents, thus promoting sports, a better quality of life and the community's environment.

Last but not least, this plan also seeks to recover and take advantage of abandoned green spaces, rehabilitating them to significantly improve environmental quality and the local ecosystem, promoting a healthier urban environment.

Transforming these previously abandoned spaces into public areas and green zones will bring an important environmental quality to the community of zone 13 and to the city of Cali as it brings innumerable benefits to the health of the inhabitants and a very positive contribution to the climate problem we are facing at the moment.

Five strategies will be implemented to ensure that the objectives of the plan are achieved in order to benefit the communities of Zone 13.

## KEY STRATEGIES

1 - Create a pedestrian connection network in the sector to link the proposed and existing public space.

— — — — **Pedestrian network**

2 - Connect the city's bike lanes to a proposed new circuit within the area.

— — — — **Cycle Circuit**

3 - Design hard areas such as squares and parks to connect the proposed facilities and the pedestrian network.

— — — — **Integrated Spaces**

4 - Build a network of facilities to meet the needs of the community in the area (main axis).

— — — — **Weaving Communities**

5 - Generate a new mobility circuit prioritizing pedestrian and new bicycle routes.

— — — — **Sustainable Mobility**

6 - Increase the percentage of green areas and pre existing tree mass to generate recreational spaces.

— — — — **Green spaces**



## MASTER PLAN “Circuito El Pondaje”

- Existing Urban Facilities
- New Urban Facilities / Renovated Facilities
- Main axis / Commercial Use
- Pedestrian Network
- Bike-ways Network
- New Bus Stops
- Sector 13 delimitation

The Master Plan represents a strategic response to the area’s longstanding challenges, fostering urban regeneration while creating a sustainable, inclusive, and connected environment.

This plan will not only reintegrate Zone 13 into the broader urban structure of Cali but will also contribute to the social and environmental well-being of its inhabitants, providing them with enhanced opportunities for growth and development.

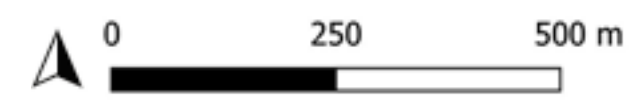


Fig. 70 Author’s elvoration. Base map based on Geoportal IDESC





### MAIN AXIS

An strategic approach for the plan will focus on the land uses. The idea is to create a main axis within the area along the main roads to create an integrated corridor that offers basic services and commerce to the community.

The main streets are selected after the analysis made at city scale, to understand which are the main corridors to connect the different centralities of the city.

The plan is to design and optimize the use of space, giving an easy accessibility to essential services in order to improve the quality of life for the residents. The main corridors will host different activities, aligned with the city's transport and mobility flows, creating a greater connectivity within the area.

The intervention will strengthen the integration of Zone 13 with the rest of the city, promoting a more dynamic and accessible urban environment for its inhabitants.

- Main Road (Calle 23 b, Calle 72 c, Carrera 27, Carrera 28 D, Calle 72 i, Calle 42)
- Main Axis (Commercial uses)
- Sector 13 delimitation

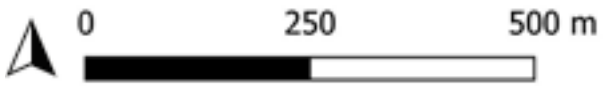


Fig. 71 Author's elvoration. Base map based on Geoportal IDESC



## MOBILITY STRUCTURE

The main idea is to optimize the connectivity within the area and facilitate access between the important nodes, such as commercial areas, public spaces, and community focal points.

The intervention will enhance the connectivity within the zone by improving the vehicular traffic. The main goal is to create a smoother and accessible movement for the users, fostering a better social and economic integration. The change in certain selected roads is made according to the analysis of car mobility in the area, selecting those that allow the creation of a circuit of entry and exit to the area from Simon Bolivar Avenue.

The plan will ensure that the resident of the area can move easily and safely within and out of the area, where main centralities are well-connected with the rest of the city.

- Main roads (two way road)
- Secondary roads (one way road)
- Avenida Simon Bolivar
- ⊝ Nodes
- Sector 13 delimitation

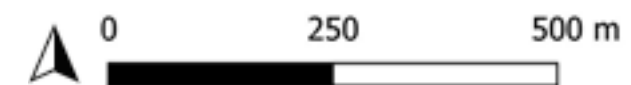


Fig. 72 Author's elvoration. Base map based on Geoportal IDESC



## PUBLIC TRANSPORT SYSTEM

For the Public Transport System, new routes will be created, connecting them with the existing ones to make sure that the area is well connected, creating a network between the existing facilities, the new ones, the main centralities and the different public spaces.

The approach seeks to optimize the system by facilitating the residents access to all essential services like education, health, and commerce. The new routes will reduce travel times connect the new urban facilities and public spaces in the area.

- Existing Routes
- - - New Routes
- Bus stops
- ⊖ Main Station (Terminal Calipso)
- Sector 13 delimitation

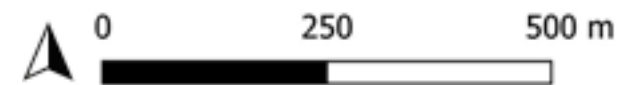


Fig. 73 Author's elvoration. Base map based on Geoportal IDESC



## PEDESTRIAN CONNECTIVITY

The objective is to create a network of pedestrian structure networks that crossed the main commercial corridors, public spaces and urban facilities. This to improve connectivity and give priority to pedestrians.

The proposal seeks the development of safe, accessible and efficient routes for pedestrians, promoting the mobility on foot. These paths will connect different points of interest (nodes) encouraging social cohesion.

The proposal of shared streets is also implemented at different points in the area, in order to connect the different public spaces with the facilities, and achieve greater participation by the community. The main idea is to manage these streets as shared spaces from Monday to Friday, and that the weekends are purely pedestrian and become spaces where the community can perform different cultural activities or carry out local markets, encouraging citizen participation.

This strategy can also reduce dependence on motorized transport, creating a sustainable and accessible environment for the area.

 Pedestrian Connection

 Shared Streets

 Sector 13 delimitation

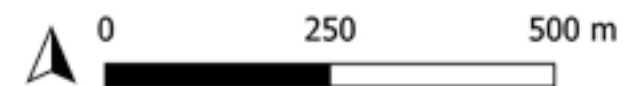
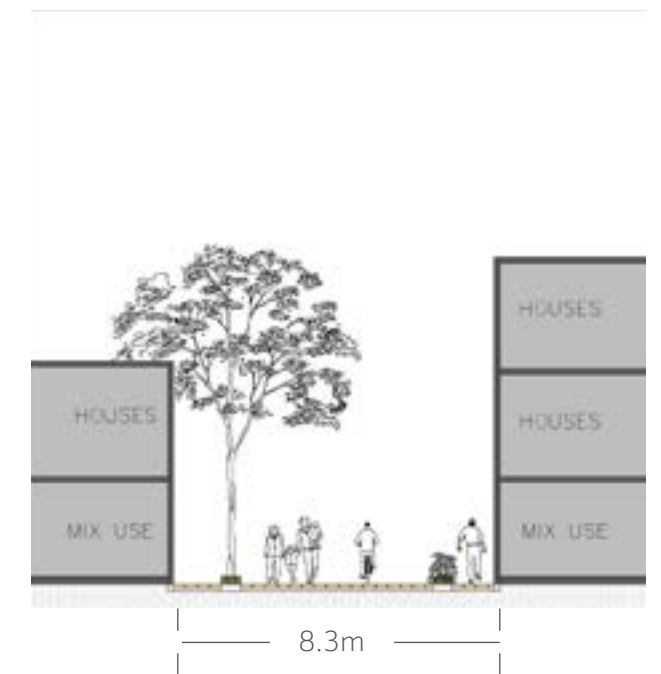


Fig. 74 Author's elvoration. Base map based on Geoportal IDESC

Fig. 75 & 76 Author's elaboration.



Fig. 77 Author's elvoration. Base map based on Geoportal IDESC

## BICYCLE ROUTE NETWORK

As well as the pedestrian network, a network of bicycle routes is proposed to connect the different important points, such as public spaces, different facilities and centralities of the area.

The network is proposed following the connections of the pedestrian network, which connects with the existing network of the city and those proposed in the UPU 4 for the part of the city.

This will help to give more priority not only to pedestrian, but also to non-motorized vehicle mobility, achieving a sustainable development in the area. This strategy can also reduce dependence on motorized transport, creating a sustainable and accessible environment for the area.

- Pedestrian Connection
- Bicycle Lanes
- Sector 13 delimitation

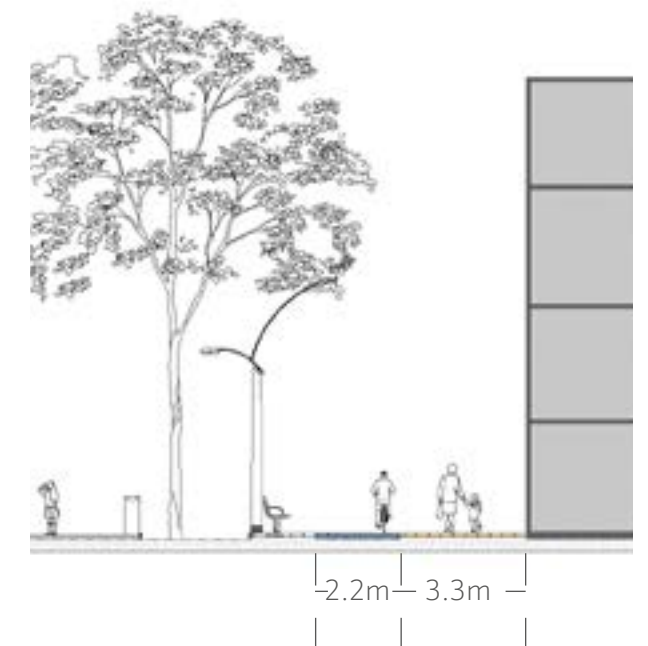
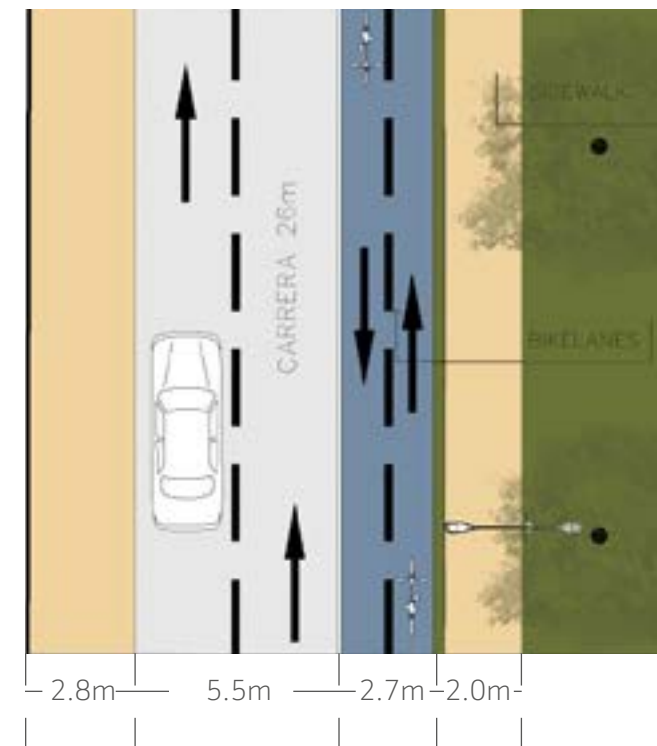


Fig. 78 & 79 Author's elaboration.



Fig. 80 Author's elvoration. Base map based on Geoportal IDESC

## ENVIRONMENTAL INFRASTRUCTURE

One important point is the recovery of environmental value, with special emphasis on the revitalization of neglected green areas that have great potential to become quality public spaces.

These green areas, properly recovered and maintained, will not only function as environmental lungs for the city, but will also help mitigate the effects of climate change, improve biodiversity, and regulate local temperatures.

At the same time, a proposal to increase the tree mass to mitigate heat island effects compared to other areas of the city will be implemented. This will also help to improve comfort along the routes and places in the area.

The main idea is to transform these areas into active and safe public space, following the guidelines from the city to protect these green zones, bringing ecological and social benefits.



Fig. 81 Author's elvoration. Base map based on Geoportal IDESC





Fig. 82 Author's elvoration. Base map based on Geoportall IDESC

## HYDROLOGICAL STRUCTURE

The recovery and revitalization of water bodies, with a particular focus on the Pondaje water channels and lagoons. This initiative follows the guidelines established in the storm channel plans mentioned in UPU (Urban Planning Unit) No. 4 for Comuna 13.

The main idea is to restore their ecological and urban functionality, mainly the storm water management to mitigate flood risk from the water bodies an the river, giving that is close to the area. The rehabilitation of the canals and lagoons not only seeks to improve water flow, but also to convert these spaces into integration areas for the community, promoting the creation of linear parks and recreational areas around the water bodies.

This approach will transform the canals and lagoons into the environmental assets that contribute to the improvement of the urban landscape, offering quality green spaces, better water quality, and restoring local ecosystems.

- Canals to recover
- Pedestrian Connection
- Bicycle Lanes
- Sector 13 delimitation

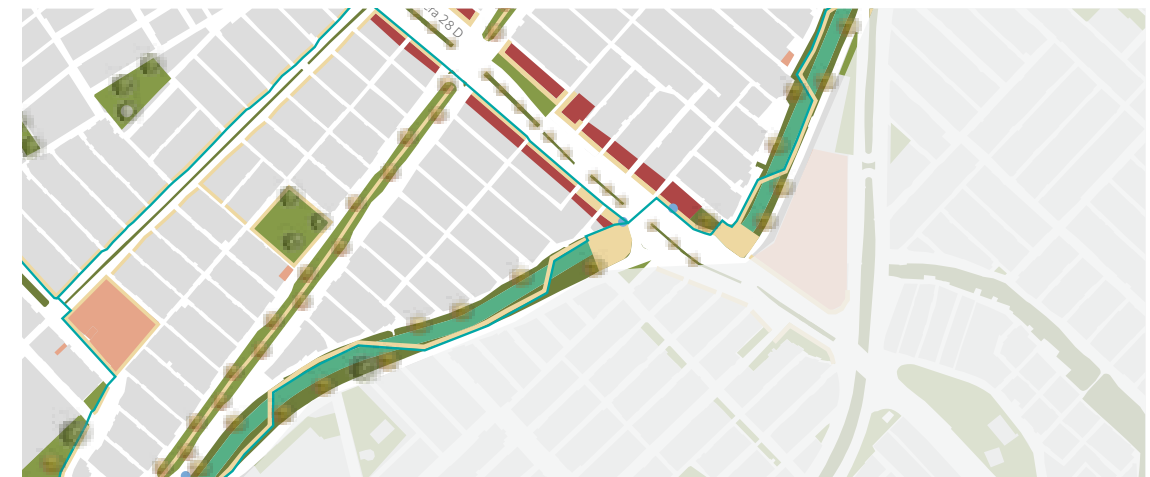
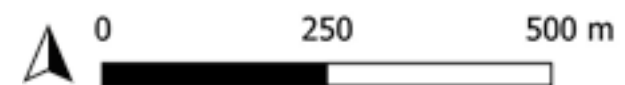


Fig. 83 Author's elvoration. Base map based on Geoportall IDESC





## PUBLIC SPACE

Create a network of different public spaces that efficiently and accessibly links the different cultural facilities and public spaces in the area. The importance of this initiative lies in generating an integrated circuit that enhances social interaction, the use of public space and access to culture.

The circuit will create a cohesive urban fabric where culture is integrated. This by connecting squares, parks, community centers, and cultural facilities, encouraging a flow of people and revitalizing public spaces.

This network will strengthen the cultural identity of Zone 13 by making cultural facilities such as libraries, art centers, theaters and community spaces more accessible. The creation of this network is very important to achieve a inclusive city, favoring the participation of residents in the cultural life, and improving the quality of public spaces.

- Connections
- ⊘ Key public space to connect
- Sector 13 delimitation

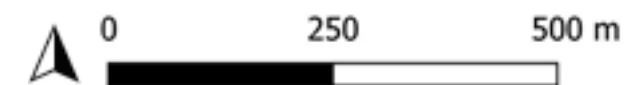


Fig. 84 Author's elvoration. Base map based on Geoportal IDESC





## URBAN FACILITIES

One strategy is the recovery and adaptation of cultural and service facilities, with the objective of creating a network of facilities that effectively responds to the needs of the community.

The network will have a series of renovated and new urban facilities like cultural centers, libraries, community centers, and other spaces for public use, where the main objective is to provide essential services in areas such as education, culture, health, sports and recreation.

The proposed facilities will comply with the missing uses expressed by the community in UPU 4. These will be facilities for early childhood care, for cultural and recreational activities and for social welfare. The existing facilities will be adapted to the new demands of the community, making these spaces more accessible, and multi functional.

This network of facilities will be a key element in strengthening the social fabric and ensuring that all groups in the community have access to spaces that promote culture, learning and making the area a more equitable and sustainable place.

- Existing facilities
- New Facilities
- Renovated Facilities
- Sector 13 delimitation

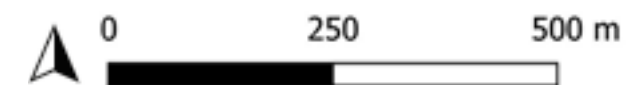


Fig. 85 Author's elvoration. Base map based on Geoportal IDESC



### INFORMAL SETTLEMENTS

The master plan contemplates a comprehensive intervention in informal settlements that have shaped an irregular urban morphology, in order to reorganize the territory and improve the living conditions of its inhabitants.

These settlements have generated a fragmented and disjointed urban structure, with limited access to basic services, deficient infrastructure and low quality public spaces. The proposed intervention will seek to regularize and reorder these sectors, integrating them coherently into the formal urban fabric.

The plan will include the improvement of infrastructure in these settlements, with the development of access roads, public service networks and the creation of quality public spaces. In this case you will intervene those accents along the "Diagonal 70".

This approach aims not only to improve the physical conditions of the environment, but also to provide the inhabitants of these settlements with access to adequate urban infrastructure, basic services and a better quality of life.

- Informal settlements
- Sector 13 delimitation

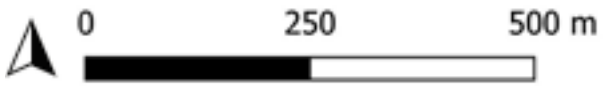


Fig. 86 Author's elvoration. Base map based on Geoportal IDESC



Fig. 87 Author's elevation. Base map based on Geoportal IDESC

## Detailed example of Master Plan interventions

One of the neighborhoods that make up Zone 13 is the Pondaje neighborhood, which has different spaces of great opportunity to develop the different strategies of the Master Plan "Circuito el Pondaje". The following is the proposal of public spaces, facilities and different interventions for the specific area, carried out with the guidelines of the Master Plan presented above.

▭ Specific area / El Pondaje

▭ Sector 13 delimitation



Fig.88: Public Space / Source: "Circuito Verde del Oriente"

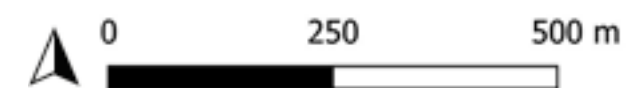




Fig. 89 / Source: "Circuito Verde del Oriente"

Urban Plan Scale 1:2000



Pedestrian Network



Public Space



Mobility System



Bicycly Lane Network



Urban Facilities



Environmental Structure

FLOOR AREAS	
Impermeable	32.866 m2
Permeable	25.077 m2

Fig.90 - 95/ Source: "Circuito Verde del Oriente"

### Tree Density

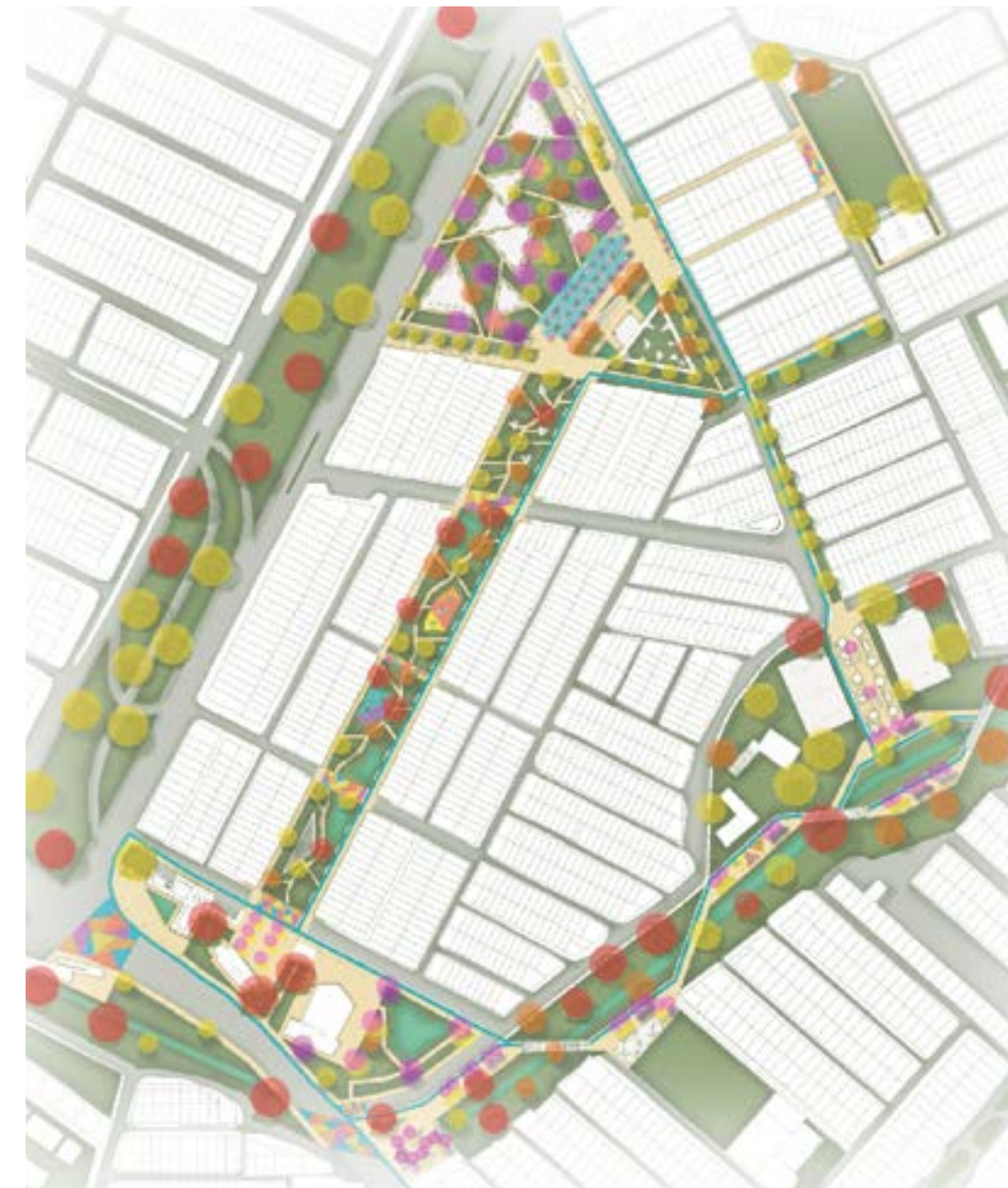


Fig.96 / Source: "Circuito Verde del Oriente"

Tree Plant Scale 1:500



Acacia



Gualanday



Guayacan



Saman



Cedro

As for the tree planting of the area, a specific species of trees suitable for the climatic conditions of Cali is proposed. The selected trees will fulfill the function of increasing the tree mass of the zone without affecting the ecosystem of the city.

Fig.97 - 101 / Source: "Circuito Verde del Oriente"

## PUBLIC SPACE INTERVENTIONS

The intervention is based on unifying the different park typologies of the neighborhood to achieve a park in series that allows to turn the area into a walkable circuit that prioritizes the pedestrian, that prioritizes the community and understands the urban space as a living space for people. The park proposal will be integrated to the guidelines of the Master Plan "Circuto El Pondaje".

### Corner Park

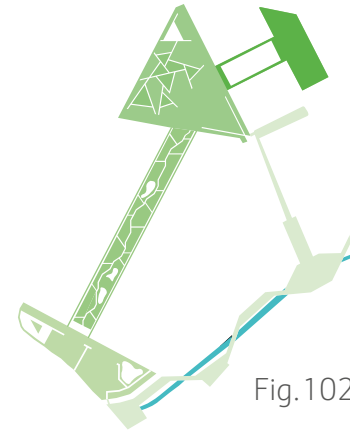


Fig. 102

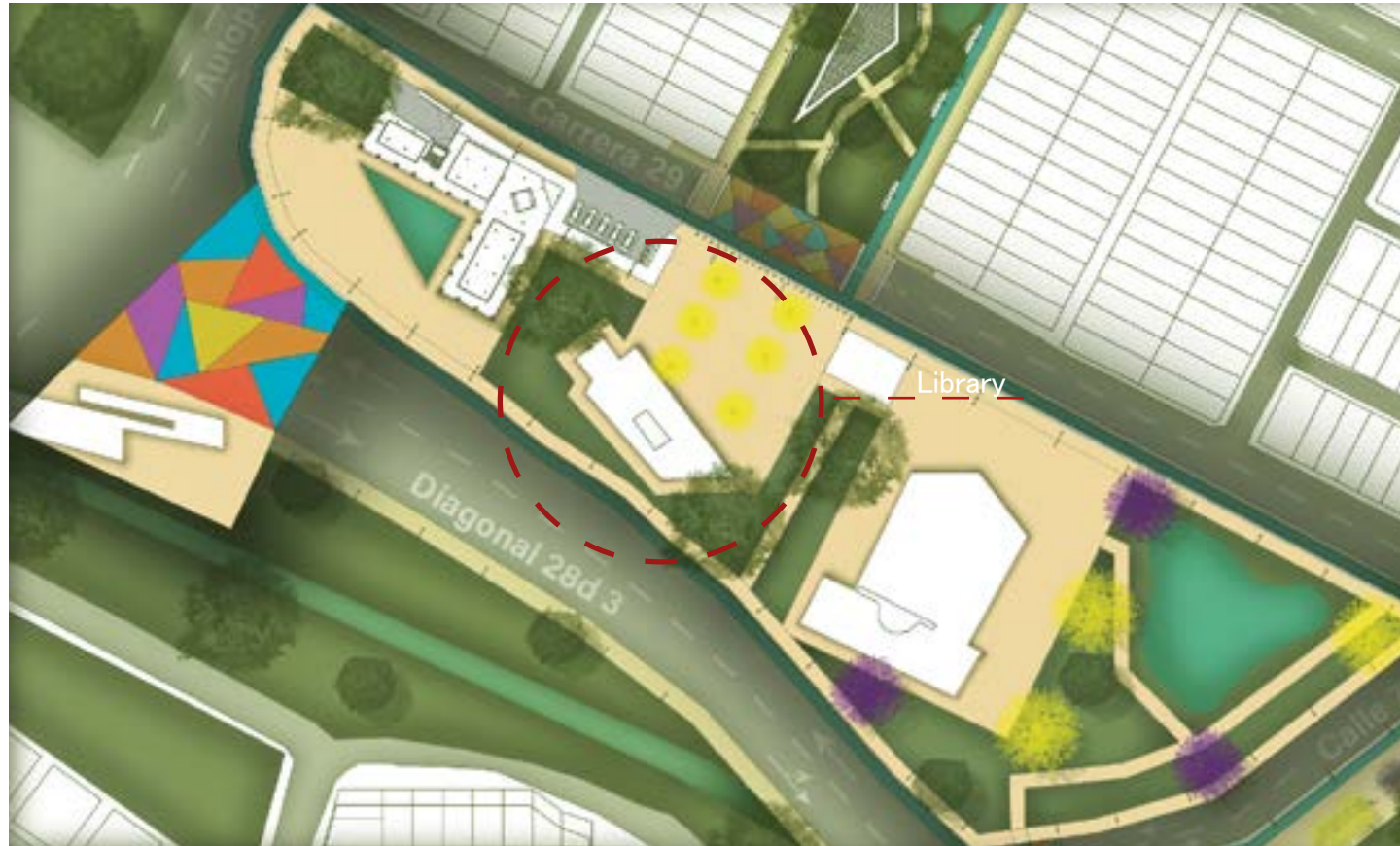


Fig. 103 / Source: "Circuito Verde del Oriente"

Urban Plan



Fig. 104

Section A



Fig. 105: View from Street



Fig. 106: Park

FLOOR AREAS	
Impermeable	4.983 m <sup>2</sup>
Permeable	5.279 m <sup>2</sup>

## Lineal Park

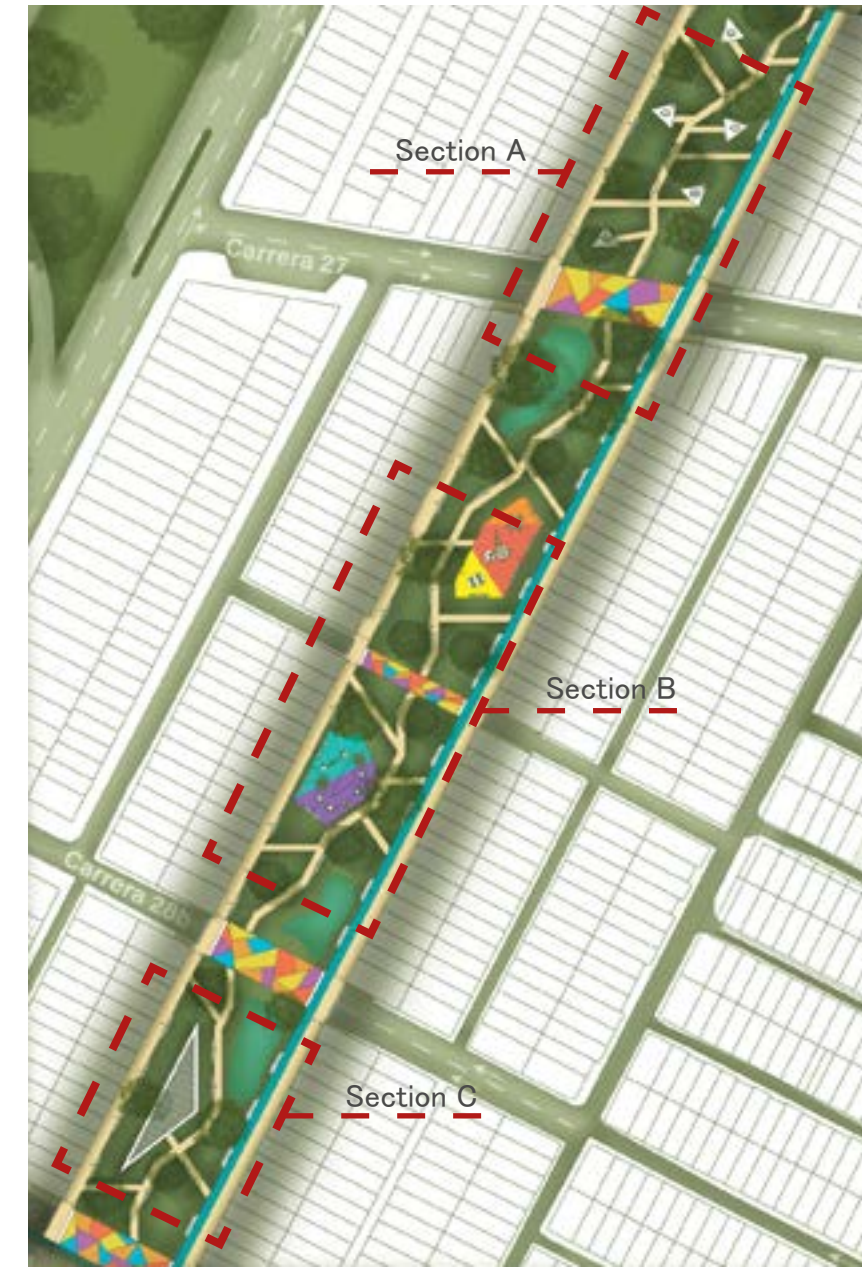


Fig. 107 / Source: "Circuito Verde del Oriente"

Urban Plan



Fig. 111

Section A



Fig. 112

Section B



Fig. 113

Section C

FLOOR AREAS	
Impermeable	2.412 m <sup>2</sup>
Permeable	8.484 m <sup>2</sup>



Fig. 108: Library Extension



Fig. 109: Playground



Fig. 110: Picnic Area

# Main Square

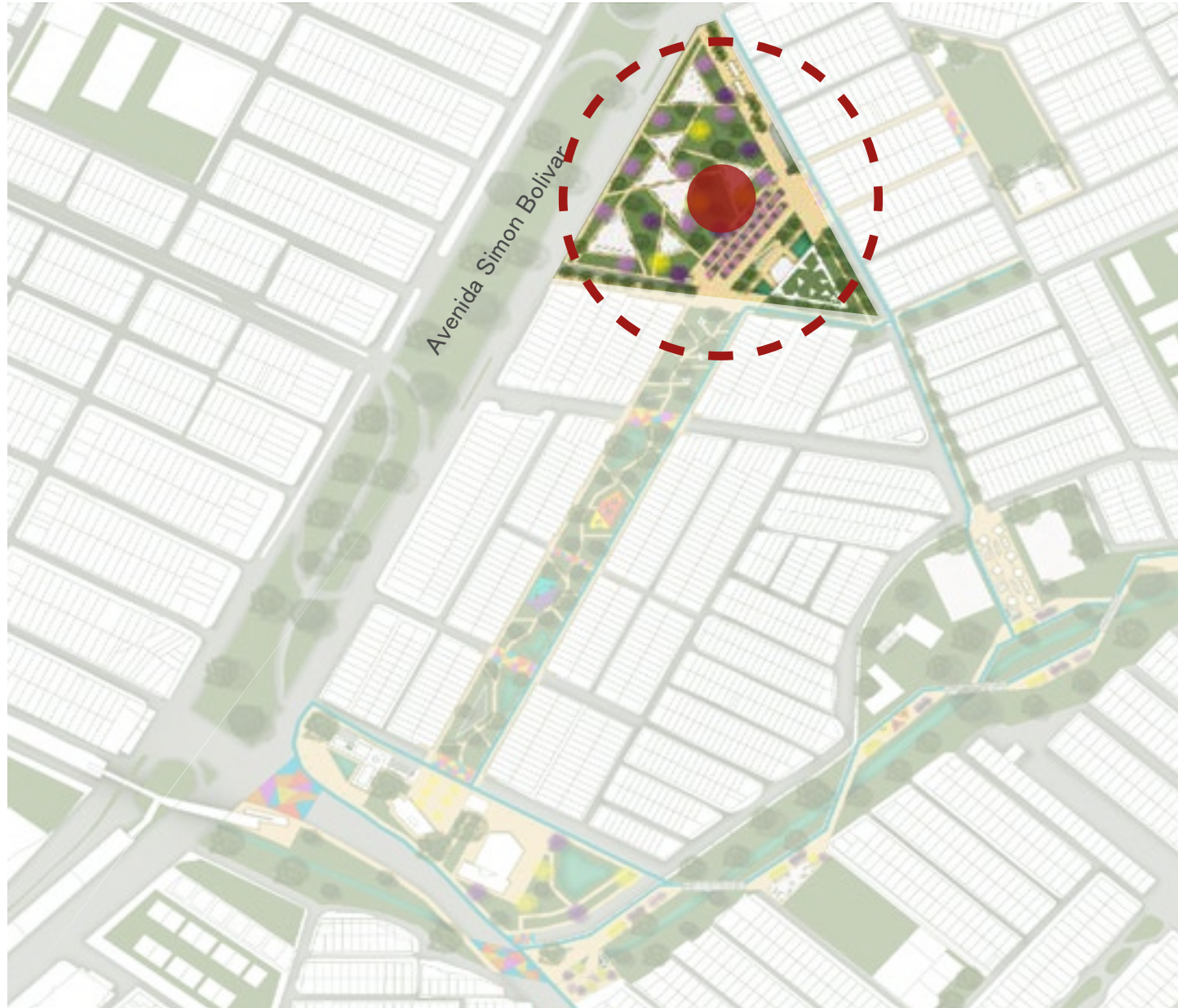


Fig.114 / Source: "Circuito Verde del Oriente"

Potential Lot ▲

One of the plans proposed in UPU 4 for the zone is to use the lot located on Simon Bolivar Avenue as a potential space for the sustainable urban development of Zone 13.

The lot acts as a square welcoming the circuit of public spaces, connecting the affected neighborhoods with the rest of the city. Different spaces are proposed for community recreation and commerce, as well as an urban facility for cultural activities that attract the public outside the zone and integrate the inhabitants of the area, thus fostering social cohesion.

LOT
Main Square
2.499 m2

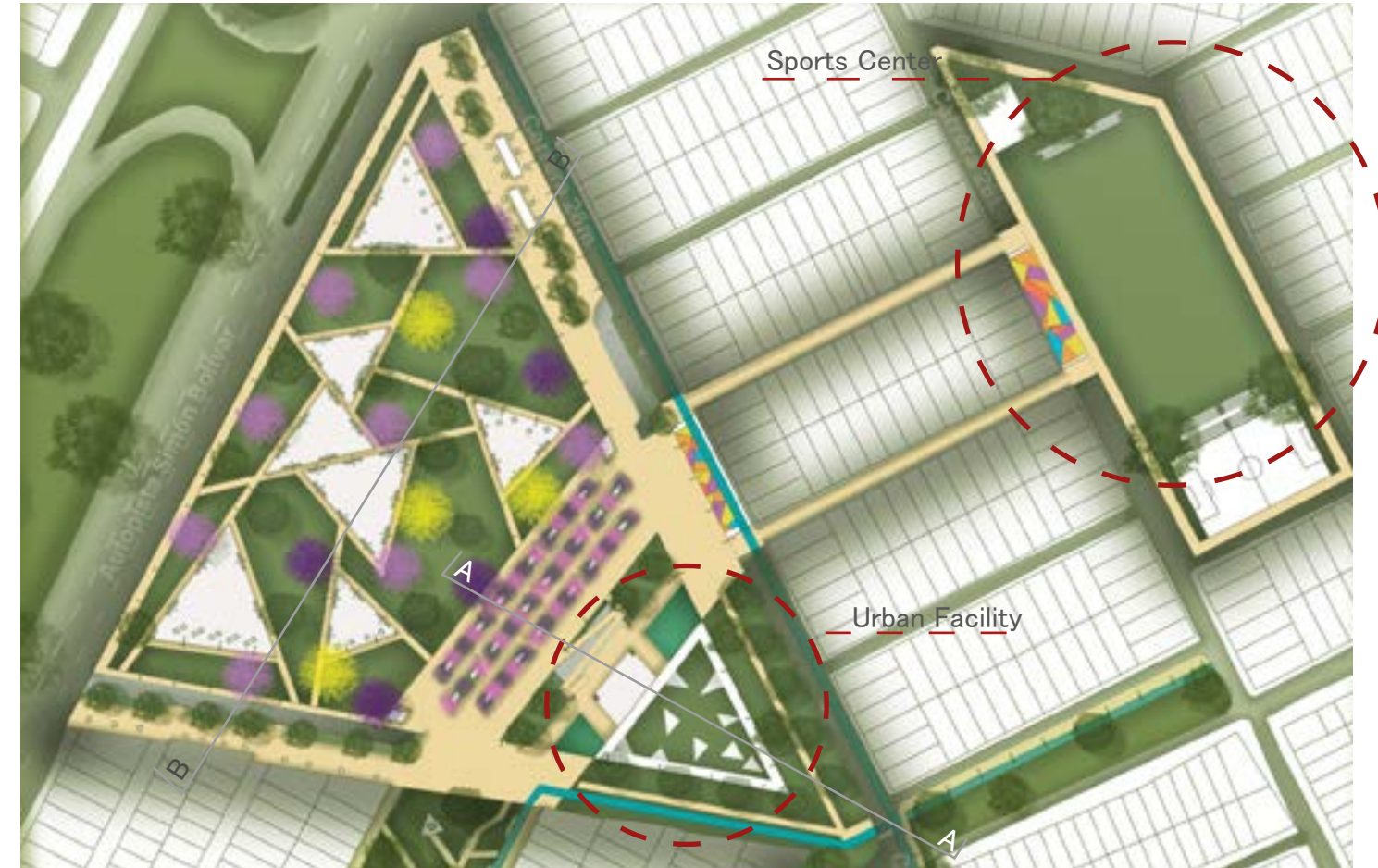


Fig.115 / Source: "Circuito Verde del Oriente"

Urban Plan ▲



Fig.116

Section A

FLOOR AREAS	
Impermeable	21.892 m2
Permeable	14.034 m2



Fig.117

Section B



Fig.118: Museum



Fig.119: Outside Theater



Fig.120: Commercial Area

## Canal Intervention



Fig.121 / Source: "Circuito Verde del Oriente"

Urban Plan

One of the strategies of the Master Plan "Circuito El Pondaje" is the recovery of the water channels in the area, for the specific area an intervention is proposed with the objective of recovering the channel that goes along "Calle 72" F, and at the same time generate public space for the use of the community.

Recreational and commercial spaces are proposed to give continuity to the main axes proposed in the Master Plan and to activate the area.

FLOOR AREAS	
Impermeable	8.562 m2
Permeable	2.559 m2



Fig.122

Section A



Fig.123

Section B



Fig.124

Section C



Fig.125

Section D



Fig.126: Seating area



Fig.127: Boulevard



Fig.128: Main Axis - Commercial area



Fig. 129: Main Square / Source: "Circuito Verde del Oriente"

Passage of the main square of the "Circuito del Oriente" project, connecting the open-air museum with the theater (entrance to the cultural center".





Fig. 130: Outside Theater / Source: "Circuito Verde del Oriente"

Open-air theater and entrance to the cultural center. Place designed for the organization of cultural events that involve the community.



Fig. 131: Boulevard Playground / Source: "Circuito Verde del Oriente"

Playground as a response space to the nearest kindergarten, for the use of students during the week and the rest of the population of the area. The idea is to provide different uses in the Boulevard to revitalize the area.



Fig. 132: Commercial Area / Source: "Circuito Verde del Oriente"

Commercial zone located in Boulevard to increase the activity and difference of uses in the area, creating new employment opportunities and thus boosting economic development.

As mentioned before, the purpose of the master plan is to improve people's quality of life and reduce urban fragmentation, and one of the ways to do this is to achieve social and territorial cohesion. As Ali Madanipour puts it in his studies on spatial justice and urban design. This concept emphasizes the need to ensure that urban spaces are accessible and equitable and reflect the diversity of the communities they serve, eliminating barriers that exclude certain groups for socioeconomic, cultural, or geographic reasons.

Therefore, four key points serve to measure whether the public spaces proposed in the plan comply with the social inclusion function of the territory.

- **Accessibility and connectivity**

The plan proposes improving the mobility of the area by upgrading the streets and renovating roads, as well as adding 7 new routes and bus stops to optimize connectivity within the area and the rest of the city.

The proposed new spaces focus on pedestrian connectivity, giving maximum priority to pedestrians and non-motorized vehicles, proposing a network of new sidewalks and bicycle lanes that connect important nodes and public spaces, creating a unified circuit.



Fig. 133 / Author's elaboration



- **Spatial equity**

One of the plan's main objectives is to generate a circuit that allows people to move around easily, connecting them with the proposed public spaces and those to be renovated. This will allow easy access to these spaces that provide different services to the entire population.

The circuit prioritizes pedestrian and bicycle mobility, crossing central areas of the neighborhoods, and peripheral areas that will be connected to the city network.



Fig. 134 / Author's elaboration



- **Community involvement**

During the urban analysis for the approach of the master plan, the UPU 4 corresponding to the area was studied, where the community through workshops with the local government of Cali expressed their needs and concerns of the area, giving rise to a guide of different proposals that reflect and aim to meet those needs expressed by the population.

New urban facilities and renovation of the existing ones with the different uses that are currently lacking in the different neighborhoods of the area 13 are proposed, as well as an improvement in the urban infrastructure such as streets, sidewalks and public space.

- **Diversity of use and functions**

Within the different interventions proposed for the area, public space plays an important role where it is consolidated as a place for social cohesion. The idea of these spaces such as parks, squares, and environmental corridors is to offer different activities for the whole population.

An example of this is the spaces designed in the project "Circuito del Oriente" where the welcome plaza offers an area for cultural activities such as an open-air museum, where the community can participate, creating a appropriateness if the space.



Fig. 135 / Author's elaboration

Considering the interventions proposed in the master plan and the public space of the area, these address the needs for urban infrastructure and public space and serve as a basis for guidelines to demonstrate how marginal areas of a city can be transformed into points of opportunity for social change and economic momentum.

Implementing such a plan, focused on urban regeneration that considers key factors such as social inclusion, revitalization of public space, variety of uses and activities, and environmental sustainability, among others, is expected to improve the quality of life of the inhabitants and allow for the creation of a more inclusive and connected city.

# CHAPTER 6

CONCLUSION

The development of the thesis focused on conducting an in-depth analysis in one of the vulnerable areas of the city of Cali, to finally propose a master plan based on a proposal for urban regeneration in order to improve the quality of life of the inhabitants, and at the same time reduce the fragmentation of the city that characterizes most Latin American cities, in this case Cali, Colombia. The analysis focused on Zone 13 (Comuna 13), one of the most vulnerable areas of the city, characterized by its low quality of infrastructure, limited supply of public space and high levels of social marginalization. To answer the two questions posed at the beginning, a theoretical and empirical review, an analysis of the current context, and finally a proposal for an intervention in the area were carried out.

The first part of the research includes a review of theories and literature that address urban regeneration in vulnerable contexts from a global to a local scale. Different authors such as Jane Jacobs, Kevin Lynch, Richard Florida, David Harvey, among others that address issues such as "inclusive city", "urban sustainability, and 'mixed-used spaces' were studied to build a theoretical framework to inform planning and design decisions in the master plan. This analysis highlighted the need for and importance of considering urban regeneration not only as something physical, but also from a social and economic perspective, emphasizing the need to involve local communities in the planning of their own environment.

To complement the analysis, the project "Development of public space in P. P El Hoyo -Piloto" by Colectivo 720 + DARP, was studied. The project showed how participatory design and construction of quality public space can activate and revitalize the true potential of vulnerable communities. The results of this proposal served to demonstrate that the creation of well-designed public spaces in marginal urban areas can generate profound changes in social dynamics and in the perception of security in the area, improving the quality of life of the inhabitants.

To make a Master Plan proposal for Comuna 13 (zone 13), it was first necessary to understand the general structure of Cali, its history, and the urban characteristics that directly affect inclusion and sustainable development. In this phase, the formation of the city, its administrative divisions, mobility and public transportation system, land uses, public facilities and environmental infrastructure were analyzed.

This analysis revealed how Cali has experienced disorderly growth marking an urban fragmentation, where the most vulnerable areas are disconnected from the rest of the city, both physically and socially.

The specific situation of Comuna 13 (zone 13), one of the densest areas in terms of population and with the lowest economic income, was studied. The analysis of demographic data showed that the area has a high percentage of young people and families with limited income, with restricted access to basic services and recreational spaces. The diagnosis also included an analysis of The UPU 4 (Unidad de Planeacion Urbana), where the aspirations and demands of the community are included, providing a frame of reference for the proposed interventions in the area.

The "Circuito El Pondaje" Master Plan for Comuna 13 (zone 13) was conceived under a comprehensive vision of urban regeneration that considers not only the structural needs of the area, but also the aspirations of the inhabitants. The proposal focuses on the regeneration of the area through strategic interventions that include the creation of high-quality public spaces, the improvement of the environmental structure, and the reinforcement of safety and mobility. The strategic guidelines of the master plan are summarized in the following key points:

- Creation and improvement of public space: A network of parks, plazas, community centers and recreation areas will be established to promote social and cultural coexistence and sports activities. These spaces, designed according to the needs and preferences of the community, offer alternatives for residents to actively participate in public life, reinforcing social cohesion.
- Environmental sustainability and recovery of natural spaces: The plan includes the recovery of green areas and bodies of water such as the lagoons, as well as the reforestation of certain areas to increase the number of trees, creating a healthier and more pleasant environment. These interventions also seek to improve the area's micro climate, reduce pollution, and establish an ecological connection with other areas of the city.
- Improvements in safety and infrastructure: Considering the mobility and insecurity problems affecting the area, the plan contemplates the rehabilitation of streets, expansion of public transportation routes and improved lighting and surveillance of public spaces. These interventions not only facilitate mobility, but also contribute to the perception of security in the neighborhoods that make up Comuna 13 (zone 13), promoting the use of public space.

- Expansion of cultural and educational offerings: In areas where access to cultural and educational activities is limited, the master plan proposes the construction of cultural centers and bookstores, as well as the implementation of community programs to promote art, culture and education. These initiatives seek to benefit especially the youth population through education and cultural participation.

Within the framework of the "Circuito del Pondaje" Master Plan, a public space proposal is highlighted, which seeks to connect various public spaces through pedestrian corridors. This circuit is designed to facilitate pedestrian transit between different areas of the zone, fostering greater interaction between residents and reinforcing the identity of Comuna 13 (zone 13). By connecting parks, plazas and other recreational spaces, the "Circuito del Oriente" project creates a route that makes the area more accessible and attractive to its residents and the rest of the city. The initiative proposes greater priority for pedestrian mobility and non-motorized vehicles, a practice that not only improves people's physical health but also facilitates the appropriation of public space and a sense of community.

The proposed master plan for the area provides a comprehensive response to the questions posed in this thesis.

The research confirms that the quality of life in vulnerable communities can be changed by improving and creating public spaces that encourage the development of new social, cultural and recreational activities. By promoting social cohesion, improved mobility and environmental structure, the plan contributes to reducing Cali's urban fragmentation, integrating Comuna 13 (zone 13) into the city's structure.

Focusing on the key points of urban regeneration such as social inclusion, revitalization of public space, variety of land uses, environmental sustainability, and economic development, a master plan is proposed that serves as a guide to improve people's quality of life and end urban fragmentation.

It is important to emphasize that the thesis proposes a master plan for the area, which is expected to serve as a kind of strategic guide with general guidelines to orient urban and social development. With the master plan, it is expected that future proposals will be based on the concept of urban regeneration, prioritizing the creation of functional, sustainable, and equitable spaces. The main objective is to generate a positive impact that promotes social inclusion and an improvement in the quality of life of the inhabitants.

To obtain an effective result in projects of this type, it is important to address the specific social problems that affect the area with an interdisciplinary and collaborative approach, involving different entities such as local governments, the local community, and different professions such as architects, urban planners, and sociologists, among others. In addition, the strategies proposed for each specific area should consider both the physical characteristics and social contexts to ensure an inclusive and effective development plan.

In summary, the master plan proposal for Comuna 13 (zone 13), not only addresses immediate infrastructure and public space needs, but also lays the groundwork for sustainable and cohesive development. The implementation of such a master plan can demonstrate the possibility of transforming vulnerable areas into areas of opportunity, where the built environment becomes an engine for social and economic change, improving the well-being of its inhabitants and contributing to the construction of a more inclusive, connected and equitable city.



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**Fig.69:** IDESC (Infraestructura de Datos Espaciales Santiago de Cali) (2024). Comuna 13 - Cali, Colombia.  
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[https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)  
<http://ws-idesc.cali.gov.co:8081/geoserver/wfs?>

**Fig. 70 -74:** Echeverry Acosta, J (2024). Master Plan “Circuito El Pondaje”  
Base map:  
<https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>  
[https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)  
<http://ws-idesc.cali.gov.co:8081/geoserver/wfs>

**Fig. 75 -76:** Echeverry Acosta, J (2024).

**Fig. 77:** Echeverry Acosta, J (2024). Master Plan “Circuito El Pondaje”  
Base map:  
<https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>  
[https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)  
<http://ws-idesc.cali.gov.co:8081/geoserver/wfs>

**Fig. 78 -79:** Echeverry Acosta, J (2024).

**Fig. 80 -87:** Echeverry Acosta, J (2024). Master Plan “Circuito El Pondaje”  
Base map:  
<https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>  
[https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)  
<http://ws-idesc.cali.gov.co:8081/geoserver/wfs>

**Fig. 88 – 132:** Fernández, J & Echeverry J (2022). Circuito Verde Del Oriente

**Fig. 133 -134:** Echeverry Acosta, J (2024). Master Plan “Circuito El Pondaje”  
Base map:  
<https://www.cali.gov.co/planeacion/publicaciones/3560/idesc/>  
[https://www.cali.gov.co/planeacion/publicaciones/46986/servicios\\_wfs\\_idesc/](https://www.cali.gov.co/planeacion/publicaciones/46986/servicios_wfs_idesc/)  
<http://ws-idesc.cali.gov.co:8081/geoserver/wfs>

**Fig. 135:** Fernández, J & Echeverry J (2022). Circuito Verde Del Oriente



