

ABSTRACT

Title of Thesis: SOCIAL URBANISM IN MEDELLIN –
INTERGATION OF LANDSCAPE, LIFE, AND
CULTURE.

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Over the last 50 years, the city of Medellín, Colombia has experienced a drastic urban transformation. The drug war and armed conflict in the late 20th century expedited urbanization as people were forced to leave their rural homes and seek shelter in major cities. However, the infrastructural capacity of larger cities has been unable to accommodate the basic needs of the growing population. As a result, people had to build habitats in the peripheries of the cities. These “informal settlements” were born out of necessity, with limited resources, and often under unsafe conditions. Nonetheless, these self-built neighborhoods are “the most common form of urbanization on the planet,” and as such, the processes behind “informal city making” are key to understanding the potential for development, innovation, and integration of a city. This paradigm shift regarding informality intends to bring visibility to the perseverance and creativity of migrants under limited resources, to challenge policies that shape urbanization and to explore alternative methods to address population growth.

SOCIAL URBANISM IN MEDELLIN – INTEGRATION OF LANDSCAPE, LIFE,
AND CULTURE

by

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Dedication

To my parents, who courageously voyaged from Colombia to the United States almost 15 years ago, sacrificing everything they had in search of better opportunities for the future of their children. This thesis is dedicated to the resilience, love and hope that you instilled in me through your migration and dedication to our family's future.

Acknowledgements

I extend my deepest gratitude to my thesis chair, Dr. Georgeanne Matthews, for believing in me, for her invaluable guidance and mentorship through this journey. Infinite thanks to my committee members, Clara Irazabal, Michael Abrams, Brian Kelly, and James Tilghman for their expertise, constructive feedback, and dedication to this project, each one has been instrumental in shaping the outcome. This recognition is certainly not a personal achievement, but a reflection of the collaborative effort and expertise that the entire committee brought to the table. I am honored to have had the opportunity to work with them all.

Lastly, I would like to thank my family for their unwavering encouragement, patience, and love to sustain me through the challenges of this thesis. Gratitude and appreciation to a special person whose encouragement, understanding, and support have been invaluable. Thank you to my colleagues, classmates, and friends for their vital “granito de arena” in this journey. I could not have done it without you all.

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Chapter 1: Cities are People.

Overview

The foundational component of cities are people. Understanding where people live, how they live, what they do, where they group or disperse, how they interact with one another, with nature or with their surroundings are fundamental aspects to architecture, urbanism, and design. In a world with an ever-growing population and rapid rates of urbanization, how can we as architects and planners design to satisfy the needs of all people today, and all people in the future? the answer to the question is one that lies right in front of us, it requires a thorough understanding of the natural patterns of humanity and the efforts to work with those patterns rather than against them. Over half of the world population live in urban settings¹ and one third of the total urban form are informal settlements². Cities develop in various landscapes, some may form near/on bodies of water, some on the altitudes of the mountains, etc. Yet, the question remains, how could the world possibly prepare for the exponential growth of urban areas of the next several decades without thoroughly embracing the outgrown urban areas of today? Considering that approximately 90% of designers spend their careers designing for the problems of the richest 10% of customers

¹ Hannah Ritchie and Max Roser, "Urbanization," *Our World in Data*, June 13, 2018, <https://ourworldindata.org/urbanization>.

² Jota Samper, Jennifer A. Shelby, and Dean Behary, "The Paradox of Informal Settlements Revealed in an ATLAS of Informality: Findings from Mapping Growth in the Most Common Yet Unmapped Forms of Urbanization," *Sustainability* 12, no. 22 (November 15, 2020): 9510, <https://doi.org/10.3390/su12229510>.

worldwide³, how can we help bridge that gap? How can we shift our focus to attend to the needs of that remaining 90% of customers that the vast majority of designers rarely works for? What can we learn from how the majority of the population lives and design to empower and build on their existing assets? How can we design to increase the opportunities for those with limited access to resources?

Medellín's extensive experience with "informal" forms of urbanization won the "City of the Year" competition for the most innovative urban center in 2013, according to The Wall Street Journal. Over the decades, the [elected] mayor[s] have encouraged infrastructural capacity expansion to embrace, rather than attempt to eradicate, informal settlements in the city. This thesis argues that the process of intervention begins by identifying and leveraging existing community assets, and prioritizing the increase of accessibility to public resources, in order to support [informal settlement] communities, prompt economic growth, and shrink the poverty gap. Thus, a cyclical pattern is created, in which the community is acknowledged and respected as experts of their own lifestyles to achieve long-term solutions. This thesis explores the following questions:

- What are the processes of informal city making?
- What are the best and worst practices to address this global phenomenon?
- How can architects and planners promote economic growth without causing displacement?

³ Paul Polak, "¡Viva La Revolución," Dr. Paul Polak, October 6, 2011, <https://paulpolak.com/viva-la-revolucion/>.

- What can be learned from the resilience of people and informal settlement communities to address the global housing crisis?

The goal of this thesis is to learn from the unique processes of informality and engage with the ongoing efforts of public administrations, such as PUI (Proyectos Urbanos Integrales – Integrated Urban Projects) in Medellín and find an opportunity to provide a public space within the existing fabric. The program is defined based on community-driven solutions that empower existing community assets and prioritize accessibility to public resources. The importance of this process is evident in the global trends of population growth, urbanization, climate resilience, demand for housing and all related rights of healthy living, migration, displacement, poverty, etc. Every single person has the right to proper housing with basic living standards. Cities need to be able to constantly expand, and most importantly, maintain infrastructural capacity to provide proper health, education, employment, and cultural engagement.

Urbanization

Cities are constellations of jobs, services, opportunities, technology, innovation, and most importantly, people. This density of elements within a relatively small area increases the number of options, choices, and opportunities everyone can incorporate into their lives. Only 1% of global land is defined as “built up”, referring to cities, towns, villages, or centers of human infrastructure⁴, however, these agglomerations are where the majority of people live, and the trend will continue to prevail over the next few decades. Therefore, the conditions of the land, the direction

⁴ Ritchie and Roser, “Urbanization.”

and elevation of the topography, directly dictate what can be built, where and how. This is especially important in places with large populations, where land is scarce, and the terrains are mountainous. According to the World Bank, in less than 30 years, it is expected that 70 percent of all inhabitants will live in urban settings⁵. The intense rate and the shift of rural to urban development are a relatively recent global phenomenon. UN data estimates that the number of people in urban areas surpassed the number of people in rural areas less than 20 years ago, in 2007⁶. As the conditions of the world are constantly changing, cities are attractive and often indispensable locations for people to achieve the quality of life they seek today. Furthermore, the lifespan of individuals has been lengthening and the average household size has been shrinking⁷, both aspects which further emphasize pressure on the need for available housing. In other words, people need to have a place to live, for longer periods of time, and more houses are needed to provide enough space for people to live in individually. Population projections and studies on the housing trends based on UN data, estimate that the world would need to build more than “two billion new homes over the next 80 years”, which is inevitably tied to a rise in “demand for food, water and materials”⁸. The figures below illustrate these trends in urbanization demonstrating that although the proportion of built land is low, the majority of people live in urban areas, and that number will only continue to increase exponentially.

⁵ “Urban Development - Overview,” World Bank, accessed November 12, 2022, <https://www.worldbank.org/en/topic/urbandevelopment/overview>.

⁶ Ritchie and Roser, “Urbanization.”

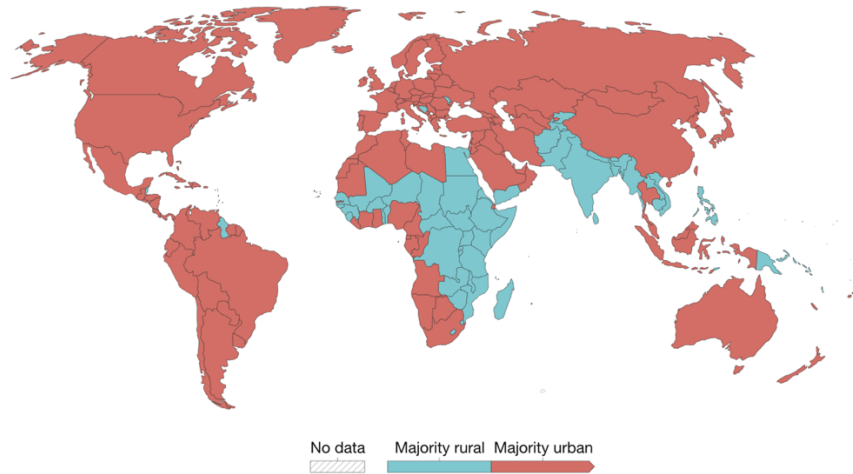
⁷ Emily Badger, “Why We Should Be Worried About the Rapid Growth in Global Households,” *Bloomberg.Com*, February 14, 2014, <https://www.bloomberg.com/news/articles/2014-02-14/why-we-should-be-worried-about-the-rapid-growth-in-global-households>.

⁸ Sean Smith, “The World Needs to Build More than Two Billion New Homes over the next 80 Years,” *journal, The Conversation*, February 28, 2018, <http://theconversation.com/the-world-needs-to-build-more-than-two-billion-new-homes-over-the-next-80-years-91794>.

Do more people live in urban or rural areas?, 2022

Our World
in Data

Share of the population which live in urban versus rural areas. Here, 'majority urban' indicates more than 50 percent of the population live in urban centres; 'majority rural' indicates less than 50 percent. Urban populations are defined based on the definition of urban areas by national statistical offices. This is based on estimates to 2016, combined with UN projections to 2050.

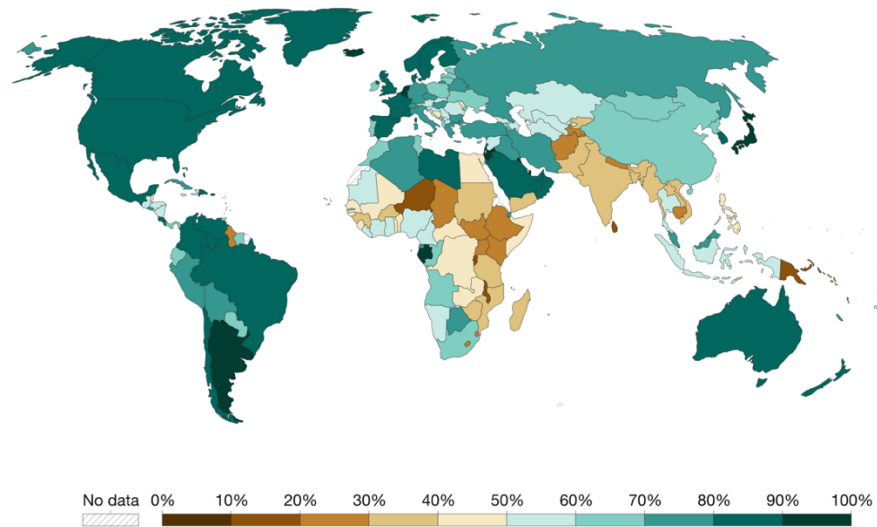


Source: OWID based on UN World Urbanization Prospects (2018) & Historical Sources (see Sources tab)
OurWorldInData.org/urbanization • CC BY

Figure 1 Proportion of population living in urban settings in 2022 (OWID)

Share of people living in urban areas, 2020

Our World
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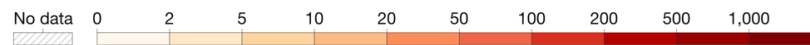
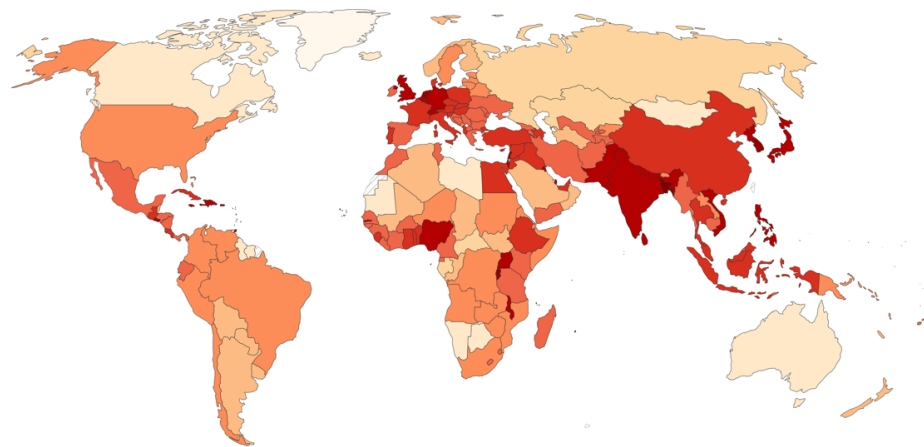
Source: UN Population Division (via World Bank)
Note: Urban populations are defined based on the definition of urban areas by national statistical offices.
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Figure 2 Proportion of people living in urban areas in 2020 (OWID)

Population density, 2022

The number of people per km² of land area

Our World
in Data



Source: FAO via World Bank (2021); Gapminder (v6); HYDE (v3.2); UN (2022)

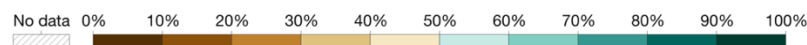
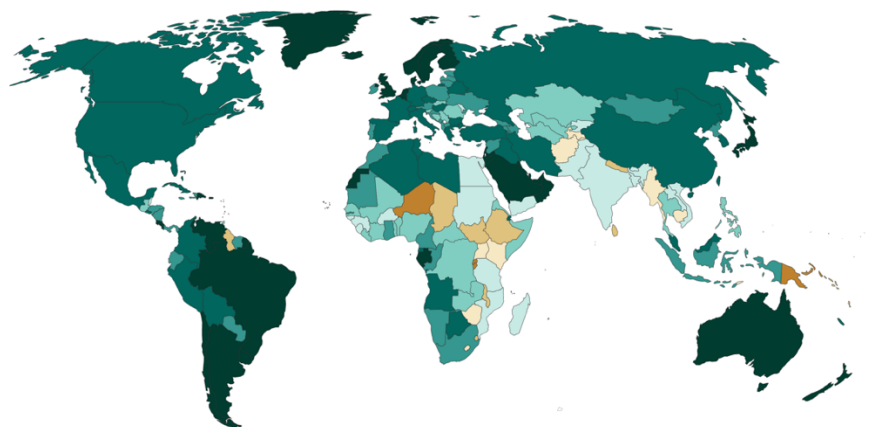
OurWorldInData.org/world-population-growth • CC BY

Figure 3 Density of population in 2022 (OWID)

Share of the population living in urban areas, 2050

Share of the total population living in urban areas, with UN urbanization projections to 2050

Our World
in Data



Source: OWID based on UN World Urbanization Prospects 2018 and historical sources (see Sources) OurWorldInData.org/urbanization • CC BY
Note: Urban areas are defined based on national definitions which can vary by country.

Figure 4 Projection of population living in urban areas in 2050 (OWID)

Chapter 2: Human movement

Displacement and Migration

Displacement and migration add another layer of complexity to the constant requirement for infrastructure and accessibility to keep up with the basic needs of people. It is human nature to be constantly seeking quality of life improvements. Whether these are motivated by internal or external forces, people must make decisions on a daily basis that impact their living conditions. These decisions revolve around elemental human needs that begin at securing a place to live, to seek shelter from adverse conditions, to access basic services, and expand infrastructural capacity reach to jobs and public resources.

Internal forces

Internally motivated migration is derived from a personal choice. The search for better education, professional or economic advancement, the opportunity of proximity to people, places, or lifestyles, in between others, are the internal forces that cause people to move. These are usually experienced by people who have access to a variety of resources and opportunities. These types of movements are also affected by generational trends of where people live and what lifestyle they carry at different points in time. Often times, housing options and opportunities are limited by the costs and accessibility of resources depending on the context.

External forces

External forces, on the other hand, include the need to seek shelter from natural disasters and severe environmental factors, or to escape from conflict and violence. According to the UNHCR, 89.32 million people were forcibly displaced worldwide in 2021; about 60 % of them being displaced within their country of residence⁹ in different countries across the globe. People who experience forceful displacement must leave their homes with just about as much as they can carry with their own hands, if anything at all, and they have to begin to reconstruct their lives from scratch in a foreign location. For refugees, the receiving location extends internationally, anywhere across the globe, and for the internally displaced, the movement is usually toward the most populous cities within their own country.

Regardless of the distance or the cause, this forceful disruption usually affects poor populations harder, populations that have limited access and options in various aspects of their life. Considering that the infrastructural capacity of existing cities is poorly prepared to accommodate the basic needs for the inflows of human movement, where can people go to find a new home? To put this into perspective, studies show that more than 13 million Americans, for instance, could be forced to relocate by the end of the century due to climate change¹⁰ alone, and with the increasing effects of global warming, natural disasters will become more frequent and increase in their severity and aggressiveness. Therefore, growth management and exhaustion of natural resources should be priority concerns for governments worldwide. The

⁹ United Nations High Commissioner for Refugees, “Figures at a Glance,” UNHCR, accessed October 25, 2022, <https://www.unhcr.org/figures-at-a-glance.html>.

¹⁰ Petra lecture – need to add more info

“management” and environmental practices that have been in place until now, need to quickly adapt to the natural trends, it is imperial that “management” is flexible and adaptive to natural conditions rather than disruptive and counterproductive.

Historically, informally developed communities have been seen as a “disease” and the tactic to “manage” them has been focused on eradicating them. However, this “solution” is not only ethically wrong, but it is simply a waste of time because once an informal settlement is destroyed, the people that live in it can only reconstruct their self-built homes elsewhere, creating a cyclical pattern of displacement.

The case of Colombia

Located near the equator of the globe, right at the top of South America, bordered by Venezuela and Brazil on the East, Peru and Ecuador on the Southwest, East of the Pacific Ocean and touching Panama and the Caribbean Sea, Colombia is a prime location that can see an influx of climate migration as global warming rises. Although climate migration approximations cannot precisely define where people will move considering the multiplicity of factors that affect these decisions, they certainly emphasize the urgency to address displacement and the responsibility to accommodate the growing rates of urbanization with proper housing, sanitation, infrastructure, and accessibility.

Like many other countries, Colombia has a known history of internal displacement due to external forces and in recent years, due to the rise in international displacement, mainly pertaining Venezuela, Colombia was the second major hosting

country in the world receiving about 1.8 million people¹¹. The landscape, depending on the context is one of the main factors that determines where self-built communities develop. For instance, in Bogota, the capital of Colombia, this natural pattern follows a north/south orientation, in Rio de Janeiro and Caracas, pockets of poverty can be found throughout the city directly adjacent to luxurious zones, and in Medellín there is a “thick ring of poverty” that wraps around the hills of the Aburra valley¹² while the core of the city sits on both sides of the river in the valley.

¹¹ Refugees, “Figures at a Glance.”

¹² Luisa Sotomayor, “Dealing with Dangerous Spaces: The Construction of Urban Policy in Medellín,” *Latin American Perspectives* 44, no. 2 (2017): 71–90.

Chapter 3: Resilient Communities

Informal settlements

“Informal settlements” are [communities] that are born out of necessity, with limited resources, and often under unsafe conditions. Nonetheless, overtime, as people continue to progress in their lives, they are able to make their homes more permanent. The people that make up these communities are creative, resilient, hard-working individuals in search of access to basic resources, better economic or professional opportunities, access to education, cultural integration, broadly, in search of quality-of-life improvements. Each person holds a different story about where they come from, what the journey has been, the hardships they have encountered, the skills they have developed and the goals they intend to pursue. Some may have been displaced due to climate change or violence, or some may have been driven by personal choices or the choices of those in charge. All have been brave to leave the life they have always known with the hope of a different future for themselves or for their families. Restarting from scratch in a new place usually involves a degree of financial instability, a cultural or emotional impact, a search for belonging and a geographical distance to the past.

As global urbanization, migration, and displacement all continue to grow, the infrastructural capacity of larger cities has been unable to accommodate the basic needs of the population. Recent global estimates suggest that about one in three people in urban areas lived in slums at some point, and one in eight people live in

slums today¹³. However, it is important to note that the definition of informality varies around the world, depending on the context, and therefore, the measurement metrics can only provide a suggestive overview of reality. These differences will be illustrated later in this chapter through examples of slum living conditions around the world. “Slum household” as a metric defined by the UN-HABITAT, helps measure wellbeing and living standards, it is outlined as a “group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, and durability of housing”¹⁴. This elaborates on the wide and varied range of informal conditions, even within this metric definition and closely correlated to the context, the degree of access, and origin of perspective. Additionally, there are multiple terms used to refer to the same occurrence, “informal settlements”, “slums”, “shanty homes”, “self-built neighborhoods”. Some more problematic than others, considering the negative connotations that further disseminate the stigma toward poverty and magnify the gap between socioeconomic statuses. Negative labels fail to recognize that the impact they have on people’s identities as they battle to integrate into an unfamiliar setting. Nonetheless, informal settlements are the most common form of urbanization in the planet¹⁵. As such, the processes behind “informal city making” are key to understanding the potential of development and innovation of a city and the direction where design efforts should be headed. As a matter of fact, it is expected that within

¹³ Julius Mwelu, “Slum Almanac 2015/2016 Tracking Improvement in the Lives of Slum Dwellers,” *UN Habitat*, 2015, 98; Samper, Shelby, and Behary, “The Paradox of Informal Settlements Revealed in an ATLAS of Informality.”

¹⁴ Ritchie and Roser, “Urbanization.”

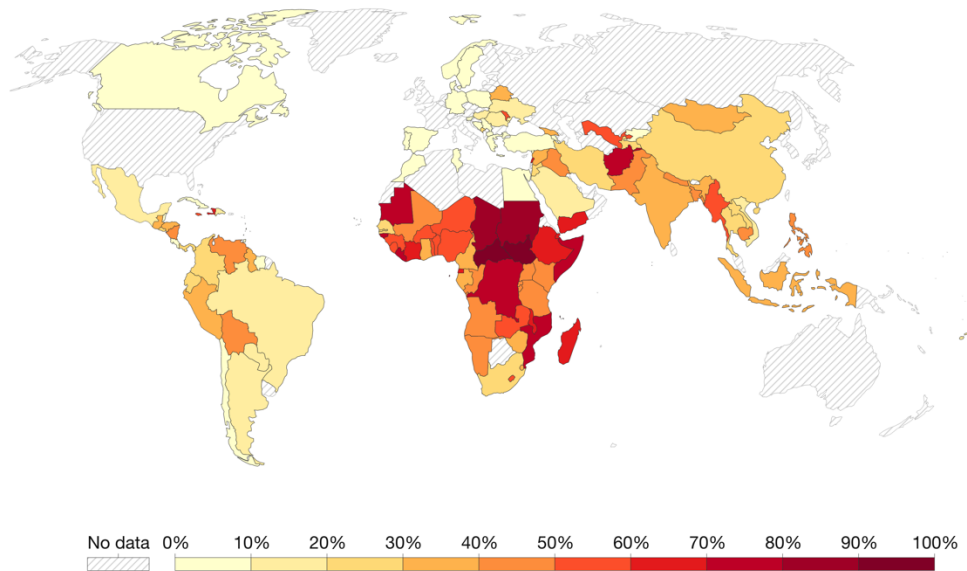
¹⁵ Samper, Shelby, and Behary, “The Paradox of Informal Settlements Revealed in an ATLAS of Informality.”

the next three decades, up to three billion people will live in informal urban environments¹⁶, and even though self-built communities worldwide hold different degrees of informality and legitimacy, they are at the forefront of the most pressing issues society will continue to face in the future.

Share of urban population living in slums, 2018

A slum household is defined as a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, and durability of housing.

Our World
in Data



Source: UN-HABITAT (via World Bank)

OurWorldInData.org/urbanization • CC BY

Figure 5 Population living in slums in 2018 (OWID)

Embracing informality

While at first homes may be built from scraps and wood, they grow into permanence with bricks and concrete. The basic unit is one that allows for future growth so that as the families grow, they can add one more living quarter on top, or

¹⁶ Samper, Shelby, and Behary.

rent a space in the house, or even set up their own business at the street level, while the top becomes residential. It's this modularity that allows a home to grow with time and allows the people that live in it to adapt their space based on their own resources.

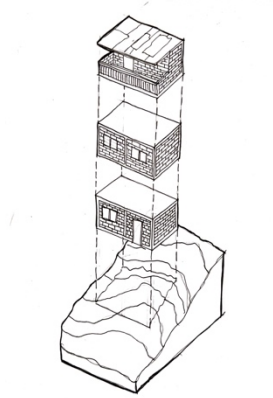


Figure 6 The basic living unit (drawing by Author)

Balconies, overhangs, exposed outdoor stairs are common elements of this typology of flexible, multipurpose, organically adaptive living quarters. A separation from the term “informal” and any connotations of temporariness attached to it, to one of permanence that acknowledges the “self-built” nature of this global phenomenon that is born out of necessity. “Self-built” communities are in place to stay, and cities must embrace and support them. It's essential to recognize their inhabitants as experts of their own living conditions to truly understand in what ways to support them.

“Slums” may lack access to one or more of the various resources mentioned at the beginning of this chapter, but most importantly, these communities are resilient and creative communities that find their own ways to access anything they lack, they are communities that deserve as much care and attention as any other, they must be at the front and center of planning and design considering the urgency of their needs and potential they have. Informality can be defined in multiple ways that are directly

dependent upon the context and the origin of the perspective, but ignoring their permanence further disseminates the disconnect between planning and design. Bridging that gap is vital as it directly impacts the daily lives of large portions of the population worldwide.

Chapter 4: Assessing Quality of Life

Poverty

Informality develops in situations where people cannot afford to live in the formal housing conditions available near agglomerations of jobs. When the options are limited and the cost of living is high, people have to accommodate to the options they can afford. In some cases, this means living further away from city centers, or in overcrowded conditions. Similarly to “slum household” metrics, poverty is also measured using a variety of determinants. The international definition of poverty is living below \$1.90 a day¹⁷, however the data and charts for 2019 considered the poverty line to be \$2.15¹⁸. While this value is adjusted to provide a worldwide baseline, what it means to live in poverty varies depending on the context. According to the United Nations Sustainable Development Goals (SDG) and the Johannesburg Plan of implementation, the most pressing global challenge facing the world today is poverty eradication¹⁹. Poverty is at the root foundation of all the challenges for development that humanity faces. SDG number 1 aims to eradicate poverty by “providing universal access to basic social services; improving access to sustainable livelihoods, entrepreneurial opportunities and productive resources; empowering people living in poverty and their organizations; progressively developing social protection systems to support those who cannot support themselves; addressing the disproportionate impact of poverty on women; working with interested donors and

¹⁷ Ritchie and Roser, “Urbanization.”

¹⁸ Ritchie and Roser.

¹⁹ “Poverty Eradication | Department of Economic and Social Affairs,” accessed November 10, 2022, <https://sdgs.un.org/topics/poverty-eradication>.

recipients to allocate increased shares of ODA to poverty eradication; and intensifying international cooperation for poverty eradication”²⁰. Achieving these goals in all countries of the world is challenging considering the variables and how success is determined. The global multidimensional poverty index (MPI) is used to measure progress on Sustainable Development Goal number 1. It expands the definition beyond monetary means to include the lived realities and scarcities people face within a range from 0 to 1, where higher values imply higher poverty²¹. The World Bank also expands their definition of poverty through their goal to “reduce poverty and increase shared prosperity”, where the shared prosperity targets “fostering the well-being of the bottom 40% of the population of every country”²². For far too long, living under poverty has implied the lack of one or multiple basic resources, but beyond the living quarters, it also implied living far away from educational centers, parks, sports facilities, and multiple other resources that are essential to basic living conditions beyond the home. However, regardless of anyone’s living conditions, shouldn’t public spaces be easily accessible for all? When it comes to “self-built” communities, acknowledging that this are constantly changing and situating into permanence, access to basic living needs such as potable water, sewage systems, electricity/internet, between others, the proximity to places of learning, job development, sports, health, and recreation should become the more accessible as well.

²⁰ “Poverty Eradication | Department of Economic and Social Affairs.”

²¹ UNDP (United Nations Development Programme), “2020 Global Multidimensional Poverty Index (MPI),” *UNDP (United Nations Development Programme)*, 2020, <http://hdr.undp.org/en/2020-MPI>.

²² Dean Jolliffe et al., eds., *A Measured Approach to Ending Poverty and Boosting Shared Prosperity: Concepts, Data, and the Twin Goals*, Policy Research Report (Washington, DC: World Bank Group, 2015).

Poverty in Colombia

When it comes to poverty, according to the international poverty line of \$2.15 per day, 5.28% of the Colombian population was living under extreme poverty, it jumped to 10.82% on 2020 as impacted by the pandemic, but according to the national poverty line 42.5 % of the population lives in poverty²³.

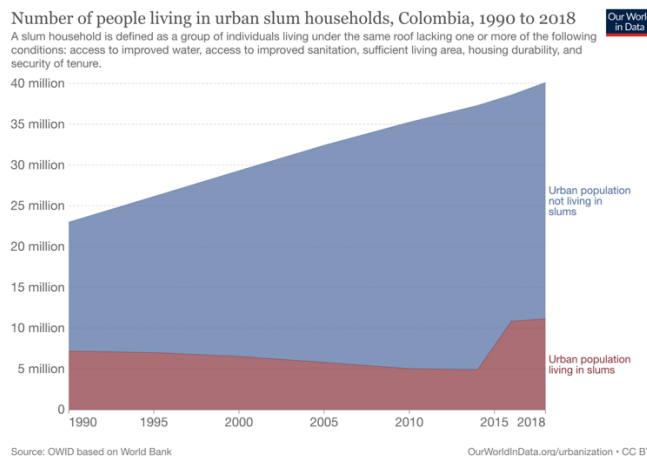


Figure 7 Number of people living in slum households in Colombia over time (OWID)

The MPI value for 2015/2016 was 0.020 or 4.8%²⁴. The GINI index is 54.2, which indicates a high level of income inequality²⁵. The case of Colombia illustrates the complexity of global goals, how the data can be interpreted, and the need for holistic approaches that address the well-being of low-to-middle class populations beyond the income numbers. Quality of life goes beyond housing; it requires access to basic living standards that include drinking water, sanitation, electricity, and cooking fuel; it also requires appropriate access to health services and education; and

²³ Ritchie and Roser, “Urbanization.”

²⁴ UNDP (United Nations Development Programme), “2020 Global Multidimensional Poverty Index (MPI).”

²⁵ “Gini Index - Colombia | Data,” accessed November 13, 2022, <https://data.worldbank.org/indicator/SI.POV.GINI?end=2020&locations=CO&start=1992&view=map>.

it extends to cultural and civic engagement. According to The World bank, Colombia has had 100% electricity access in 2020, 73% of the population has access to clean water, 8.8% of the population does not receive the minimum level of dietary energy consumption, the poverty rate went from 29% in 2019 to 38% in 2020 for the

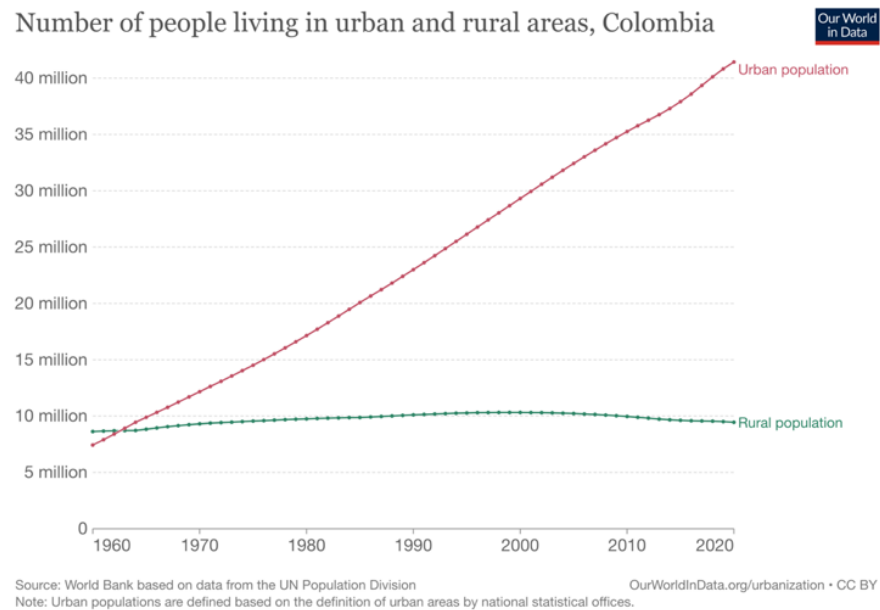


Figure 8 Rapid growth of urban areas illustrated (OWID)

population of almost 52 million people with a literacy rate of 96%²⁶. On the goal to eradicate poverty, according to the United Nations Development Program, Colombia is on track to halve its multidimensional index of poverty (MPI) by 2030²⁷. When it comes to density, Colombia's urban population for 2021 was 41,904,698, an increase of 1.14% from 2020, while the rural population for 2021 was 9,361,143, which saw a 0.96% decline from 2020²⁸.

²⁶ UNDP (United Nations Development Programme), "2020 Global Multidimensional Poverty Index (MPI)."

²⁷ UNDP (United Nations Development Programme).

²⁸ "Colombia Poverty Rate 1992-2022," accessed November 10, 2022, <https://www.macrotrends.net/countries/COL/colombia/poverty-rate>.

The life expectancy for Colombia in 2021 was 77.53 years, a 0.22% increase from 2020²⁹. These data markers corroborate that urban settings are growing and people are living longer, so the need for housing and accessibility to basic life necessities continues to grow. As illustrated below, these trends are representative of the worldwide trends as well.

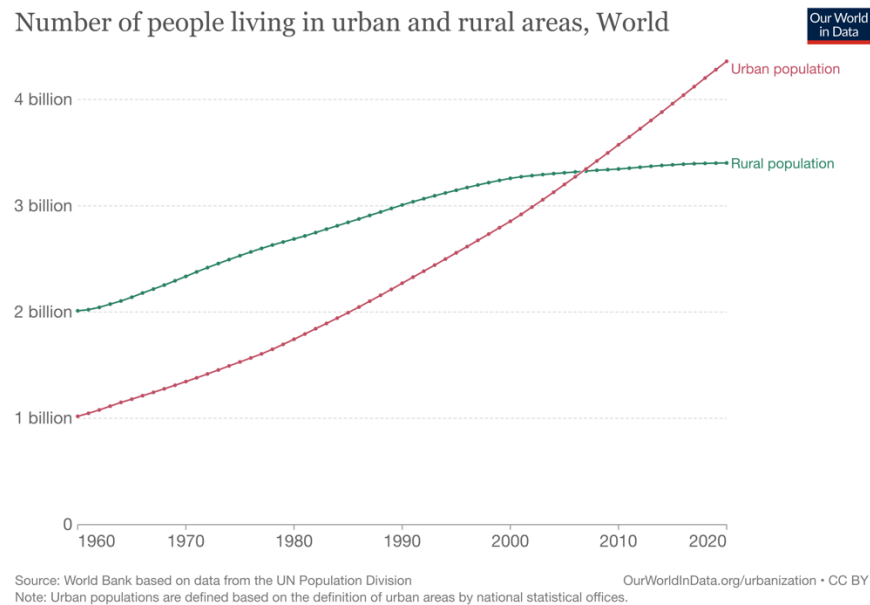


Figure 9 Urban growth worldwide (OWID)

²⁹ “Colombia Poverty Rate 1992-2022.”

Chapter 5: Medellín

The city of the Eternal Spring

The city of Medellín is located in the Aburra Valley, in a central region of the Andes Mountains in Colombia. It is divided into sixteen districts, called Comunas, and each district is composed of multiple neighborhoods (barrios).

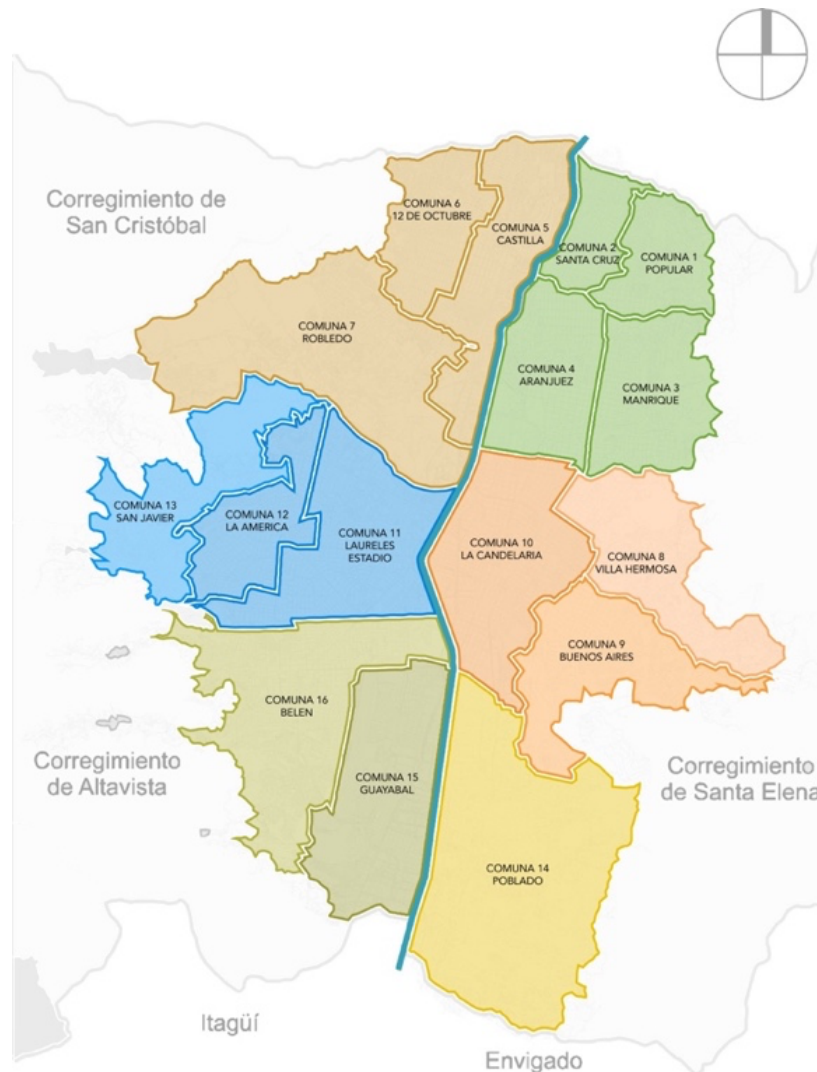


Figure 10 Diagram of regions and districts of Medellín (diagram by Author)

Known as The City of Eternal Spring for its pleasant warm climate year-round, with varying temperatures between 62 and 78 degrees.

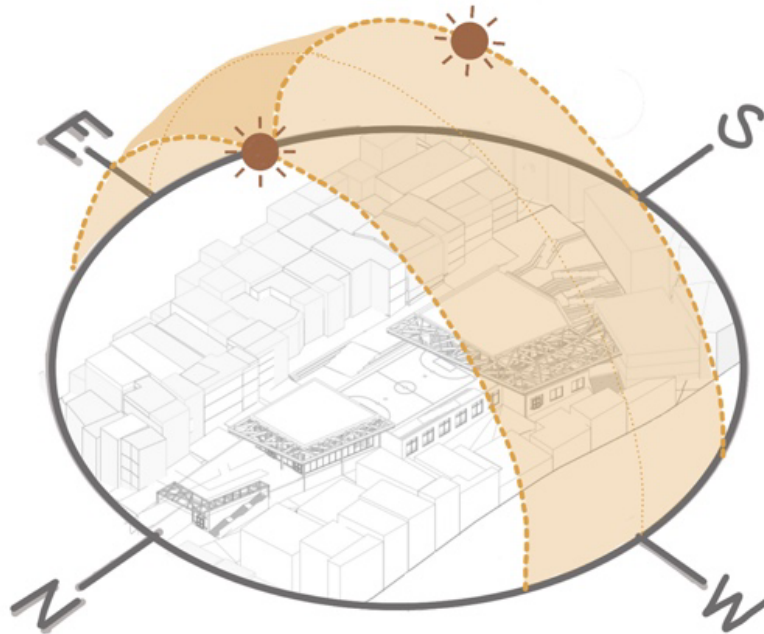


Figure 11 Sun Analysis (diagram by Author)

Medellin is the capital of the commercial flower growing and innovation district, and the epicenter of Colombia's textile industry³⁰. In a country heavily marked by a violent history as the world's largest cocaine producer³¹, it has undergone a drastic transformation. It's a place that has transformed its history and reshaped its future. Medellin acknowledges its history in many ways and turns it into the motivation to seek peace and equity for all. Although certain challenges continue to persist today, it

³⁰ Marcus Johnson, "Medellin Profile," International Trade Administration (US Department of Commerce, n.d.).

³¹ "Largest Producer of Cocaine (Country)," Guinness World Records, accessed December 12, 2022, <https://www.guinnessworldrecords.com/world-records/largest-cocaine-producing-country>.

is through planning, architecture and space that the city is constantly striving to improve the conditions of all its residents and visitors alike.

In the process, Medellin has been recognized as the “Most innovative city in the world” by the Wall Street Journal and Urban Land Institute, the “Resilient city” by the Rockefeller Foundation, both in 2013; in 2014 it was awarded “Best city to live in Latin America” by Indra; in 2015, Medellin won “Inter-American Award for Innovation in Effective Public Management” by The Organization of American States, as well as, “City with the best initiatives regarding sustainable mobility”, awarded by ICLEI Eco Mobility; In 2016 the city was awarded the “Lee Kuan Yew World City Prize” by Urban Redevelopment Authority Singapore, and the “Transformational City of the Year” by BRAVO Business Awards; and most recently, in 2017 UNESCO awarded "Medellin, a Learning City"³². The history behind these achievements is an approach of social urbanism that focuses on integrating the comunas to the city, based on the needs directly dictated by the community. This process involves multiple stakeholders that revolve around the community to make this possible. In Medellin, the innovation does not come from any out of the world technology, but rather from the creative solutions that are design with people for people. The key factor of social urbanism is that there is no one formula but rather a variety of factors that determine what needs to be prioritized, at a given time, in a given context.

³² Johnson, “Medellin Profile.”

Geographical and demographic context

The city extends from north to south along the valley to both sides of the Porce river. Medellin is the second largest city in Colombia after the capital, Bogota (Bogota's 2018 population was above 10.5 million). According to United Nations estimates, the population of Medellin in 2018 was almost 4 million, and it's projected to be above 4.3 million by 2030 at a growth rate of .8%³³. Some of the densest neighborhoods are in the northwest, northeast, central west and central east regions of the city.

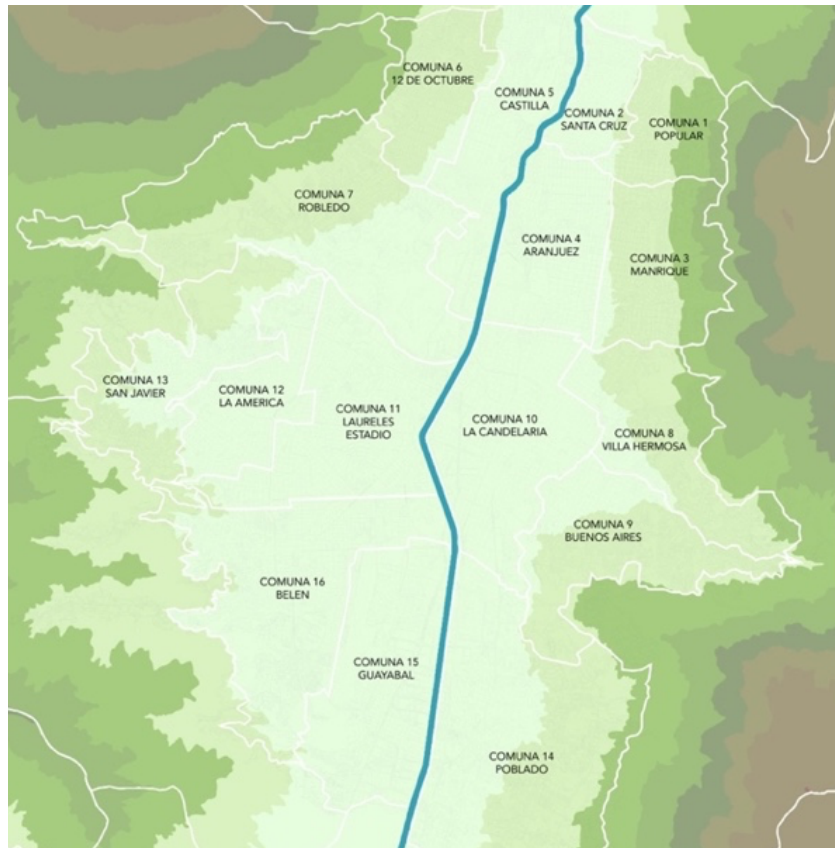


Figure 12 Topographical relationship of Comunas to the valley (diagram by Author)

³³ United Nations, *The World's Cities in 2018*, Statistical Papers - United Nations (Ser. A), Population and Vital Statistics Report (UN, 2016), <https://doi.org/10.18356/8519891f-en>.

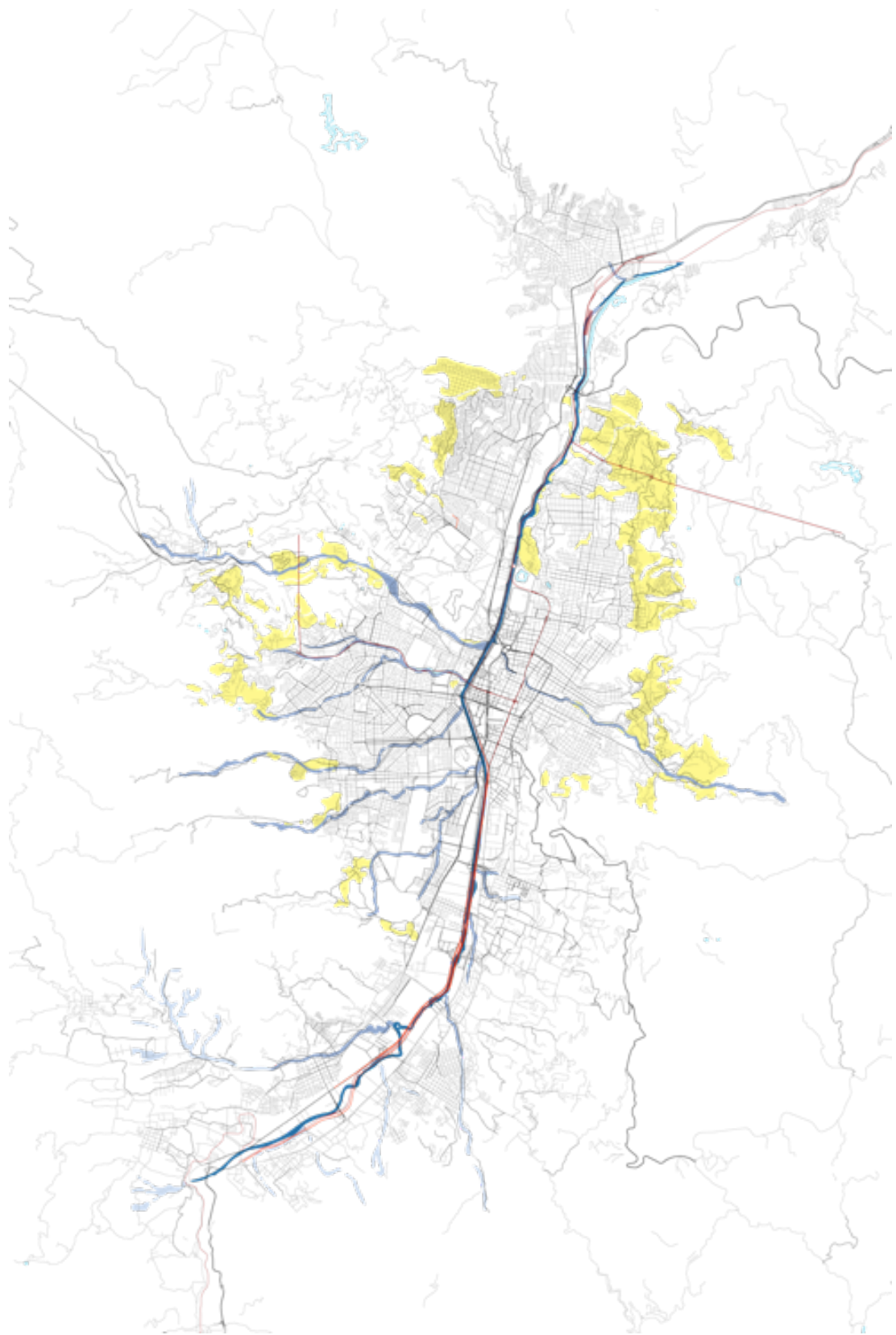


Figure 13 New Informal extensions in yellow (drawing by Author)

Historical context

A brief look at Colombia's history illustrates the direct impact to spatial and political fragmentation, and migration trends experienced today in Medellín.

Colombia declared its independence from Spain in 1810 and the multi-class Liberal and Conservative parties were formed with strong hereditary affiliations³⁴. Since then, multiple civil wars occurred between the two parties in the 19th century until 1902, where a period of peace reigned for about 50 years³⁵. In the 1940s and 50s, the civil war between the Liberal and Conservative party, called “la violencia” broke out as the liberal party lost the presidency and the Colombian liberal populist politician Jorge Gaitan was murdered in Bogota³⁶. The tension between the parties grew as the military was controlled by the conservatives, who armed peasant groups as paramilitary (semi-military or irregular) forces, and the Liberals formed guerilla groups in self-defense and retaliation³⁷. The war was mostly fought in the countryside in Colombia and therefore accelerated the mass migration to the larger cities, along with industrialization. Economically, Medellín has been at the core of industrialization for the country since the 1900s, it profited greatly from gold mining and coffee production³⁸. The rapid growth and tensions between political parties

³⁴ Catherine C. LeGRAND, “The Colombian Crisis in Historical Perspective,” *Canadian Journal of Latin American and Caribbean Studies / Revue Canadienne Des Études Latino-Américaines et Caraïbes* 28, no. 55/56 (2003): 165–209.

³⁵ LeGRAND.

³⁶ LeGRAND, 172; John Betancur, “Regularization of Informal Settlements in Medellín, Colombia,” *Global Urban Development Magazine*, accessed November 13, 2022, <https://www.globalurban.org/GUDMag07Vol3Iss1/Betancur.htm>.

³⁷ LeGRAND, “The Colombian Crisis in Historical Perspective.”

³⁸ Betancur, “Regularization of Informal Settlements in Medellín, Colombia.”

established the city as a central hub for migration due to the concentration of jobs, education, opportunities, and the pursue for shelter from violence in the northwest region of Colombia at the time. In an attempt to cease violence, the two political parties decided to come together to make peace through a pact known as the National Front (Frente Nacional), where the political parties would alternate the presidency for the next 15 years, and in this false sense of democracy, the central government had a weak presence in large areas of the country as well as young settlements³⁹.

In the 1960s, inspired by the Cuban revolutions' guerilla tactics as well as the local foundations from La Violencia, two prevailing guerillas emerged, The National Liberation Army (Ejército de Liberación Nacional, or ELN) and the Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia or FARC)⁴⁰. They operate indifferently of one another and have their own processes with the government, in separate territories of the country. FARC, the oldest guerilla army in Latin America with a heavy communist influence from the 1920s, set roots in the coffee regions in the eastern and central mountain ranges in response to official violence and military oppression⁴¹; coincidently these lands were suitable for growing coca leaves, corrupting the initially political values of the FARC into a self-funded, violent business of control and power. The illicit armed forces maintained and expanded their power taking advantage of the ambiguous state presence; establishing themselves as local authority; profiting from the growing demand of marijuana in the 70s and from cocaine in the 80s from the US; taxing all profitable activities of

³⁹ LeGRAND, "The Colombian Crisis in Historical Perspective."

⁴⁰ LeGRAND.

⁴¹ LeGRAND.

farmers; terrorizing the country with kidnappings, infrastructural disruptions; attacks to basic service supplies, between others in demand for ransom money or political representation⁴². In the meantime, drug lords from humble origins emerged as entrepreneurs to respond to the international demand for drugs, in search of “social and economic mobility”, and as their fortune grew, they began investing their profits back into the country in the 1980s⁴³. The wealth created by the narcotraffickers caught the attention of the guerrillas as valuable sources of income from kidnappings, forcing the drug lords to create their own guerillas to protect their families and fight back⁴⁴, unraveling a battle over territory and power that displaced thousands of civilians from rural lands. At the turn of the century, the Colombian military was strengthened by US equipment and training to combat narcotraffic through President Uribe’s 2002 civilian militias, rehabilitation zones, aerial fumigation drugs⁴⁵. The violent battle over economic resources and political order heavily impacted lower income communities throughout the country as vulnerable victims from violence, lack of state protection and access to basic human rights, and recruitment and taxation from illicit forces, a history of pain that over the last 20 years, Medellin has resiliently been working to transform through social urbanism strategies.

⁴² LeGRAND.

⁴³ LeGRAND.

⁴⁴ LeGRAND.

⁴⁵ LeGRAND.

Geographic Profile

The Comuna 13, also known as San Javier is a 742-hectare⁴⁶ or about 2.7 square mile area of unstable soil⁴⁷ located on the steep central-west hillsides of the valley of Aburra. Bordered by the Comuna 7, Robledo, to the north; and comunas 11 and 12, Laureles-Estadio and La America respectively, to the east⁴⁸; the district is bounded by the corregimiento of San Cristobal to the west and Altavista to the west and south. Within Comuna 13, there are 19 barrios or neighborhoods: El Pesebre, Blanquizal, Santa Rosa de Lima, Los Alcázares, Metropolitano, La Pradera, Juan XXIII – La Quiebra, San Javier No. 1, San Javier No. 2, Veinte de Julio, Belencito, Betania, El Corazón, Las Independencias, Nuevos Conquistadores, El Salado, Eduardo Santos, Antonio Nariño and El Socorro. The neighborhoods are composed of almost 50,000 households ranging in socio-economic levels 1 through 4⁴⁹ for a population of almost 140,000 people⁵⁰.

⁴⁶ sebasweb, “La comuna 13, un libro vivo,” *Vivir en El Poblado* (blog), June 4, 2015, <https://vivirenelpoblado.com/la-comuna-13-un-libro-vivo/>.

⁴⁷ Sotomayor, “Dealing with Dangerous Spaces.”

⁴⁸ Esteban Fernández Vázquez and Fernando Rubiera Morollón, *Defining the Spatial Scale in Modern Regional Analysis: New Challenges from Data at Local Level* (Springer Science & Business Media, 2013).

⁴⁹ sebasweb, “La comuna 13, un libro vivo.”

⁵⁰ Sotomayor, “Dealing with Dangerous Spaces.”

Timeline

Over the last 50 years, since the establishment of Comuna 13, urban policy methods have shifted within three relative phases. Beginning with a “thin state presence” of exclusionary policies and distant interventions between 1978 and 2002; through a violent battle of control of the territory through military and paramilitary forces between 2000 and 2003; to a social urbanism approach to build up participatory planning and increased accessibility to resources between 2004 and 2011⁵¹. There are multiple political, geographic, economical, and cultural factors, between others, that have plotted the organic development of the district and are essential to understanding the current conditions to identify opportunities and challenges.

The socio-spatial history of the Comuna 13 is reflective of the political, economic, and geographically fragmented history of Colombia on a local and regional level. It is important to note that almost half of the population of Medellín lives in neighborhoods that started as informal settlements and have reached varying degrees of consolidation over time⁵² and this form of development is most common form of urbanization in the world⁵³. In the context of Medellín, the neighboring districts of Comunas 11 and 12 that are located on the planar areas of the valley, were formally planned, and designed. Comuna 11, for instance, was master planned with influence of the Garden City movement for affluent individuals, while Comuna 12 was designed as a working-class community; though the economic class of these districts

⁵¹ Sotomayor.

⁵² Sotomayor.

⁵³ Samper, Shelby, and Behary, “The Paradox of Informal Settlements Revealed in an ATLAS of Informality.”

varies from middle to upper class, they have been successfully sustained overtime largely due to their geographical location⁵⁴. The steep hillsides of the Andes Mountain crest were the only remaining spaces where displaced individuals could land.

Comuna 13 started developing around the 1970s as “Latin America’s largest land invasion”, with about 5000 households that were built on rugged hills with steep slopes over a period of about five years⁵⁵. For the most part, Medellín’s lower-class neighborhoods are located on the hill sides. This pattern is caused by geographical and socio-political conditions of the history of the city. On the steep topography on this area of the Andes Mountain crest of the western chain of the valley, most of the land where the Comuna 13 sits is prone to landslides and natural disasters. Within the early planning and development practices in Colombia that followed the 1886 constitution guiding the government to implement “noninterventionist” approaches, this land was categorized as “non-recoverable high-risk zones” that are not suitable for “human settlement”, therefore the state and the local government were prohibited from providing roads, infrastructure, and public services⁵⁶ to avoid housing from developing in the area. However, due to the displacement from the gentrification of the city center, population growth, and the violence of the armed conflict in the rural areas, people had no choice but to make a place for themselves in the peripheries of the city and the urban borders of the rural land. In the late 20th century, politicians would campaign through false or unrealistic promises to expand access to services in

⁵⁴ Sotomayor, “Dealing with Dangerous Spaces,” 72.

⁵⁵ Sotomayor, “Dealing with Dangerous Spaces.”

⁵⁶ Sotomayor.

these areas. This resulted in the growth of extensive territories outside of legal codes or master planning regulations and accentuating profound socio-spatial injustices⁵⁷. At the beginning, people built the early forms of their homes as shacks on the bare soil. There are five major types of risks the community had to learn to cope with under these conditions: failure to meet basic daily subsistence conditions; constant impact of natural disasters; the relentless threat of eviction; incarceration, criminalization, and police brutality; violent conflicts with neighbors and insecurity.

Violence in the community originated from multiple sources. In one hand, within this initial phase of urban planning for Comuna 13, while the state failed to guarantee basic rights and security for the citizens, the authorities also had the power to practice “violent attempts eviction”, approaching displaced populations as criminals and perpetuating an unjust stigmatization of the residents of the hill sides as “invaders”⁵⁸ that has caused decades of damage and trauma evident in the community today. On the other hand, fueled by the marginalization, poverty and unemployment, youth gangs organized in the early 1980s. By 1986 and until 1998, the leftist urban militia, Comandos Armados del Pueblo or United Commandos of the People (CAP) had claimed control over the territory, gaining local recognition as authority in the midst’s of the proliferation of illicit drug dealing⁵⁹. Considering the state presence in this area was already weak, around 1991, Medellin was considered the most violent city in the world with a daily average of “19 violent deaths and 433 per 100,000 inhabitant murder rates”⁶⁰, the territory was completely off limits to the police and youth gang

⁵⁷ Sotomayor.

⁵⁸ Sotomayor.

⁵⁹ Sotomayor.

⁶⁰ Sotomayor.

recruitment was nearly impossible to avoid. The location of the Comuna, provided criminals a quick and easy gateway in and out of the city to carry out criminal behaviors without being noticed, catching the attention of major paramilitary groups such as the FARC, ELN, and further igniting the quest for control of the territory between 1998 and 2002⁶¹. The severity of the situation alarmed the local, regional, metropolitan, and even international influences to seek solutions considering the humanitarian, political and economic pressures at play.

The following phase, between 2000 and 2003, was one of failed peace treaties, social and participatory initiatives, and military operations in attempts to stop the FARC and other paramilitary forces from relentlessly continuing to terrorizing the country. The mayor of Medellin at the time, Luis Perez, enforced “sweeping by army force” operations in response to the failure of peace agreements and rising violence, but it wasn’t until Alvaro Uribe was elected president in 2002, decreeing “civil rights restrictions and increased power for public armed forces” that Perez had the opportunity to launch Operacion Orion (Orion Operation).⁶² Operacion Orion was a four-day operation where 1500 troopers of combined forces on foot, in tanks and from helicopters entered Comuna 13, marking a turning point for the community as a whole since the large operation affected over 100,000 people⁶³, following a period of intense surveillance. While the military operation in itself was considered a success, it was highly problematic in that it approached all residents of the Comuna as criminals and multiple innocent people lost their lives from false confessions and accusations,

⁶¹ Sotomayor; LeGRAND, “The Colombian Crisis in Historical Perspective.”

⁶² Sotomayor, “Dealing with Dangerous Spaces.”

⁶³ sebasweb, “La comuna 13, un libro vivo”; Sotomayor, “Dealing with Dangerous Spaces.”

unearthing a tense relationship of trauma and distrust between the authorities and the residents. All these factors contributed to the intensification of local advocates demanding social development programs, meaningful participation in urban planning decisions, and protection of human rights from the state⁶⁴ – a shout for comprehensive, bottom-up planning methods.

This paradigm shift in planning demanded for sustainable long term solutions to the problems that had been marginalizing the community for ages. It began with a resident organized political movement called Movimiento Compromiso Ciudadano or Citizen Commitment Movement (MCC) that elected Mayor Sergio Fajardo, a journalist that focused on the demand for social urbanism between 2004 and 2011; and Mayor Alonzo Salazar, a social researcher to continue to urban reform required⁶⁵ further explored in the next chapter.

⁶⁴ Sotomayor, “Dealing with Dangerous Spaces.”

⁶⁵ Sotomayor.

Transformation from the ground-up

In the period between 2004 and 2011, a history of broken political promises started to change drastically rooted in grassroots efforts where the community, as experts of their own conditions have an active participation in the planning and development of their community. These efforts began long before the military interventions of 2002. As a matter of fact, the Consejo Comunitario de Desarrollo Integral or Community Counsel of Integral Development (CCDI) developed a diagnosis of the Zone 4, which encompasses Central-West Medellin to assess the state of the community between 1997 and 1999; a plan that was updated in 2003 by the Asociacion Latinoamericana de Cooperacion Internacional or Latin American Association of International Cooperation (ALCI) and the Secretary of Social Development of the Alcaldia de Medellin⁶⁶. These are some examples of a period of “NGOsation” that flourished within a progressive government as a tool for community organizers to advocate for a new political rationality in the local administration that empowers “social urbanism logics and capacities”⁶⁷. These efforts led to the development of the Plan de Desarrollo local or Local Development Plan (LDP) between 2006 and 2007⁶⁸ specific to Comuna 13, the product of a five-phase process that allowed the community to identify and express their lived realities through assets and opportunities. The development and implementation of the plan is part of a complex iteration of urban interventions that is constantly revised and

⁶⁶ Sotomayor.

⁶⁷ Sotomayor.

⁶⁸ Sotomayor.

adjusted to better serve the changing conditions of the community and adapt as a living organism.

In accordance with the PDL efforts, Mayor Fajardo marked an important political shift in urban planning for Medellín advocating for the importance of development tools to restore justice, equity, and inclusion; to “pay-back”⁶⁹ for the historical debt owed to marginalized people. These values took the form of *Proyectos Urbanos Integrales* or Integrated Urban Projects (PUI)⁷⁰ implemented in four zones of the city with a variety of infrastructural mobility interventions, educational facilities, public spaces, urban security strategies and local economic development initiatives. Between 2004 and 2007, \$158.5 million dollars and later between 2008 and 2011 up to \$217.5 million dollars⁷¹ were invested in services and programs that have been impactful to the quality of life of the residents, some projects more than others. Furthermore, Medellín’s programs allow 5% of the municipal budget to be allocated directly by local communities⁷². In this manner, the government acknowledges and understands that people have been able to build their own communities under very difficult circumstances and seeks to support the continuation of those efforts through bottom-up participatory planning programs.

⁶⁹ Sotomayor.

⁷⁰ “Alcaldía de Medellín,” Alcaldía de Medellín, accessed December 5, 2022, https://www.medellin.gov.co/es/programas-y-proyectos/?post_types=proyectos.

⁷¹ Sotomayor, “Dealing with Dangerous Spaces.”

⁷² Sotomayor.

In order to integrate informal settlements, the first step is to get to know the community and understand the underlying patterns they operate on. Communities are experts of their own conditions and to implement any type of project, they should play an important role in the process. PUIs are an important tool in the urban reform process, and they require strong political backing and commitment⁷³, along with the support of local organizations and the extensive community participation in the process of creative policy making.

An important step in the long-term sustainability of tools, such as, the PUIs and the PDL, is the constant revision and adjustment of the plan to adapt to changing conditions. The PDL has been revised in 2009/2010, and then again in 2017/2018⁷⁴. Through these revisions, the date of execution was shifted from 2020 to 2027 to incorporate the new changes. In addition, the 2017/2018 revision involved an extensive community engagement process to assess the progress and the course of action necessary.

Participatory Planning Component

The Plan de Desarrollo local or Local Development Plan (LDP) is organized in three chapters, the first one provides context for the process, methodology, and participatory planning procedure. The second chapter establishes the actual development plan through a strategy that designates objectives, visions principles and

⁷³ Luisa Sotomayor, “Dealing with Dangerous Spaces: The Construction of Urban Policy in Medellín,” *Latin American Perspectives* 44, no. 2 (2017): 71–90.

⁷⁴ Ana María Bermúdez Rivera and Julieth Viviana Marín Zapata, “Juan Carlos García Aristizábal,” n.d., 251.

focuses, it incorporates historic and geographic aspects of the territory and integrates population data along with quality-of-life measurements⁷⁵. For each of the 17 topics, it consolidates the original plan with new actionable items and ideas based on the most pressing issues identified by community members. In this process, its important to involve a considerable, extensive, and inclusive range of participants to avoid single perspective projects. Finally, the third chapter brings together the territorial and communitarian proposal with clear articulation of next steps that launch the strategic plan. The goal of the development plan is to generate significant changes for the community, inspire new project and ventures for development to empower the existing community assets⁷⁶.

Key stake holders

The key stakeholders in the development of the PDL are: the municipal administration, the juntas administradoras municipales, the Consejos comunalesy corregimentales de planeaccion, Organizaciones Sociales or social organizations, and most importantly, the community. The plan is supported by the planning department – plan de Desarrollo local⁷⁷. The ability to understand the living realities of people is at the forefront of the plan and is the key to develop solutions to improve the quality of life of all.

⁷⁵ Rivera and Zapata, “Juan Carlos García Aristizábal.”

⁷⁶ sebasweb, “La comuna 13, un libro vivo.”

⁷⁷ Rivera and Zapata, “Juan Carlos García Aristizábal.”

Methodology

The community engagement process took place over a 10 month period with active participation of la junta administradora local (JAL) el consejo communal de planeacion (CCP) as well as diverse groups, organizations, leaders, and residents of the territory. The 2017-18 actualization process involved a participatory strategy regarding 17 topics and 10 population groups for a total of 27 components. This process emphasized the importance of highlighting the existing community asset.

Chapter 6: Site Selection

Potential Sites

Through the site selection process, I have analyzed data regarding 4 regions of the city of Medellin. For each, I have identified what comunas are a part of them and compared some general data as an overview of the current conditions. The data includes population size, quality of life index, socio-economic status, housing, public service coverage, transportation, employment, and safety. From this data, assets and needs across these communities stand out as opportunities that would define the program of this thesis. For instance, comunas 1 and 10, have the highest unemployment rates recorded, therefore a training facility that includes access to technology and professional development may be beneficial in either of these. From the perspective of food insecurity, comunas such as 1 and 6 would benefit from community gardens where citizens learn and crop their own food. As an opportunity for sports facilities and recreation, Comuna 6 may be the best candidate considering that education, recreation, and employment were 3 areas identified as dimensions that have not seen much improvement in recent years. Comuna 13 has been stigmatized as dangerous and unruly through a history of marginalizing urban planning and political designations. The community engagement process and the efforts to build, for the first time in its history, a good relationship with authority, stands out as the most impactful opportunity to learn from considering the multiple troubled histories that have taken place all around the world. therefore, I have chosen four sites in Comuna 13 as the possible setting for this project.

Parque San Javier

Located right across the street from the San Javier II metro and cable car station, this site is in a mainly residential area, with a relatively flat topography that has been identified by the city as a site for future project development. It is currently an empty lot where people have set up informal tents for their businesses.



Figure 15 San Javier Park Site Option (drawings by Author; google earth collection)

Cancha Las Perillas

Informal this site is located where the formal, semi-formal and informal processes of development meet. The site is quite steep and it is located in a mainly residential area, away from the business of the sites that are closer to transit hubs.



Figure 16 Cancha Las Perillas Site Option (drawings by Author, google earth collection)

Cancha de Futsal - selected.

Located down the street from the electrical stairs PUI project, this site offers a combination of opportunities to reach the community at different levels of the topography. It is currently a soccer field and a small children's park. It is characterized by the multiple graffiti murals that are characteristic of Comuna 13. This location marks the convergence of the regular city grid, with the organic pathways up the hill. Due to its proximity to the electrical stairs, it is a prime location for tourist to begin their tours of the community. It is a meeting point. This site is the convergence of visitors and locals, demanding the colocation of multiple services to serve the users of the space.



Figure 17 Cancha de Futsal Site Option (drawings by Author, google earth collection)

Chapter 7: Site Analysis

Overview

I visited the site in January of 2023 for a period of about 10 and visited chosen site multiple times throughout the week, in the early afternoon and the evening to observe the types of activities taking place. Due to its proximity to the electrical stairs, it is heavily transited by tourists and tour guides. The climate throughout the week was generally sunny with cloudy periods of showers that lasted no more than 3 hours per session. This site analysis encompasses a thorough observation and interaction with community members of different age groups to get an illustration of the life and culture in this community. In social urbanism projects, this portion of the process can and should take at least a year to maximize local participation and truly engage the community in the planning process and decision making of the projects that need to take place. This study explores this process at a smaller scale to determine the design driving factors for the project. It's important to recognize that while it is challenging to satisfy the needs of all individuals, specific themes can be synthesized from this process to capture as much as possible of the diverse needs of the community. It's important to remember that locals are the experts of their own conditions. In order for them to continue to take ownership of their space and its evolution, they need to be at the epicenter of the process. This culture of ownership of the space creates a network of respect and responsibility to maintain and care for the spaces in the community as their own.

Transportation

The site is accessible by metro, bus, taxi, or motorcycle and by foot, generally requiring a combination of 2 of these methods.

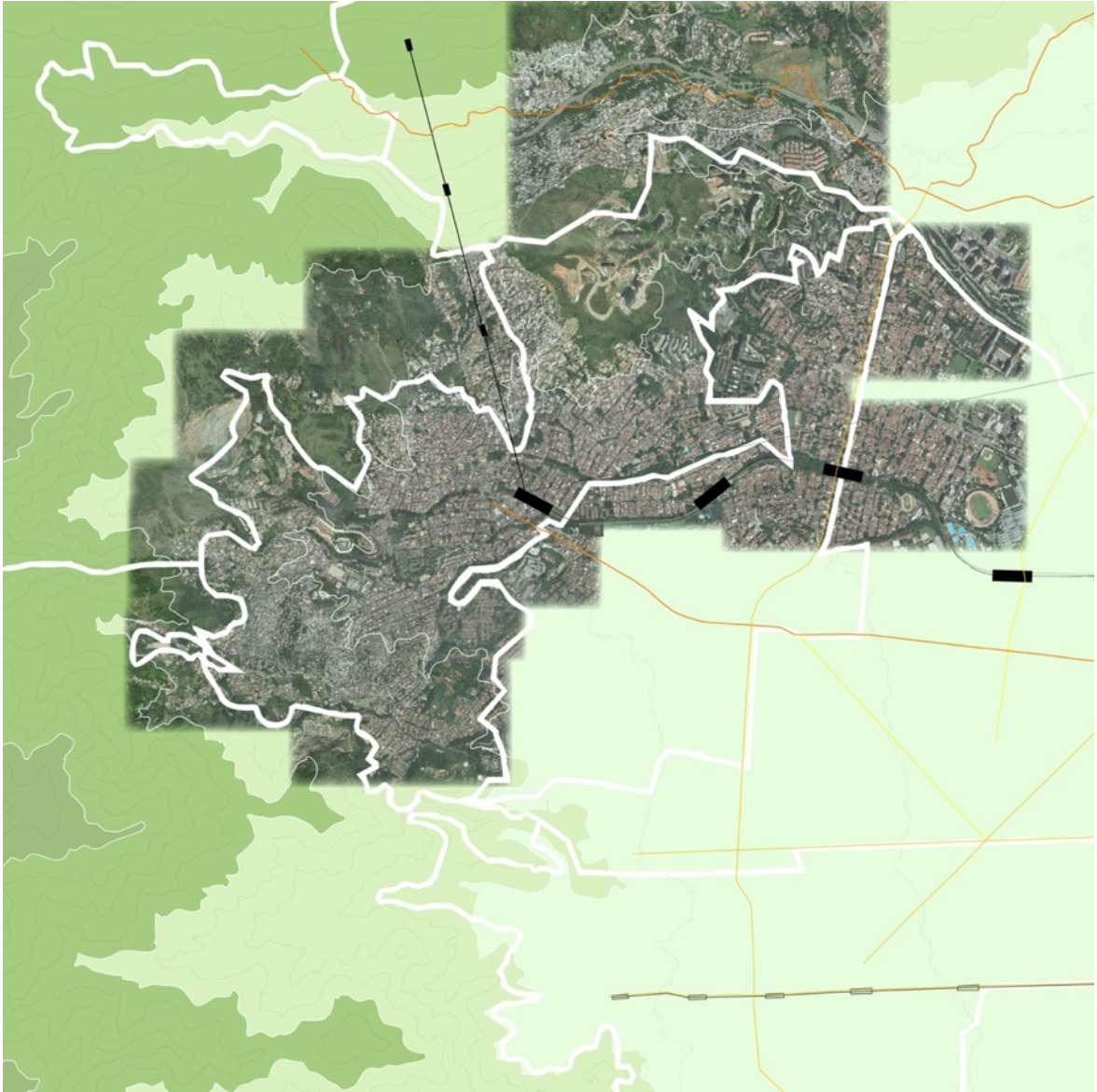


Figure 18 Comuna 13 –transportation to the comuna (drawing by Author)

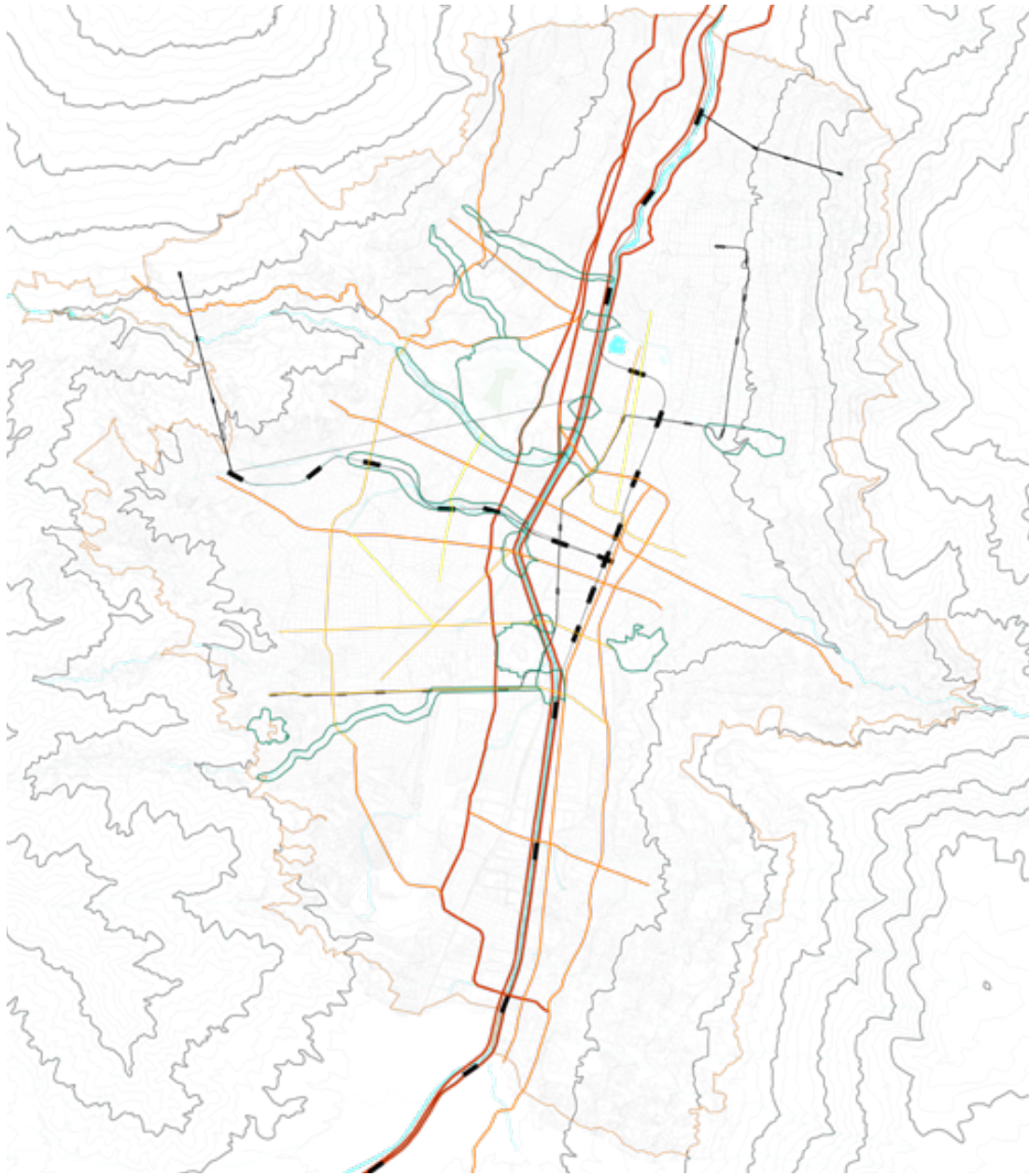


Figure 19 Public transportation of the city diagram (drawing by Author)

From the San Javier metro station, one can take a 10 min taxi/bus ride to arrive at the site. The metro is very well organized with signage. At this station, one can also take a metro cable to go up to San Cristobal. Local tour guides meet the tourists either at the metro station and ride the taxi/bus with the visitors or meet directly at the site. Both the taxi and the bus rides immerse oneself into the culture

from the beginning with friendly locals with stories or recommendations to share, as well as music and culture to indulge in. In addition, both of these vehicular methods of transportation cannot access the vehicular street next to the site as this one is only used for service vehicles for the community and pedestrians or local bikes.

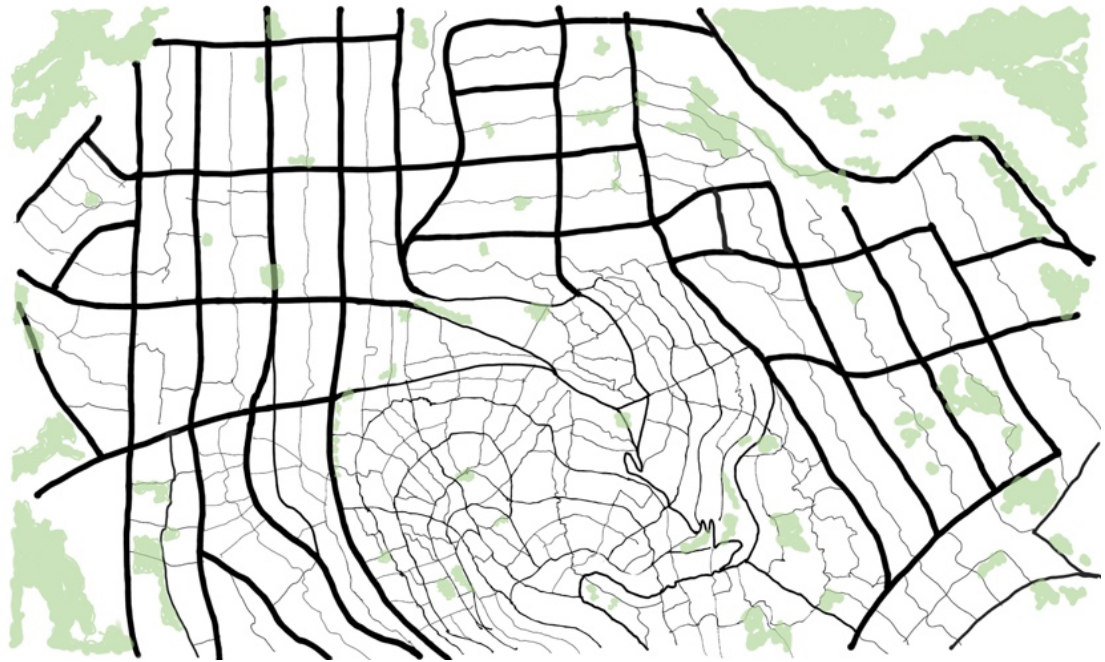


Figure 20 Street network (drawing by Author)

Site Location Observations

The selected site is a central location for San Javier. It is adjacent to the last vehicular road, as the roads beyond this point are only transited by foot, tuk tuk motorcycles, motorcycles and bikes. The complex network of streets is composed by homes that were “self-built” or built with local craftsmanship long ago, they are well connected to water, sewage and electricity networks and they are organic in nature, they have the potential to expand up to 4 levels in height if not already there. Although most of the land is already built on, there are some wider sections of some

streets that allow for multiple activities to occur. In general, all the spaces, nooks, crannies and anything in between is available to activity to take place. People take ownership of the street and set up their businesses with multiple craft stands for sale, food stands, and well as performance spaces for street artists to entertain the visitors.



Figure 21 Edges (drawing by Author)

The first level of almost all the homes is commercial space, including stores, restaurants, art galleries, bars, museums and more. The upper levels are sometimes part of the commercial activity and sometimes residential. Multiple rooftops are active activity spaces. there are some tree areas, but since most of the space is built up, there is little direct interaction with green space. Almost no wall is left blank as these are full of colors with vibrant murals. As one continues up the hill, the neighborhood becomes an intricate labyrinth where local knowledge is essential to find one's way, and if willing to explore the places is full of surprises with hidden resident art galleries, craft shops, restaurants and more.



Figure 22 Blocks (drawing by Author)

Local Elder observations

The elder in the community are found working the multiple crafts stands, stores, restaurants, etc. Often working from the stands set up at the ground level of their own residence. Those that are directly located on the transited pathways are welcoming and happy to share stories about how they put their own homes together, brick-by-brick, or how the hill used to be when houses were few and far between. They hold dearly painful stories of resilience through violent times, and they are proud to see and recognize the transformation of their community. As they walk through the community or when the tour guides bring visitors to them, they greet each other as family, they all know each other's stories and recognize the grains of sand that they have all contributed to their community. On the other hand, elders that live further up in the narrow streets of the hill expressed their wishes for more transits of people to go through different paths in the community so that all those home business shops could get more visitors as well.

Young Adult observations

Young Adults between the ages of 18 and 30 are often times the tour guides. Local tour guides are the best sources of information for authentic local experiences. They have lived through the history of transformation of the Comuna and have experienced first-hand the changes that have been brought about as the community and the government entities have embarked in this social urbanism journey. Some tour guides may have already acquired their professional card, a certificate of a three year program that trains them in the art of storytelling so that they are best prepared to communicate their history with visitors, and some may be in the process of getting it. The process requires hours of classes and hours of practice. The educational institutions are a bus ride away, but locals believe that closer satellite spaces where they can continue their education on site would be highly beneficial. Finding tour guides that speak English is difficult, hence why the supply and demand of this skill is highly profitable if acquired. Furthermore, local guides noted that larger companies that have a strong internet presence have seen the profitability of this service and have started to take over this locally born opportunity. A space that would allow locals to maintain control of this service would be beneficial both for the tourist that may be unsure where to find a local guide and well as the guides looking for customers. It appears the local tour guides organize themselves amongst each other to make sure they are bringing visitors to all the galleries and performances equally, so that the community as a whole has the opportunity to get some exposure. Their ability to coordinate amongst them and to “share the wealth” is fascinating, making it possible

for visitors to come multiple times, and ensuring they get a variety of different experiences every time.

Among the young adults, the other major group is that of the graffiti artists. They take the city as their canvas, and take all the surfaces as opportunities to tell the story of the community through art. These talented individuals are self-funded, but their commitment to the community ensures all murals stay fresh and are retouched every 1 to 3 years, depending on how quickly they can make the money to buy their painting materials. Their income comes mainly from their art galleries, where people can purchase pieces and merchandize. They organize themselves and respect each other's space to make sure no mural is vandalized, but rather work together to create collaborations once a mural starts to wear down. Since the murals are the canvas for their story and culture, artists are in close contact with tour guides to ensure the tour guides have the most up to date descriptions of the art to share with the public.

Youth Observations

The youth spend their time near the futsal field, waiting for an opportunity to play. They are very smart and through their exposure with visitors have quickly picked up a few words in multiple languages to engage with people. Some of them have parents that are away at work all day or even parents that are in other cities while they stay at the care of relatives. A place where children can engage in more education, sportsmanship in a manner that allows them to stay on site to interact with the activities all around would be beneficial. The community is composed by multiple networks where everybody knows one another, and everyone helps keep an eye on the children.

Programming

Self-build community integration requires a holistic approach to people's lives. Ensuring a well-rounded livelihood that goes beyond meeting the basic human needs requires equipping and empowering individuals with the tools that can improve their quality of life. When it comes to the comunas in Medellin, the foundational aspects of housing and access to basic services such as water and electricity has been established. In many of the communities, people built their own homes while the governing officials focused on improving the infrastructure and providing utilities. At the same time, multiple improvements to transportation connectivity have been implemented to create direct access within peripheral communities, and to/from the city center. Although multiple projects have drastically impacted some of the most pressing issues faced in Comunas, there is much room for improvement and continued integration.

Youth management as it is impacted by crime, violence, poverty, and many other societal problems has been a pressing concern for families and communities in the peripheries of the city, especially for Comuna 13. Over the last two decades, Medellin has been implementing a variety of programs and places to keep children busy and educated to create a positive impact. Through architecture, projects that provide engagement in sports, arts, culture, education, and community have helped reduce and reroute youth away from crime. The program of this thesis is directly defined and driven from the community's assets and needs. The wave of art and culture as method of engagement calls for a program that includes spaces that support those efforts. The community could benefit from access to spaces dedicated to arts

and culture, sports, performances, professional development. These departments include the following programmatic elements: digital labs, art studios, music studios, dance rooms, maker labs, woodshops, galleries, training classrooms, conference rooms, printing, entrepreneurship offices, employment resources, a café, soccer fields, gyms, playgrounds, lockers, an auditorium, a stage, a mezzanine level. Administrative and support spaces include, lobby, offices, information desk, and storage. The ultimate goal is to determine what type of program would best serve the community within their current context. The program should strive to improve the quality of life and accessibility to public services of its users.

Chapter 7: Design Integration

Landscape, life, and culture concept

The landscape are the natural conditions that determine what can generally be build and where. Its topographical orientation directly impacts the design, a major factor in locations with irregular lands to build on.

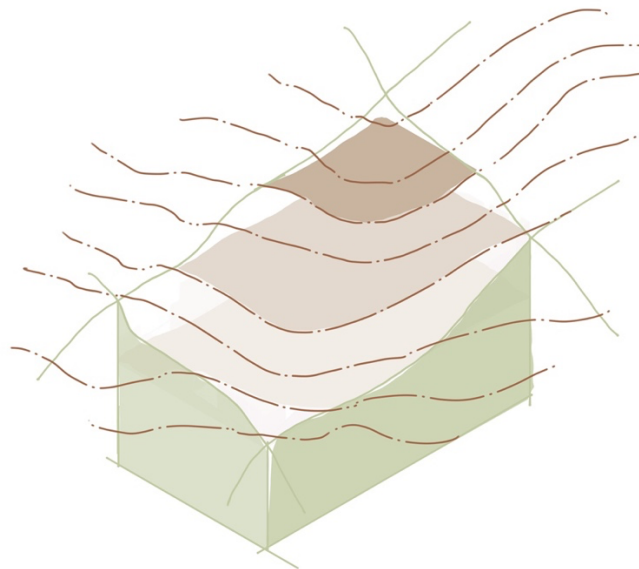


Figure 23 Natural landscape diagram (by Author)

Building efficiency begins with a compact layout prepared to respond to specific site conditions.

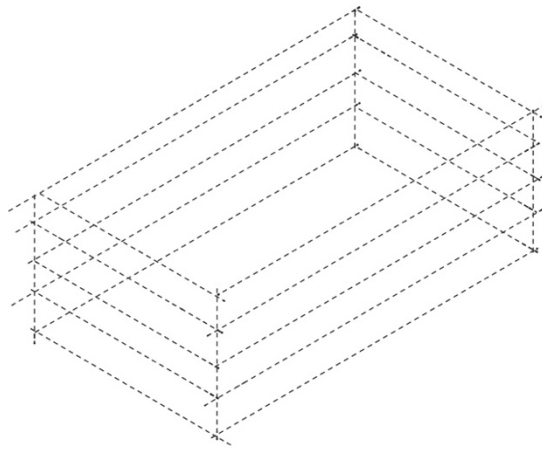


Figure 24 Basic building form diagram (by Author)

Maintaining the basic building form within the landscape illustrates the variety of levels where the building meets its surroundings.

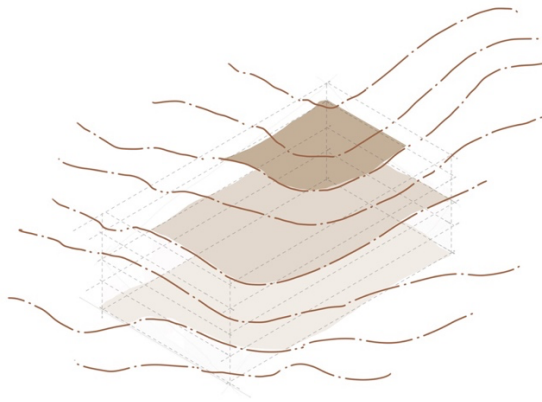


Figure 25 Integration of building on land diagram (by Author)

Distributing the program into sections that respond to the context, break up the rigidity of the basic building form, interact with the natural elevations of the site to create staggered terraces on the landscape begins to truly integrate the

landscape with life, the life that will take place in all these spaces. The “rigid” or “highly constrained” site transforms its challenges into opportunities.

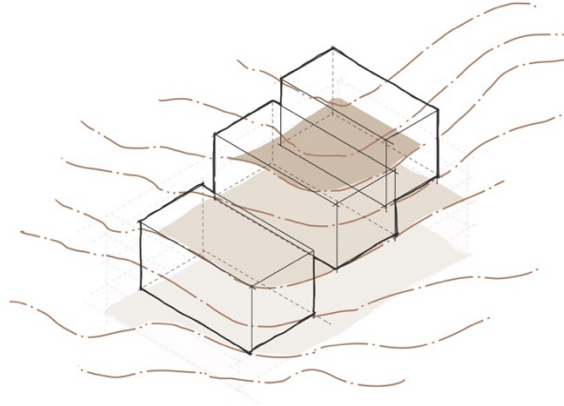


Figure 26 Multiplying space diagram (by Author)

The multiple and varied spaces that have been created are occupied by the life that takes place in the program. It includes Culture + Tourism in copper, followed by Sports + Recreation in green and Community Resources in blue.

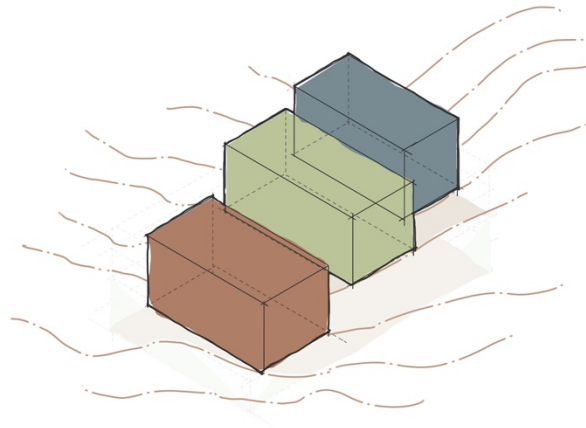


Figure 27 Units of life that determine the program diagram (by Author)

The Yellow arrows illustrate the major cores of vertical circulation within the building, although the building itself is the connecting feature for all levels of the topography.

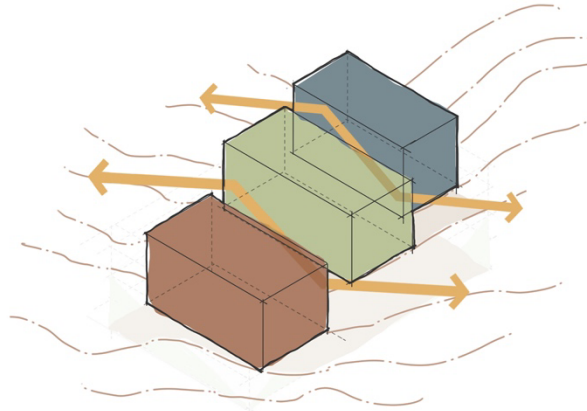
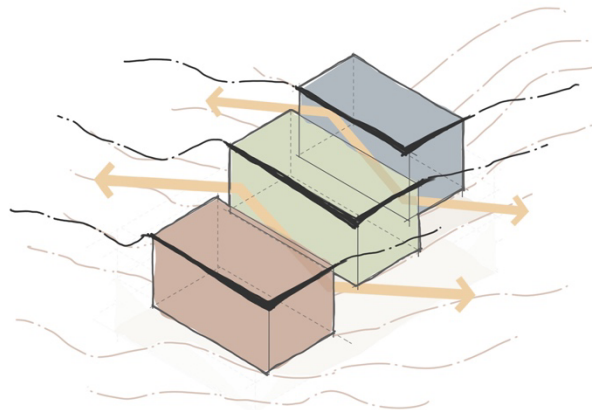


Figure 28 Circulation diagram (by Author)

All spaces of the building allow for multiple uses, where rooftops become gardens, and other become shading devices, where stairs become amphitheater stages for outdoor performances and the building becomes one with the landscape. Every space is filled, interiors with life services for the community and exteriors with flexible culture empowerment programs.



The design

The “building” is a series of staggered terrace spaces that interact with one another and attract visitors and locals alike to explore up, around, and beyond. The copper patina materiality of the shading canopies blends with the local landscape of the self-built homes as it ages gracefully with colorful tones of greens, blues, oranges, reds and yellows in the copper. The main structural walls spaces for local artist’s to take over as the canvas of their stories.

Design overview

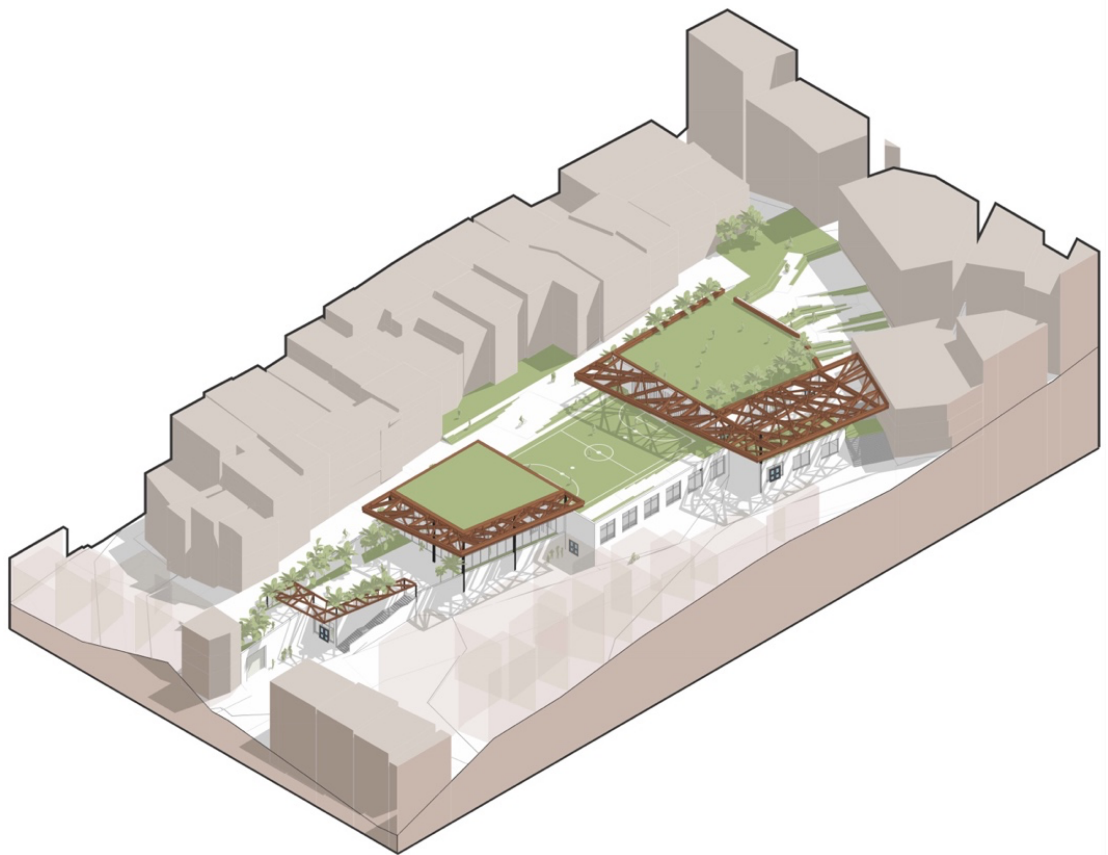


Figure 29 Axonometric drawing (by Author)

The levels are seamlessly integrated with their surroundings. The stepping on the hill allows for minimal invasion of the natural landscape, and increased interaction of spaces as people are drawn from neighboring activities. The increased connectivity of the levels invites locals, tour guides, and visitors to explore all the paths that are now connected, increasing the transit of people to reach elder habitants that would like to have more customers for their ground level businesses.



Figure 30 Longitudinal Section (drawing by Author)

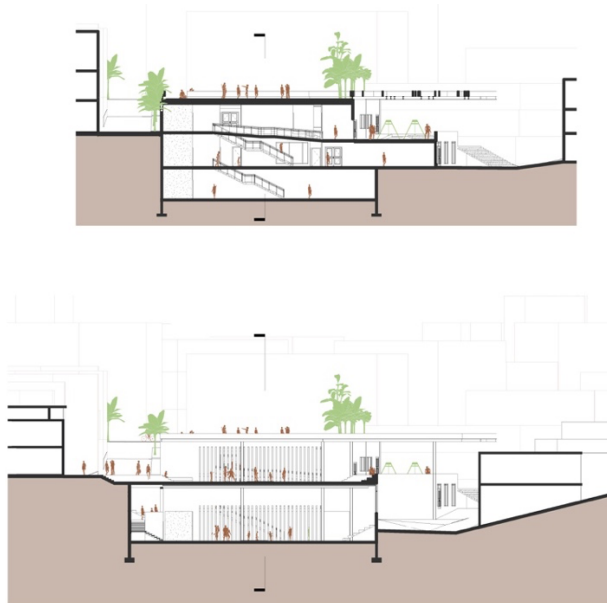


Figure 31 Transverse sections (by Author)

The outdoor futsal space that existed already, is given back to the community in addition to multiple park levels, market terraces and performance nooks.



Figure 32 Site plan (by Author)

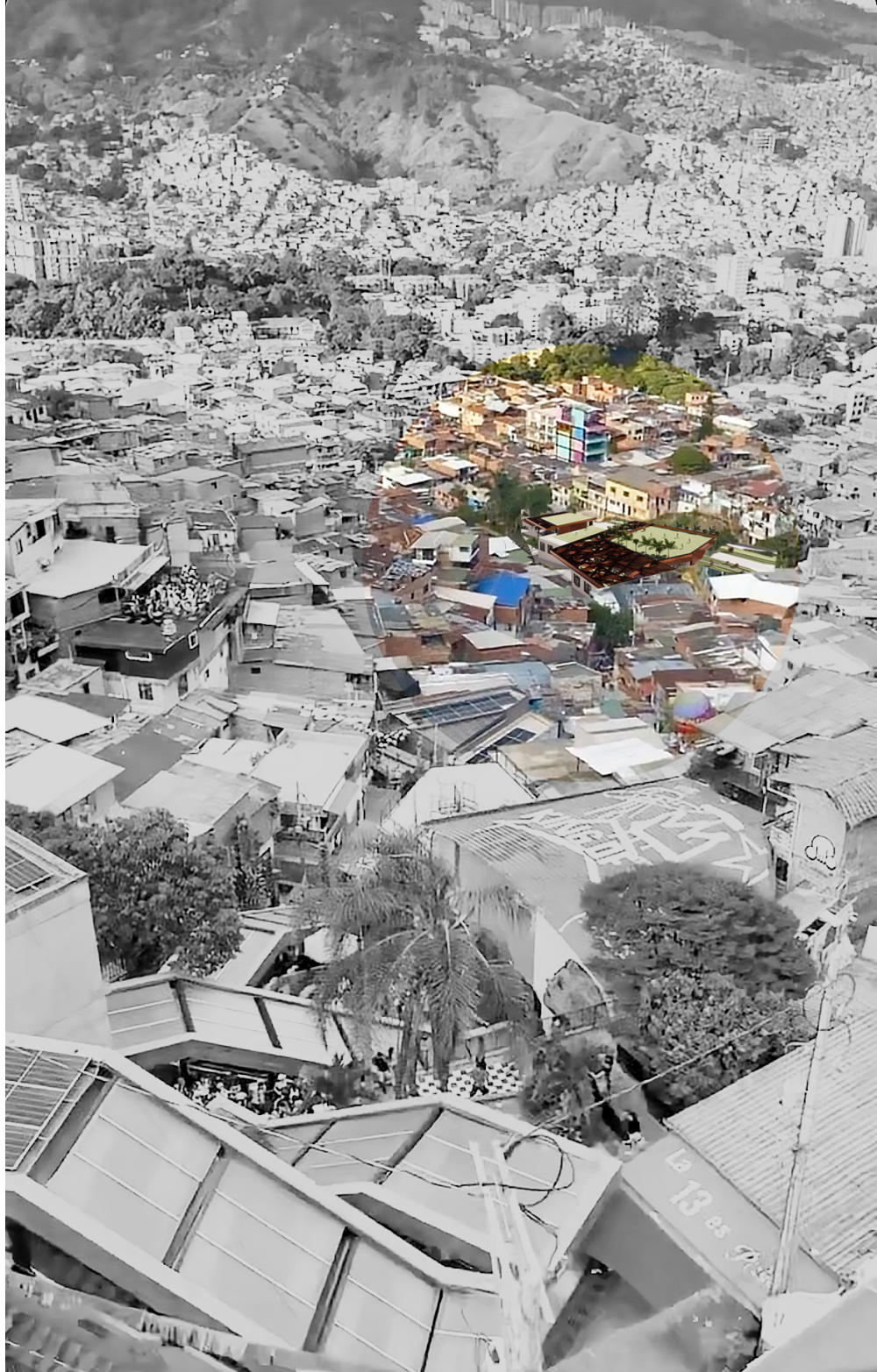


Figure 33 View from the electrical escalators toward the site (by Author)

The interior spaces include a tourism and culture hub at the lower level to act as the meeting point where community members can continue to organize themselves and arrange visits to all the galleries in the mountain. A place where tourists can arrive and be sure to find a local guide to learn about the community and embrace the culture. The second level holds an indoor multipurpose arena in case of rain for activities to continue, but also for large community gatherings. This space is connected to the artist's showroom. A gallery for local artists that have their own galleries all over the mountain to showcase samples of their art and invite people to follow their directions to view the full collections and merchandize. Outside the showroom, local crafts are sold as people enjoy learning about the culture and enjoy street performances. The shading canopy over this area provides a relief for hot and sunny days, as well as the flexibility to move activity under shelter in case of rain. The next level is a mezzanine of the showroom that connects with the outdoor futsal field, a space iconic of this location over time that was preserved to continue to be enjoyed by the children. Here they have the opportunity to play with tourists and continue to learn multiple languages in their interactions. This space is directly connected to the next level of community services that include child care and classrooms as a satellite location to educational facilities located further away. Lastly, the amphitheater park on the hill, where people can enjoy outdoor performances, overview the city and interact with nature.



Figure 34 Floor plans (by Author)



Figure 35 Artist's Showroom (by Author)



Figure 36 Futsal field (by Author)



Figure 37 Market terrace (by Author)



Figure 38 Nearby rooftop view of the project (by Author)



Figure 39 Landscape, life, and culture integration (by Author)

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