THE ROLE OF CONFLICT IN THE PRODUCTION OF GREEN PUBLIC SPACE IN AN INFORMAL SETTLEMENT: THE CASE OF LOS CIPRESES DE BARRIO MÉXICO, SAN JOSÉ, COSTA RICA

by

FELIPE BARRANTES

(Under the Direction of Sungkyung Lee)

ABSTRACT

In urban informal settlements, Green Public Space is often located in areas of high ecological significance that are considerably impaired by multiple processes of urbanization. Therefore, various environmental initiatives seek to improve these areas and interact with residents regarding their use and management of Green Public Space. However, differing interests among stakeholders generate conflict and represent significant barriers to this effort. Through qualitative research with the residents and external stakeholders of an informal settlement, this study explores the role of conflict between stakeholders in the use and management of Green Public Space as a way to understand the processes by which such spaces are socially produced. The results provide a discussion of why conflict becomes a barrier to improvement. They also expose the exclusion of stakeholders and shows larger cultural issues. Conflict is seen here as an opportunity for practitioners to access social dynamics in contexts characterized by differences.

INDEX WORDS: landscape architecture, informal settlements, green public space, conflict, social production, social construction

THE ROLE OF CONFLICT IN THE PRODUCTION OF GREEN PUBLIC SPACE IN AN INFORMAL SETTLEMENT: THE CASE OF LOS CIPRESES DE BARRIO MÉXICO, SAN JOSÉ, COSTA RICA.

by

FELIPE BARRANTES

B.Arch., University of Costa Rica, San José, Costa Rica, 2012

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

MASTER OF LANDSCAPE ARCHITECTURE

ATHENS, GEORGIA

2022

THE ROLE OF CONFLICT IN THE PRODUCTION OF GREEN PUBLIC SPACE IN AN INFORMAL SETTLEMENT: THE CASE OF LOS CIPRESES DE BARRIO MÉXICO, SAN JOSÉ, COSTA RICA.

by

FELIPE BARRANTES

Major Professor:	Sungkyung Lee
Committee:	Doug Pardue
	Stephen Ramos
	Isabel Macdonald

Electronic Version Approved:

Ron Walcott
Vice Provost for Graduate Education and Dean of the Graduate School
The University of Georgia
August 2022

ACKNOWLEDGEMENTS

I would like to thank my supervisor, Dr. Sungkyung Lee, for her feedback and dedicated involvement throughout every step of this process. It has been an honor and a privilege to work with her over these past two years. I would also like to thank Jon Calabria and Douglas Pardue for all their help and advice. They have been my mentors in the field of landscape architecture. I also thank all the participants that took part in the study and enabled this research to be possible. Finally, I would like to thank my family for all their love and support. Without their efforts, it would have been impossible to finish this work.

TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER 1

INTRODUCTION

The problem

Urban green spaces provide critical ecosystem services and social benefits for cities around the globe (Tzoulas et al. 2007, Elmqvist et al. 2015). In Latin America, it is common that informal settlements are situated adjacent to ecologically sensitive areas considered unsuitable for urbanization including floodplains, steep slopes, riparian forests, wetlands, and bluffs. For this reason, these settlements have been pointed out as causative of environmental degradation (Fitchett 2014) and their inhabitants more exposed and vulnerable to natural hazards than the rest of the population (McCallin, Scherer, and Duyne 2015). Costa Rica is not an exception. Several policies and research findings about urban green spaces strictly refer to informal settlements as invasive to green spaces (Sánchez et al. 2015). Such claims are still made even though they disregard the contribution that informal settlement processes have made in the creation and improvement of urban green spaces (Hernández García 2010) while ignoring the benefits that their inhabitants obtain from being next to urban green spaces. To consider informal settlements as strictly detrimental to nature provokes the exclusion and marginalization of their inhabitants. (Perlman 1979, Turner and Fichter 1972).

Scholars and practitioners have demonstrated that there are social and environmental benefits to considering informal settlements a part of the solution and not a problem that needs to be eliminated (Roy 2005). The practices of clearance and

relocation of informal settlements disrupt the economic and social networks of their inhabitants, and these practices have been replaced by on-site upgrading and improvement programs (Beardsley and Werthmann 2008). Maintaining the relationship between dwellers and the landscape they inhabit is mutually beneficial even though such upgrading programs are more complicated and costly (Werthmann 2021).

Green Public Space (GPS), which includes street parks, riparian areas, community gardens and small patches of vegetation near the streets and houses, is part of a community's public space and considered the most important issue in the improvement of informal settlements (Werthmann 2021). In the context of this thesis, GPS is defined as a publicly accessible open space predominantly covered with vegetation. GPS is considered a "public" space because its collectively used and managed by different stakeholders. However, GPS is not entirely accessible to everyone because outsiders are identified by residents and not always welcome. Though entrance to GPS is not physically prevented, people entering this space know that they are in someone else's place. Also, GPS is considered "green" due to biophysical qualities that oppose urbanized open spaces. Therefore, GPS in informal settlements is intentionally distinguished from open space and public space to emphasize the connection between informal settlements and urban biodiversity.

GPS is the result of the close relationship that people have with the place they inhabit and its social, political, and economical circumstances. In other words, GPS is socially produced and socially constructed (Hernández-García 2013). As a consequence, public space in informal settlements reflects varying degrees of exclusion, inequality, and conflict due to their social nature (Hernandez 2009). Thus, practitioners involved in the

processes of upgrading and improving GPS in informal settlements should consider these social relations an essential component of their interventions.

In recent years, environmental initiatives in Costa Rica have been involved in the improvement of GPS in informal settlements. Such initiatives face three main challenges caused by conflicting social dynamics regarding use and management of GPS. First, the role of the State is ambiguous and sometimes absent because of the informal condition of the settlements (Werthmann 2021) which contributes to unclear governance structures. Secondly, some environmental initiatives are centered around environmental improvement at the city level and at times this rests in opposition to the needs of local residents. And third, there are internal divisions and irreconcilable situations that hinder opportunities for dialogue and participation among stakeholders. These challenges represent a significant barrier to the improvement of GPS.

This thesis aims to contribute to the advancement of grassroots greening initiatives through a substantive exploration of the prevailing social challenges around GPS use and management in an informal settlement. More specifically, it seeks to understand the role of conflict between stakeholders in the creation, transformation, and management of GPS in such settings. When not considered solely an obstacle, conflicts are an opportunity to uncover the deep social differences and power relations at play, a reflection of larger cultural issues. With this knowledge, practitioners will be better equipped to intervene the social situation in which their projects will be situated.

The setting

To illustrate the role of conflict among stakeholders within the context of GPS, the researcher selected a site in a stretch of the Torres River in San José, Costa Rica, where a community named Los Cipreses de Barrio Mexico (LC) has settled for the past 29 years. LC inhabitants have used their hands, ingenuity, and their limited economic capacity to build and manage their houses and open spaces. Over the past years, multiple environmental groups became involved in the management of GPS in LC due to the ecological significance of this location, thus changing its spatial and social dynamics.

The Great Metropolitan Area (GMA) of Costa Rica:

Costa Rica is a small country located in Central America between Panama and Nicaragua. By 2018, the estimated population of Costa Rica was 5 million, of which 60% is classified as urban. Most of the urban population of this country lives in the Central Valley, where its urban area is defined as the Great Metropolitan Area (GMA) (Figure 1). GMA is an urban agglomeration and planning region established in 1982 as an initiative to organize urban activities in the Central Valley. Although this initiative aimed to prevent urban expansion especially in environmentally fragile areas, GMA's extension is among the largest metropolitan area in the continent (Martínez and Ruíz Agüero 2015).

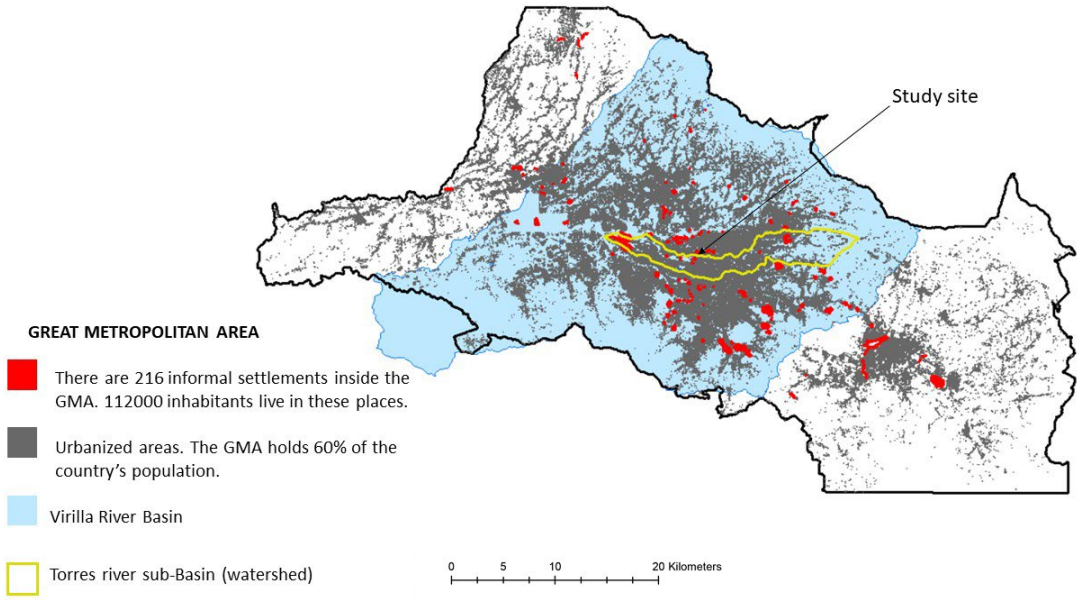


Figure 1.1: Informal settlements within the Great Metropolitan Area of Costa Rica. Virilla River Basin and Torres River sub-basin. Source: Map by Felipe Barrantes.

Informal settlements inside the GMA

Informal settlements in the GMA are related to the spatial segregation that began during the colonial period (1575-1821). Within the city of San José, the biggest city and economic center in Costa Rica, a clear segregation was determined between the "main residents," who had most of the economic resources and control of the means of production and "El Pueblo," or the poor worker communities. As the population and economy increased, contrast and segregation between the rich and poor also increased. These socio-economic conditions gave place to urban poverty and the appearance of informal settlements. Thus, informal settlements were products of segregation of the poor segment of the population, which depended exclusively on their manual labor to survive. This condition has been maintained over generations (Viales Hurtado 2005).

Exponential proliferation of informal settlements occurred during the 1980s as

the situation in all Latin America became extremely difficult. Instability, inflation, and unemployment augmented the housing deficit. "By the end of 1970 there were 11 squatter settlements in the GMA. At the end of the 1980s there were 138; of these, 91 were located in San José itself" (Imparato and Ruster 2003).

Currently, the government, led by the Ministry of Housing and Human Settlements (MIVAH) has gathered detailed and accurate information about the population and conditions of every informal settlement in the country. To date, the MIVAH has quantified 650 informal settlements that house 174,000 inhabitants which corresponds to 3.57% of the country's population. The GMA, which holds 60% of the country's population, has 216 informal settlements and 112,000 people live in these spaces.

Torres river sub-basin and the Torres River Urban Biological Corridor

Most of the area of the GMA is located inside the watershed of the river Grande de Tárcoles (see map in appendix B). Within this watershed, the most urbanized areas in the GMA are in the Virilla river sub-basin, which houses the Torres River Urban Biological Corridor. The Virilla river sub-basin suffers from environmental threats such as fragmentation and loss of forests, loss of biodiversity, heat island effect, sedimentation, erosion, and contamination of water bodies caused by industrial, agricultural, and domestic waste (Trujillo Acosta et al. 2016, Gabriela Pérez et al. 2021). These negative impacts are the reasons why the Grande de Tárcoles river is the most polluted river in Central America (Bergoeing and Brenes Q 2013).

One of the most recent initiatives to address environmental issues inside the GMA has been the creation of the Torres River Urban Biological Corridor which attempts to

increase the biological connectivity inside the urban grid and maximize the ecosystem services. The expected result is to increase biodiversity and natural resources in order to contribute to the urban sustainable development for better quality of life and human wellbeing (GIZ 2019).

Los Cipreses de Barrio México (LC)

LC is a small settlement located near the heart of San José, in the Barrio México Neighborhood (Figure 1.2). The history of LC as a residential development started on May 8th, 1990, when a willful group of men and women in need of housing settled in private and abandoned land next to the Torres River. Similar to other informal settlements, conditions at the time of occupation were precarious due to the lack of urban infrastructure and services. Dwellings were built mostly with reused wood, cardboard, and fabrics. Many people were constantly moving over and altering the site. During the first years of occupation, violent encounters between settlers and threats of eviction from the government occurred. As the community evolved and settled, inhabitants were able to accommodate themselves and create better living conditions. Today, twenty-nine years later, LC has a population of 274 inhabitants, many families have grown and thrived, and it is a well-organized and safe community. Nevertheless, the settlement still lacks many basic services and infrastructure that regular housing settlements have.

Figure 1.2: Bird's-eye view of Los Cipreses de Barrio Mexico. Source: International Network of Analog Forestry.

In addition to the houses, three quarters of LC is green space. These areas are non-suitable for buildings because of the landslide susceptibility to and adjacency to the river's flood plain. As a result, the LC community kept these places green and conducted different management activities such as garbage collection and removal of invasive grasses. Currently, open areas in LC form one of the biggest patches of green space adjacent to the Torres River near the center of San José. Multiple environmental groups have developed projects to improve the environmental quality of its green spaces, some of which have involved the Cipreses community in their activities.

Methods

This research uses a qualitative mini-ethnographic case study to produce contextual knowledge about how antagonistic relations between stakeholders effects the management of GPSs within the LC settlement.

A mini-ethnographic case study is a form of blended research design (Fusch, Fusch, and Ness 2017). The first method, the mini-ethnography, focus on a specific or a narrow area of inquiry and occurs in less time than a full-scale ethnography (White 2009). This duration of time can range from weeks to less than a year (Fusch, Fusch, and Ness 2017). For this research, the method was adequate since its purpose is to understand a specific cultural practice, and inside this practice, a particular social relation. The second method, the case study, bounds the study in space and time, and identifies operational links of events over time (Stake 1995). The case study is key since this research is bounded to a site—LC—and a time frame: June to December 2019. This research uses this combined method because it explores the effects of a social relation over this space and time.

In conducting the data gathering, interpretation, and analysis, an important fact to notice is that the researcher participated for the past five years in GPS management and transformation of the study site, even while conducting this research project. Therefore, the degree of involvement between the researcher, the site, and the community is a form of bias. Subjectivity and researcher bias are common issues in ethnographic processes (Jackson 1990). To mitigate these issues, the researcher will state his personal perspectives, values, and biases. Biases will be discussed regarding the insider/outsider and the researcher/participant relation.

Data collection

Validity of the data collection was accomplished by using methodological triangulation between three methods: participant observation, semi-structured interviews, and focus groups. These methods were supplemented by reviewing documents regarding

management of GPS. Other forms of achieving validity were preserving the chain of evidence, allowing key informants to review data and data saturation, which was determined by the aims and objectives of the research.

Table 1. 1: Data collection methods

Data collection method	Dates	Obtained data
Participant observation	June – July 2019	Management practices, stakeholders
Internal stakeholders' semi-structured interviews	July 2019	Relation between community and GPS, internal dynamics.
Focus groups	July 2019	Management priorities and issues
External stakeholders' semi-structured interviews	August 2019	Roles and views about GPS and other stakeholders
Review of management documentation	2015 - 2019	Management practices and stakeholders.

Participant observation was conducted during June and July 2019. The researcher worked in multiple activities related to the site's management of its GPS. The experiential learning process helped the researcher understand practices and challenges of managing GPSs, the stakeholder's involved in these activities, as well interactions within the management of these spaces.

Eight semi-structured interviews with community members provided the data to identify the evolving relationship between the community and its GPS over time. The interviews were conducted in July and August 2019. Two types of community members were interviewed: members identified as community leaders and members of the community involved in management of GPS. Furthermore, different relations between stakeholders in the process of management of GPS were identified. In these instances, the interview was recorded, and notes were taken for data processing. A pseudonym was used to protect the informant's identity and confidentiality of the information.

Second and third interviews were conducted to key informants regarding the conflicts in management of GPS.

For each informant interviewed, a file containing the following topics was created:

- Name, role, and description of informant
- Informant's availability and attitude toward the researcher and the study
- Brief summary of interview
- Cultural terms regarding use and management of GPS
- Key topics and questions discussed in the conversation.

A focus group was conducted at the end of the community member interviews. Preliminary data about the evolution of the community's GPS and key issues was presented to participants. The goal of the focus group was to further reinforce management priorities and issues in public green spaces. During this interview, environmental issues as well as conflicts between stakeholders arose from the conversation.

After the focus group, a second set of ten interviews was conducted with external stakeholders. This second set of interviews also addressed the role of the stakeholder regarding the public green spaces in LC. Additionally, results of the focus group regarding environmental issues and conflicts were discussed with external stakeholders.

Documentation about management practices in LC was revised to complement the former data gathering methods. This documentation described multiple projects conducted between 2015 and 2019 in LC, of which many were related to the GPSs of the community.

Stakeholder interaction and management practices were also identified using mobile messaging groups created and used between 2017 and 2019 for managing GPS in LC. One of the mobile messaging groups was created during the focus group.

Data Analysis and Interpretation

The collected data was obtained following the (Cranz 2016) guidelines of semantic ethnography applied for designers which describes a systematic method for understanding the uses and experiences of a particular place and the interactions within that place. In this project, Cranz methodology was a way to reveal the cultural knowledge that exists around the use and management of GPS. Attempting to reveal this cultural knowledge provided a basis for understanding what different groups of stakeholders saw themselves doing. By using this methodology, the participant-observations, interviews, archival documentation, and focus group all provided critical information to establish the different stakeholder groups and their roles over the territory (see appendix A). The data from this methodology also produced designated categories assigned to GPS by these different cultural groups.

Afterwards, data was interpreted using both frameworks of social production and social construction of space proposed by (Low 2017). The social production of space is used as the structure for Chapter Three as it is related to the material aspects of space i.e. political, economic, technological, and historical motives regarding how spaces come into existence. It helps to explain the historical emergence, the physical aspects, the processes of the setting and its related stakeholders.

On the other hand, the social construction of space used in Chapter four deals with the transformation of space through the different meanings assigned by people through mediated social interactions (Low 1996). Within this framework, the social construction of space is mainly explored through the relations of conflict and contestation. One of the reasons for focusing on antagonistic relationships is because conflicts are a recurring theme among stakeholders. Additionally, conflict is an observable barrier to improving GPS.

Thesis Structure

Through the case study of Los Cipreses, this thesis sheds light to the increasing interaction between greening initiatives and informal settlements in San José, Costa Rica. Although urban greening in San José is expanding and active at multiple scales, neither of these initiatives have specific plans to address the particular conditions of GPS in informal settlements. Los Cipreses is an example of this intersection, where over the past years a myriad of individuals, academics, governmental and non-governmental organizations have all interacted with residents to improve their GPS. Although this interaction has resulted in many successful processes of co-management, there are barriers to accomplish the greening initiative's goals, which revolve around

environmental and social improvement in these settings. These barriers are caused by the same conditions that facilitated the co-management of GPS in Los Cipreses: informality. This research explores conflicts between stakeholders when using and managing GPS as a way to understand the processes by which it is socially produced and constructed. Conflict is seen here as an opportunity to access social dynamics that shape these spaces and expose social differences and power relations which reflect larger cultural issues. The results of this thesis inform localized tactics as well as larger scale strategies to address environmental issues in informal settlements.

Chapter two is the literature review; it addresses the concept of informal settlement with an emphasis on the how the understanding of public space and green space within informal settlements has changed.

Chapter three talks about Green Public Spaces in Los Cipreses; it explains how the GPS at Los Cipreses changes over time as a result of the continuous interaction between the different actors and this landscape.

Chapter four explores the conflicts between stakeholders within management of GPS in Los Cipreses; it investigates these conflicts in relation to how they shape and transform GPS and it uses the perspective of social construction of space as a framework for understanding how these spaces are socially transformed.

Chapter five is the discussion chapter; it explains and evaluates the main findings of this research, discusses its implications, acknowledges its limitations, and provides recommendations for both further research as well as for practical interventions.

CHAPTER 2

INFORMAL SETTLEMENTS

Introduction

This research explores the intersection between two spatial practices within urban environments: self-production of green space within informal settlements and urban greening movements. This chapter addresses the concept of informal settlement with an emphasis on the how green spaces and public spaces within informal settlements have been understood.

The first part of the chapter explains dominant discourses about informal settlements and their historical evolution, an essential component of research. Roy (2005) argues that we must aim to understand the conditions under which knowledge about informal settlements is produced to understand gaps in history and representations. In addition, Lombard (2014) emphasizes the importance for ethnographic studies about informal settlements to connect these places to contemporary debates on urban poverty and globalization. Moreover, discourses about informal settlements also imply discussing the topic of urban poverty, since these spaces are intimately connected to the people that produce them (Hernández García 2012). A historical context about informal settlements is provided and its interrelation with urban poverty is delineated. It also describes current topics of debate within research and practice in informal settlements. In further chapters, these understandings will be contrasted with detailed empirical research.

The goal of this chapter is to provide a larger context within literature about: informal settlements. The ultimate purpose is to provide the foundations for interpreting empirical data from a specific context.

Informal Settlements

"Squatters are the largest builders of housing in the world – and they are building the cities of tomorrow" (Neuwirth 2005).

There is no agreement on the term and precise definition for informal settlements (Hernández García 2012). This lack of agreement is evident considering the abundant and diverging literature that addresses these phenomena. In literature, the most common terms used are informal settlements, squatters (Neuwirth 2005, Turner and Fichter 1972) and slums (UN-Habitat 2004, Group 2019). More localized terms such as shacks, shanty towns, favelas, tugurios, precarios, villas miseria, and many others have been used in specific socio-cultural groups in contained geographical contexts, and each term has specific connotations. One reason for the lack of agreement in a definition is that spaces identified as informal settlements are heterogeneous, as they occur in multiple settings and different sizes and forms. Another reason is that the perception and approach towards these spaces has changed over the last century, as views of informality evolved from being a problem to be solved, to a solution to be understood (Hernández García 2010). As the term informal settlement and its synonyms are used to encompass diverse and constantly changing forms of urbanization around the world, there is less value in generating a narrative of universal applicability (Hernández, Kellett, and Allen 2010). Nevertheless, this section focuses on informal settlements as a general term because it

associates this research, centered in a context-specific analysis, with continuing practices in urban policy and associated academic debates.

Early views: eradication and mass housing

Informal settlements are common throughout history, but increased attention to them have raised questions over the last century, as they have proliferated dramatically in urban areas (Kellett and Napier 1995, Neuwirth 2005). This increment was caused by explosive urban population growth and the lack of housing and infrastructure for new settlers, which lead to the spontaneous proliferation of settlements in urban peripheries that were previously open spaces. In Latin America, this phenomenon occurred between 1950 and 1980, as part of the process of industrialization, a significant birth-rate increase, and migration from rural areas to the cities (Ward, Jiménez, and Di Virgilio 2015). The same process occurred in Costa Rica, where the urban population doubled between 1927 and 1963 (Albertazzi 1994). To address the issue, the Costa Rican government created the National Housing and Urbanism Institute in 1957 for solving the housing need for the urban poor. Nevertheless, the situation in Costa Rica and in many other parts of the world was not solved by government institutions but by dwellers themselves, as they self-built their own dwellings which later became entire neighborhoods. Consequently, early views portray informal settlements as "marginal" and "problematic," since they were associated with poverty, inadequate infrastructure and social pollution (Kellett and Napier 1995).

These early views ubiquitously framed informal settlements as inadequate forms of urbanization caused by poverty. Solutions to this situation were focused on eradicating these settlements and producing mass housing for the urban poor. Informal settlements were accused of environmental and social degradation, and for "making cities ugly"

(Romero 2003). These first responses were based on modern urbanism and architectural ideas—many of them stated in the *Athens Charter*—a seminal document about urban planning published in 1933 by the Swiss architect Le Corbusier. The charter laid out many of the central ideas for urban planning in the twentieth century, such as segregation by function, the reliance on new building technologies, and housing concepts as solutions for the "modern city", which opposed any form of informal, ambiguous, or spontaneous form of urbanization (Mehaffy and Haas 2018). Regarding informal settlements, the charter stated: *36:* Unsanitary blocks of houses must be demolished and replaced by green areas: the adjacent housing quarters will thus become more sanitary (Le 1973)" and" 69: The destruction of the slums around historic monuments will provide an opportunity to create verdant areas (Le 1973)*."* The charter was intolerant of any form of informal and spontaneous aspect of urbanization and required the demolition of informal settlements and their replacement with green spaces. These ideas had profound consequences on urban policies after World War II, which lead to application of the "bulldozer policy," used to eliminate and relocate informal settlement dwellers to mass housing projects in the urban peripheries (Roy 2009, Romero 2003).

Embedded in the policies of eliminating informal settlements was the underlying prejudice against the "urban poor." This prejudice contributed to the incomprehension of the phenomena of informal settlements and reinforced negative stereotypes such as insalubrity, disorganization, and precariousness of these spaces. As informal settlements were associated with these negative stereotypes, their dwellers were linked with negative stereotypes as well, such as being unworthy, ungovernable, and dirty (Perlman 2019). These perceptions can be summarized by the concept of the "culture of poverty" by

American anthropologist Oscar Lewis (Lewis 1969). In his approach, Lewis associated poverty with a series of beliefs and behaviors causative of poor conditions and inherited through the generations of poor, therefore, perpetuating poverty (Lewis 1969, Perlman 2019). In Costa Rica, for example, marginalization and negative views of the poor were present in government policies since the 1930s. In the plan to elaborate the Hygienic Conditions of the Poor Neighborhoods of San José developed by the Communist Party, the authors provide a series of images where they refer to the poor as socially marginalized, unsightly, and victims of the elites: "do you know that the working class that produces everything is highly despised, smelly, dirty, ignorant, sick and miserable, because the wealthy class that owns everything and produces nothing has monopolized and monopolized... ″ (Viales Hurtado 2005). These two examples reveal two common negative views about the urban poor. First, Lewis's view about the urban poor "blames the victim" as part of a self-destructive subculture (Perlman 2019). Second, the urban poor are presented as incapable of self-improvement, while also suggesting that their ways of life and their living spaces are not considered valuable. Although these conceptions about poverty are discredited nowadays, they are still reflected in many urban policies and popular views, as research about informal settlements, common knowledge and public policies are out of phase (Perlman 2019). As cities increased in population and housing policies failed, conceptions against informal settlements and their inhabitants started taking alternative approaches, namely, those of Janice Perlman's "*Myth of Marginality*" and Jon Turner's "*Who Decides and Who Provides.*"

Paradigm shift: the problem as solution

Janice E. Perlman is a research scholar and author who has worked with urban planning policies, poverty and informal settlements over the last forty years. She published an influential book in 1976 named *Myth of Marginality*. In this publication, Perlman argued that prevailing views about urban poor living in informal settlements were false. With support from six years of empirical research in the "*favelas*" or informal settlements of Rio de Janeiro, Brazil, she contrasted the existing realities of these places with popular and scholarly stereotypes about the urban poor. At that time, prevailing wisdom about associated "*favelados*" or dwellers of Rio's informal settlements regarded them disorganized, dangerous, and isolated from surrounding urban and political life. Perlman argued that the residents of informal settlements were well socially organized and cohesive; culturally, they were highly optimistic and aspired to better education for their children; economically, they were hard workers, as they built their own houses and much of the overall community and infrastructure; and politically, they were neither apathetic nor radical (Perlman 1979). Perlman's work also stands out because she continued to visit the favelas over a period of 40 years; this helped her understand the evolution of the favelas over time. A key conclusion from this understanding is that "favelas are not marginal, but are actively 'Marginalized 'by a system that benefits from maintenance of inequality, exclusion and repression" (Perlman 2019). Perlman's work was influential in questioning the common view of the people living in informal settlements. Likewise, Turner's work was influential in questioning informal settlements as forms of urbanization.

John F. C. Turner is a British architect who has written extensively on housing and community organization. Turner spearheaded a counternarrative in the 1960s that advocated viewing informal settlements as a solution rather than as a problem that should be eliminated. From 1957 to 1965 he worked in villages and urban informal settlements in Peru and helped develop self-help programs for housing and infrastructure building in these communities. His work is significant because he demonstrated quantitatively and qualitatively the social failures and economic impracticality of "westernization" of space and society through the application of modern and centralized housing policies in the Global South (Bower 2016). Turner provided two key ideas to the discussion about informal settlements: "self-production" and "housing as a verb," which later became part of his arguments for inverting established beliefs and proposing a new role for the professionals and institutions involved in urbanization processes. The idea of self-production was that people living in informal settlements were far from being victims as they ingeniously and energetically used their limited resources to create their dwellings. Turner argued that self-produced housing provided more than merely physical improvements as social development also had to be considered. "We are building families as well as homes" mentions one of the dwellers Turner worked with (Turner and Fichter 1972). Parallel to the idea of self-production is the concept of "housing as a verb." This notion is presented in opposition to housing as a product or a commodity. For Turner, housing as a verb gives worth to the processes and values behind the physical product. He was concerned with the effect that the housing activities have on the housed. Turner wrote: "Contrary to the generalizations made by the mass media and an uninformed middle class, these squatter settlements are no more slums than any building and

development under construction" (Turner and Fichter 1972). He observed that the way people built their houses was an incremental process of construction consisting of several stages where settlers weighted their short-term discomfort against long term benefits (Kellett and Napier 1995). Turner's ideas influenced future housing policies and housing movements such as participatory self-building, social production of habitat, slum upgrading and incrementalism. Nevertheless, his propositions also generated considerable criticism as Turner was accused of romanticizing the conditions of the poor and releasing the government from its responsibility to provide adequate housing as a basic need (Kellett and Napier 1995, Lombard 2014)

Many of these alternative approaches to informal settlements came together during the First World Conference on Human Settlements, Habitat I, held in Vancouver in 1976. This conference led to the dispersal of alternative ideas and approaches about informal settlements. Nevertheless, these ideas were seldom reflected in effective actions or resources to support groups struggling for housing and habitat (Romero 2003). In addition to the government and the dwellers, two additional groups of actors appeared on the scene of informal urbanization during the last three decades of the 20th century: (1) groups who were directly and organically linked with informal settlement dwellers (Romero 2003) and (2) groups that promoted the privatization of the housing supply and tenure legalization. Among the first group of actors were nongovernmental organizations, religious organizations and professionals linked to universities (Romero 2003). In Costa Rica, for example, groups in the form of "housing fight committees," carried organized invasions of urban land. These groups promoted informal occupation of large areas of unoccupied lands, which were mostly government lands, with reduced possibility of

eviction (Pérez 2005). These groups held the basic precept that housing and habitat conditions cannot be separated from the struggle to improve the economic, social, and political capacity of the people. The second group, championed by the World Bank, followed new economic policies referred to as neo-liberal (Lombard 2014). These policies involved incorporating the informal settlements into the housing market by promoting large-scale programs of tenure legalization and delegating housing projects to private developers. The government of Costa Rica utilized this strategy in 1987 when the state created the National Financing System for Housing, through which the state ceased its standing role as a housing manager (builder, developer, planner), thereby leaving the task to the private sector. Along these same lines, De Soto's work argues that provision of legal titles is the solution to such informality. By creating property ownership, the dweller can help poor people to invest in their homes and business, thereby invigorating the economy (De Soto 2000).

In sum, the emergence of new actors led to the diversification of approaches to informal settlements, which nowadays have become even more complex and dynamic, as the number and size of informal settlements and their populations increase without precedent (Habitat 2007). Having outlined these historical contexts within which current discussion about informal settlements occurs, key approaches regarding this research will be addressed in the next section.

Current views about informal settlements

At the turning of the 20th century, informal settlements regained attention in urban planning and international development agendas. An important figure in current discussion about informal settlements is urban planner and scholar Anaya Roy. Her work

focuses on urban transformations in the global South, as well as on global capital and predatory financialization (UCLA Luskin School of Public Affairs 2017, November 30). Her approach is valuable because she examines the phenomenon of informal settlements across economic, spatial, and political domains. Therefore exploring "informality" instead of "informal settlements" (which is a spatial concept). According to Roy (2005), this attention was framed by two dominant approaches: "crisis" and "heroism." The approach of "crisis" calls for awareness of the increasing explosion of cities or "urban hypergrowth" (Hall, Hall, and Pfeiffer 2000). Common statistics such as "almost one billion people live in informal settlements and it will double by 2030" (Habitat 2007), and "there are an estimated of 200,000 slums around the world" (Davis 2006) raise awareness of these particular patterns of urbanization. At the same time such statistics render informal settlements as homogeneous, problematic and separated from the "formal city." This implies a "normal condition," rendering "informal" as abnormal (Banks, Lombard, and Mitlin 2020). On the other hand, the "heroism" approach is associated with Hernando de Soto's "heroic entrepreneurship" (Roy 2011), which describes informal settlements as the "grassroots rebellion against state bureaucracy" (Banks, Lombard, and Mitlin 2020) . This approach follows Turner's views about acknowledging the creativity and ingenuity of people living in informal settlements but also proposes that the solution is to integrate this sector into a modern and manageable economy. Both approaches are criticized by Roy (2005) for three reasons: they equate informality with poverty, the conceptualize informality and poverty as causes of isolation from global economies, and they both assign part or all the responsibility for the poverty to the poor themselves, without acknowledging structural inequalities. These critiques provide the starting point

for some of the alternative approaches to informal settlements, which will be summarized in this section.

Challenging the dichotomy between formal and informal

As stated earlier, two dominant approaches of "crisis" and "heroism" have framed most views of informality, yet both of these approaches consider informality as fundamentally separate from formality (Roy 2005). Banks et al. (2020) argues that conceptual separation in informality debates is particularly surprising, given previous assertions that formal and informal sectors are reciprocally related and entangled. This entanglement is also addressed by Roy (2005) as she states that informality shouldn't be a separate sector but a mode of urbanization, which she defines as "as a series of transactions that connect different economies and spaces to one another." Within these definitions, she frames informality as a continuum between legality and illegality moving beyond the dichotomy between formal and informal and proposing alternative model. This has also been a focus of discussion within current literature related to informal settlements. The formal-informal dichotomy will be questioned below under three main arguments: challenging the link between informality and poverty, the complicity of the state, and the problem of formalization.

The separation between formal and informal its often aligned with the association of informal settlements with the urban poor. Banks et al. (2020) state that informality is often applied and investigated within specific domains, and one of them is the urban poor. Mehrotra (2010) claims that the definition of informal must be broadens beyond the common understanding of informal settlements as "the city for the poor and marginalized." One reason for this broadening is that equating informality with poverty

tends to overlook the complex interactions within multiple sectors and groups of people. Roy (2010) argues that both the wealthy and the poor are part of informal urbanization. She provides the example of Mumbai's shopping malls and new developments, as they are built outside of the law. Yet these development builders can command infrastructure, services and legitimacy as expressions of class power, privileges that poor inhabitants can't access. Furthermore, it's also important to highlight the role of other actors beyond the urban poor in the production of informal space. For instance, powerful non-state actors such as organized-crime groups have an interest and take advantage of informal spaces (Banks, Lombard, and Mitlin 2020). Exclusively associating informal settlements as a result urban poverty risks overlooking many other actors and processes that occur within informal settlements as part of a larger context.

It's important to note that the domain of informality its often defined by the level of legitimacy that a settlement or a set of actors possess (Roy 2005). This legitimacy is set by the state, who defines the often-ambiguous boundaries between what is formal and what is informal—which makes the state an accomplice to informality. For Banks et al. (2020) informality as a space is rarely marked by the absence of the state. Instead, informal activity is connected to forms of state cost-reduction and learning opportunities for service provisions (Banks, Lombard, and Mitlin 2020). For the state, informal settlements are low-cost solutions to provide housing and infrastructure since the condition of illegality frees the state from these responsibilities. On the other hand, the complicity of the state is also shown through how unaffordable the formal sector remains. People that can't pay the costs of planned and regulated housing and neighborhoods, seek informal settlements for more affordable choices. In this sense, informal settlements

supply affordable housing that the regulated housing market is unable to fulfill. As has been noted, the state has the power to determine what is informal and what is not, and to designate which informal settlements should flourish, and which should disappear. Hence, for Roy (2005) informality should be understood not as an object of state regulation but as produced by the state itself.

A common approach therefore to informal settlements is formalization, which means that people living in these places will be given land rights. These rights provide people land security and rights for service delivery, which are priority and legitimate needs claimed by the informal settlement dwellers themselves. The World Bank researchers argue multiple benefits from providing property rights, such as household food security, political stability and sustainable use of natural resources (Roy 2005). Nevertheless, formalization or legalization per se has been criticized by different authors who question formalization as the solution for informality. Perlman (2019) alleges that formalization implies "eliminating spaces of freedom and alternative life styles," and encourages both homogenization and gentrification. Perlman criticizes the program "Cities Without Slums" develop by the Cities Alliance and later adopted by the UN in 2000. The goal of these groups was to upgrade physical infrastructure while preserving social networks and access to job markets. Although praiseworthy goals, Perlman's criticism is directed to their pejorative approach to "slums" and the intention of "cleaning, controlling and organizing" these communities. Perlman stands among other authors as a firm defender of informal settlements. She claims that informal settlements are essential spaces for insurgence and innovation. She also argues that with formalization there will be great losses, such as jobs, productivity, cultural creativity, and social and intellectual

capital. Looking at processes of formalization as the unique solutions to informal settlements reinforces the condition of formal as positive and informal as negative.

Questioning the dichotomy between formal and informal challenges the common views of informal settlements as negative spaces. Moreover, these questions challenge many dualistic categories used for viewing informal settlements, for example, good and bad, orderly and disorderly, planned and unplanned, rich and poor. Consequently, non-dualistic approaches have emerged from these questions, providing new insights about informal settlements as a complex network of relations within a larger context. This research, then, seeks to contribute to this debate by exploring alternative roles, spaces and actors beyond traditional dualistic views of informal settlements, foregrounding the non-dualistic relation between informal settlements and urban greening movements.

The hybrid nature of informal settlements

The concept of hybridity is useful as a counter-narrative to dualistic framings used to study informal settlements. As AlSayyad (2001) points out, "assumed dualities are torn opened as the logic of hybridity is introduced." The Merriam-Webster (2020) dictionary's meaning of hybridity is something heterogeneous in origin or composition and relating to or produced from parents of different species, varieties, or breeds" (Merriam-Webster.com 2020). The terms "hybrid" and "hybridity" have been used in multiple disciplines such as biology, philology, and geology. Furthermore, for AlSayyad (2001) the use of word hybrid has been related with scientific racism, as the "hybrid" can be considered "impure," the result of a "mixture or combination which does not have the same status of the 'original.'" These numerous uses and connotations to hybridity give an ambiguous quality to the term. For Hernández (2002), when using the concept of

hybridity, “one should proceed with extreme caution,” since ambiguous use of this concept “may reduce both its analytical and political value.” This research considers these warnings, but at the same time embraces the multidimensional quality of hybridity by exploring two authors with different approaches to the term: Jaime Hernández García’s notion of hybridity in the “language and meaning of informality” (Hernández-García 2017) and Felipe Hernández’s “architectural hybridization” and “transculturation” in Latin America (Hernández 2002)(Hernández, Millington, and Borden 2005).

Jaime Hernández-García is a Colombian architect, planner and scholar who works with informal settlements, the use of public space and citizen participation. Hernández-García (2017) focuses his approach to hybridization as a mixture of elements. In his work exploring production, use and language of open spaces within informal settlements, he argues that informal settlements, contrary to being “shapeless,” have a from and a design language, which can be interpreted as a “hybridization”. This approach to hybridity is based on Argentinian cultural critic Nestor García Canclini, who argues that “Latin American expression fluctuates between the modern and the pre-modern, the local and the global, in a sort of cultural hybridization” (Hernández-García 2017). Hernández-García takes García-Canclini’s approach to define hybridization “as the use of different design elements corresponding to different styles, a vocabulary taken from different geographical, temporal and social contexts and used to produce something new. Hernández-García’s “hybridity” renders value to the language of open spaces and architecture in informal settlements as a mixture of different cultural influences.

However, Hernández-García mentions that hybridization goes further than just a combination of elements and themes. He points to Felipe Hernández’s (2002) beliefs that

hybridization carries multiple cultural meanings that have political implications. Hernández (2002) argues that the notion of hybridization is not just a "descriptive aesthetic device;" but instead involves a broader range of cultural issues and is a "theoretical tool that carries a subversive cultural value." Hernández claims that hybridity is not a product or a by-product of the fusion of two or more cultures, which would imply "systems of dependencies" of hierarchies between cultures. He then refers to Bhabha's (2012) approach to hybridity in the context of post-colonialism theory by questioning the hierarchical claim to the inherent "originality" and "purity" of some cultures. This questioning arises from Bhabha´s assertion that "all cultural statements are constructed in a contradictory and ambivalent space of enunciation." For Hernández (2010), this ambivalence comes from the assumption that each culture or sub-culture is assumed as an "homogeneous cultural construct uninhabited by differences." Within these differences there are conflicts and tensions that destabilize the hierarchical structures that place above the "pure and original" culture and then the "hybrid" below as a result. This new idea of hybridization "opens up a space of cultural negotiation." Within this space, also coined as "third space," opportunities for resistance arise "where people can encounter and transform each other rather than one group being subverted than the other" (Bhabha 2012).

Hybridity is a rather useful concept when trying to understand informal settlements. Hernández-García (2017) underlines the value of open spaces within informal settlements as a mixture of languages, practices and uses that produce something new. Then, Hernández (2002, 2010) considers this mixture not only as product, but as a "continuous process through which cultures and cultural elements are

endlessly rearticulated and gain renewed meanings." This second conceptualization of hybridity is relevant for this research, as it reveals that there are no homogeneous binary systems of social antagonism, but within each group (whether it is the community living in the informal settlements or the people promoting urban greening initiatives) there are diverse and dynamic interactions and not monolithic positions and discourses. By acknowledging the complexity of these interactions, there is an opportunity for understanding this "cultural productivity" (Hernández 2010). It is rather insightful for design and planning disciplines.

Dynamic nature informal settlements

Informal settlements are often given qualities such as constantly changing, ephemeral or unstable, and these are features associated with the dynamic nature of these places. This is relevant because it's yet another way to understand the discussion about informal settlements beyond the formal/informal dichotomy by including ever-shifting qualities that resist from being understood in binary terms. The dynamic quality of informal settlements can be seen as the natural way people create these communities (Neuwirth 2005), which are undergoing constant transformation due to the instability and minimum support from public and private bodies (Hernández García 2010). At the same time, the dynamic nature of informal settlements is also extrapolated to a larger urban context of the city, which Methrotra, for example, calls "kinetic city" (Werthmann and Bridger 2015).

Within these two scales, the dynamic nature of informal settlements will be explored through three questions: how physical conditions of informal settlements are dynamic due to the socio-spatial nature of their construction, how these dynamic qualities

have a reciprocal influence to larger urban contexts and how these dynamic conditions raise questions of representation.

Informal settlements arise from a complex system of social interactions (Hernández García 2012). Therefore, rather than seeing informal settlements as complex physical environments, they can be seen "as complex and dynamic processes that play themselves out in intricate spatial arrangements" (Huchzermeyer 2004). The relation between space and social processes has been argued in literature by authors such as Lefebvre (1991), Harvey (2018) and Certeau (1984). However, people living in informal settlements have a particular connection with these spaces. In Kellett's (2018) words, there is a "mutual connection between dwellers and dwellings," as people continuously produce, transform and consume these spaces using mostly their hands and limited resources. These spaces are in constant change, as their users "reorganize and reinterpret the physical space permanently" (Hernández García 2012). Therefore, informal settlements can be seen as a survival strategy where the "agency and creativity of their occupant-builders is central" (Hernández García 2010). They are ephemeral, unfinished and ever-shifting in nature and frequently use limited resources—often recycled materials (Hernández, Kellett, and Allen 2010). All of this reflects the social, economic, and political circumstances of their dwellers.

The dynamic nature of informal settlements has a mutually corresponding relation within a larger context. Therefore, beyond its intrinsic dynamic qualities, informal settlements are also framed by extrinsic influences that are also dynamic. On one hand, informal settlements are unstable and ephemeral and caused by the minimum support from public and private bodies (Hernández García 2010) including an absence of known

rules, norms or networks (Banks, Lombard, and Mitlin 2020). For Roy (2011) this relation with the larger city is "both arbitrary and fickle" and for Mehrotra (2010) is a simultaneous play of "affinity and rejection." On the other hand, urban growth and economies in many parts of the world are being driven by informal processes, "largely determined outside of the formal protocols of urbanization" (Werthmann and Bridger 2015). These are all "dynamic qualities of the city, that some authors demand to be acknowledged within city planning.

For instance, the dynamic and emergent qualities of the city are emphasized in the New Urban Agenda, a publication that came out in 2017 one year after the Habitat III conference. The document supports a more flexible and dynamic approach to planning by encouraging policies, tools and mechanisms that are flexible and "by addressing the evolving needs of persons and communities" with special attention to "upgrading slums and informal settlements" (Nations 2016). Another author that supports the dynamic character of the city is Rahul Mehrotra, an architect and urban designer who coined the term "kinetic city", which is defined as "a city in constant motion whose very physical fabric is characterized by this kinetic quality" (Werthmann and Bridger 2015). For Mehrotra (2010), the kinetic city is a series of notions about urbanism that are "versatile and flexible, robust and ambiguous enough to allow the kinetic quality of the city to flourish." But most importantly, for Mehrotra, informal settlements are the best example of the kinetic city. Hence, beyond the common humanitarian dimension, informal settlements should be a model of flexibility and capacity for innovation.

Framing the dynamic qualities of informal settlements as a response to the dynamic nature of cities leads to looking at informal settlements as a "symbolic image or

metaphor for the physical state of the contemporary city" (Hernández, Kellett, and Allen 2010). This raises questions of how to represent these dynamic qualities and what are the implications to the rest of the city. For Mehrotra (2010) the image of the kinetic city arises from "spaces that are supportive of lives and patterns of occupation," which are indeterminate, in constant flow and instable. The value of these new approaches resides in the incapability of more "static" views of the city to reflect the "blurred lines of contemporary urbanism in Latin America, Asia or Africa." Roy (2011) on the other hand, remarks the implications of taking informality to wider contexts: "urban informality is a heuristic device that serves to deconstruct the very basis of state legitimacy and its various instruments: maps, surveys, property, zoning and, most importantly, the law." This is relevant as current rules and categories used for urban settlements neither apply to informal settlements or are fragmented and unclear (Banks, Lombard, and Mitlin 2020). It then becomes necessary to reframe current representations of informal settlements to encompass the dynamic qualities of these places, as they do not accommodate static representations of the city.

Emphasizing the dynamic nature of informal settlements embraces the importance of time and change within the creation and use of these spaces. These qualities should be considered when creating policies directed toward informal settlements. Dynamic qualities can also inform broader discourses on urbanism (Hernández, Kellett, and Allen 2010). However, not everything within informal settlements is dynamic, as they tend to solidify over time (Kellett and Napier 1995, Turner and Fichter 1972), and sometimes they are formally initiated but later become informal settlements (Hernández García 2010). Furthermore, the dynamic character of informal settlements should be balanced

with “more fixed and formal strategies” like essential sanitary and electric infrastructure, and perhaps “green infrastructures” which is an important topic for this research. A question then arises from seeing informal settlements as “dynamic” and “hybrid”: are all informal settlements homogeneous enough to be defined in those terms?

The view from below

The previous approaches to informal settlements are presented irrespective of their specific physical, cultural, political, economic, or historical circumstances—they present informal settlements as an overarching term. These approaches have been criticized by several authors as it renders informal settlements from above, or in abstraction, thereby neglecting the specific narratives of the people living in these places and the importance of their everyday spaces (Lefebvre and Nicholson-Smith 1991, Certeau 1984). This research acknowledges these everyday spaces and how they are shaped by their user’s everyday practices. To explore everyday practices is essential to understand how green spaces are produced.

This section describes this view from below, which connects to the concepts of everyday space and everyday practices. It also explains how ethnographic methods a useful tool are not only to understand these everyday practices but these methods connect them to larger social processes.

Margaret Crawford, an urbanism and architecture theorist, claims that human experience is a critical aspect of any definition of urbanism. For her, the everyday life is the ordinary human experience, and the everyday space is the arena where these ordinary experiences unfold. (Chase, Crawford, and Kaliski 1999). But beyond being just a container, the everyday space is also shaped by these experiences and the social

interactions that occur within them. Everyday spaces are formed and constantly adjusted by the people that appropriate and use these spaces. This often gives them a disordered quality. Hernández-García (2010) talks about "everyday aesthetics" within open spaces in informal settlements and these aesthetics are an acknowledgment of the richness and complexity of everyday life in these spaces. Additionally, Crawford (1999) qualifies everyday public spaces as "ambiguous and unstable" because they contain multiple and ever-changing meanings, rather than a clear identity. As they are formed by the transient activities they house, these activities are the rhythms of everyday life. She gives value to these spaces as they have the potential to be a site of "creative resistance and liberatory power." Hence, everyday public spaces are the stage where many social processes in informal settlements occur. They are also a realm of political contestation, where space is defined through the social struggles of their inhabitants.

Beyond just being the physical spaces where everyday life unfolds, everyday spaces have an important symbolic component, related to the construction of these places 'identities (Hernández García 2010). The symbolic component of everyday spaces means that they represent something else beyond their physical qualities. The symbolic qualities of everyday space can be related to Lefebvre's (1991)" representational space," the space of inhabitants and users that is experienced through "its associated images and symbols." For Lefebvre, these spaces are not just physical spaces but also important symbolic spaces, especially for people that inhabit them. Representational space overlays physical space and gives a symbolic use of its objects; it works within a system of "non-verbal symbols and signs." As everyday space is associated with symbols, it becomes part of the construction of the identities of these spaces.

Identity, here, can be defined in two ways: sameness and difference. The former defines identity as "social labels given to individuals as members of a group"(AlSayyad 2001). This definition relates to the everyday spaces because these spaces express shared symbols of social, ethnic and other identities that connect individuals to the group and play a role in the survival of these groups (Rapoport 2016). Hernández-García's (2010) "everyday aesthetics" within informal settlements are also an example of this approach to identity because it seeks a common denominator that assumes commonalities or likeness between all informal settlements. The latter approach locates identity in differences, which means identities are products of differential relations. In this approach, identity "is necessarily shaped with reference to other identity, in relation to what which is not" (Krstic 2017). This approach embraces diversity and heterogeneity, but at the same time, "can exclude and marginalize 'others' "(Woodward 1997). Nevertheless, to understand the identities of everyday spaces, a third quality must be taken into consideration: the transient nature of everyday life.

So far, everyday life has been explained through its connection to everyday space; thus, through its spatial qualities. However, time is equally significant for everyday life. and in the everyday, time resides the opportunity for social transformation (Chase, Crawford, and Kaliski 1999). Crawford (1999) explains everyday time through Lefebvre's description of three temporalities: *cyclical*, or the rhythms of nature; *linear* patterns, or the rational view of time; and a third category of time, described as "the discontinuous and spontaneous moments that punctuate daily experience." For Crawford, this third category is the "starting point of social change" and she argues that these changes can be harnessed through multiple small and specific actions that arise within

everyday spaces in specific contexts. This type of approach is named “everyday urbanism” and more recently “tactical urbanism.” “Tactics” is used here as a mode of operation dependent on time. This contrasts with “strategies”, which are dependent on place. For Mike Lyndon, planner, and author of the book *Tactical Urbanism: Short-term Action, Long-Term Change*, tactical urbanism is a series of actions of neighborhood building and activation that are small, short-term, low-cost and flexible. These practices are a response to slow and large-scale urban interventions (Lydon and Garcia 2015). In the context of informal settlements, tactical urbanism has been applied in the form of strategic interventions. Mehanffy (2018) states that forms of tactical urbanism and similar efforts are suggested in the New Urban Agenda with the purpose of “engaging informality within the open city.” Initiatives such as everyday and tactical urbanism reflect a shift toward the acknowledgment of time in everyday space. This has led to a shift toward engaging informal settlements, which has also led to some criticism.

Neuwirth, for example, criticizes these notions applied in the New Urban Agenda, because they apply new notions of placemaking and tactical urbanism “without understanding that these are the natural way that people create their communities” (Bissen 2016). This criticism resonates with Lefebvre’s (1991) description of representational spaces, as he argues that these spaces are “passively experienced.” Representational spaces are lived spaces and hence the space of inhabitants and users, but also the space of “some” artists, writers and philosophers “who describe and aspire to do no more than describe.” Taking these considerations back to the context of informal settlements means questioning how everyday spaces can be represented and reproduced by researchers and practitioners.

French sociologist Michel Maffesoly—one of the founders of the everyday life sociology—argues that everyday life isn't a form of analysis but a specific perspective of things (Maffesoli 1989). Madanipour (1996) describes Maffesoly's approach to everyday life within three basic requirements: "The researcher takes the position of a participant, rather than a detached observer; that it takes account of experience, with all the feelings and emotions associated with it; and that it questions the validity of political-economical analysis as sufficiently explaining the social life." What is important to emphasize in the study of everyday life, is subjective aspects of social life that have been undermined by traditional approaches. This approach has many similarities with ethnographical methodologies, which have been used frequently in the context of informal settlements.

Ethnography is a widely used approach to understand everyday life. This approach has multiple variants, but for this research, ethnography will be considered a form of fieldwork. Ethnography is concerned with making sense of people's actions, and the events and opportunities confronting them in everyday life (Herbert 2000). To achieve this comprehension, ethnographers spend considerable time on site conducting multiple ethnographic field methods to observe and interact with a social group. Furthermore, ethnographers make sense of this data by analyzing people's everyday activities and interactions (Herbert 2000). Making sense of the data means revealing knowledge, understanding meaning structures and accessing social constructions that provide ethnographers not only an insider's look of everyday life but also "provide a blueprint of social action" (Herbert 2000). Therefore, ethnography involves observation, interaction and analysis of data, indispensable components of this research.

Ethnography has been a frequently used approach to understand people's everyday lives in the context of informal settlements. This approach not only has helped researchers understand how people define and inhabit these spaces through their everyday activities, but also illuminated how these spaces are a product of social and spatial marginalization. An example of ethnographical approaches within informal settlements can be found in Melanie Lombard's research about place-making in informal settlements in México (Lombard 2014). Lombard is a British researcher who explores "global shelter inequalities through the nexus of residents 'everyday constructive activities" (The University of Sheffield 2020). She uses an ethnographic methodology in two case study neighborhoods in Xalapa, México. Her approach follows a tradition of ethnographic research into urban poverty, which helps her explore individual and collective place-making activities, as an important form of shaping these spaces. Additionally, this approach allowed her to understand how the settlements she studied were discursively constructed both outside and inside the settlement. Lombard's (2014) work contributed to understanding informal settlements beyond essentialist categories of poverty and informality, and to developing theory on the relation "between social processes and spatial outcomes." Her work is not only relevant for this research because she uses ethnographic methods to study the relation between people living in informal settlements and the space they inhabit, but she also observes this relation in a wider context, by studying the discourses behind representations of these spaces.

Although everyday life and ethnography are relevant for the context of this research, some critics, and researchers underline the limitations of using these approaches. An important limitation—which Lombard (2014) was aware of in her

research—is that focusing on everyday life might disregard wider conditions relevant to the production of everyday space, such as power disparities and essentialist views of informal settlements. Roy (2011), for example, calls into question the "conditions for knowledge" through which informal settlements are represented; means certain ways informal settlements are defined and placed in the world might promote and deepen disparities between people. Additionally, these images or representations about informal settlements are considered essentialist views about these places. Lombard (2014) argues the contrary; for her there are no single or essential identities for these places. Rather, they have multiple identities, and this multiplicity is a source of richness and conflict. An example of questioning an essentialist image can be found in Roy's (2005) work, when she questions the image of the "moral capacity of the poor" in informal settlements. She argues that these representations are a recycling of the self-help housing movements and community initiatives, which were later taken for developing the views of informal settlement dwellers as "heroic entrepreneurs." This image was promoted by Hernando De Soto, a Peruvian economist who depicted this idea in his book "The Mystery of The Capital." De Soto argued that the solution to informal settlements is formalization and incorporation of informal economies into the formal markets (De Soto 2000). This approach is problematic because it creates a unified image of people that live in informal settlements: capable, self-reliant and entrepreneurial. Yet, it disregards differences within people in these spaces and the structural inequalities that created these conditions. This is an example of theories and practices that "neglect the actual geographies of capital accumulation in which those spaces are produced" (Mitchell 1997). Thus, ethnography

might be used as a device of legitimizing specific interests by claiming to understand everyday life of people living in informal settlements.

Approaches that observe informal settlements from the perspective of the everyday life of their dwellers are a critical component of this research, as these approaches claim to work with the social production of these spaces. This research will explore urban green spaces as everyday spaces, by exploring these spaces in terms of the people interacting with them through their use and transformation (Hernández García 2010). Everyday spaces are not static, nor do they express a clear and unified identity. On the contrary, they are ambiguous and constantly changing, and this implies that the approaches to everyday spaces must be tactical (Chase, Crawford, and Kaliski 1999). Furthermore, ethnographic methodologies offer researchers access to everyday lives and their symbolic dimensions. Although fieldwork observations about everyday life must be put into wider perspectives of social, economic and political process (Lombard 2014). Through exploring the everyday life, this investigation sets away from essentialist and dualist views about informal settlements, and it heads towards multiplicity of changing perspectives that interact to produce these spaces. The focus of this research resides within these interactions.

CHAPTER 3

GREEN PUBLIC SPACE IN LOS CIPRESES: CREATION, TRANSFORMATION AND COLLECTIVE MANAGEMENT

Introduction

The previous chapter—the literature review—drew attention to the intersection between greening initiatives and informal settlements in academic literature within other geographical contexts. It argues that this intersection has not been sufficiently addressed from the individual and divergent perspectives, experiences, and actions of its stakeholders. Conversely, previous research focuses on the creation of models that can be applied to multiple settings, without deepening in particular circumstances that that can influence larger systems. Thus, this research explores this intersection in one case study, drawing from the singular stories and interactions of the stakeholders directly involved in the intersectionality between greening initiatives and informal settlements.

This chapter focuses on LC of Barrio Mexico and its Green Public Space (GPS); in particular, the effect of the continuous interaction between different stakeholders and this landscape." By analyzing the emergence of GPS in LC, their qualities, improvements and the consequent challenges, this chapter lays out the groundwork for further analysis of conflicts between stakeholders. Thus, by properly presenting this scenario, readers will understand the circumstances behind the attitudes and relationships between their stakeholders. This process will be analyzed in the next chapter.

This chapter, however, is organized in five parts. The first four parts depict the historical context of LC, divided in periods differentiated by events or circumstances that

led to significant changes in GPS. The following section describes the current configuration of LC and classifies its GPS into different types. The following section shows upgrading activities for GSP over a period of five years and leads to a general overview of management of GPS which includes analysis of challenges in GPS management that were identified though a participatory root-cause analysis. The chapter finishes with the discussion of future purchase and formalization of LC, and what this change might entail for its GPS and its management.

A brief history of Los Cipreses before its occupation

LC is located in Barrio Mexico, a neighborhood near downtown San José City (see Appendix B and C). Before 1910, Barrio México was mostly pastureland and coffee farms, agricultural landscape surrounding San José´s urban areas during most of the nineteenth and twentieth centuries. Barrio México neighborhood began in 1910, when many humble families migrated from Cartago—Costa Rica's second largest city at that time—after a devastating earthquake that left many families without subsistence (Malavassi 2010). Due to this situation, landowners of Barrio México area decided to segregate their lands and provide properties for people to settle. After this initial settlement had its official naming in 1923, Barrio México thrived and became an important neighborhood of San José.

Despite the urban increasing development, the site of LC remained a pastureland, with scattered trees and remnants of the original tropical pre-mountainous forest's native to this area of San José. LC, just like other river margins in the city, served as a buffer between the Torres River and Barrio México, mostly because these sites had steep slopes, which made them less suitable for urbanization.

The natural setting of LC served the neighbors of Barrio México as a space for amusement and scattering. It was a public space where people became used to gathering to experience a rural setting nearby. Miguel Masis—a neighbor of Barrio México who has lived most of his life next to LC—remembers that people called this place "La Hacienda" (the ranch) because it looked like a farm. It had fruits of many kinds and people came to LC to harvest them.

Neighbors of Barrio Mexico also visited this place to access the river, to play soccer and kids slid downhill over the elephant grass using carboard boxes. Mr. Masis once even mentioned that "this place was fabulous for many families in the neighborhood, humble families". He depicts LC or "La Hacienda" as a bucolic setting were people had fun and enjoyed nature. He stated that it reminds him of better times when people lived in a healthier and safer San José, when children played outside and there were less cars and more trees. This same image is shared by two other neighbors of Barrio México that were interviewed who longed for those times when nature was more accessible and there was a feeling of rurality within the city.

To have a roof of their own: Occupation of the site of Los Cipreses and its initial years

The occupation of the site that today is named LC began on Tuesday May 8th, 1990. The legal status of this process was ambiguous, which created a feeling of instability in the early settlers. This instability was reflected in the physical conditions of the settlement, which remained ephemeral and precarious, and the reason for this was the threat of eviction, which discouraged settlers to put effort and resources in consolidating their dwellings and common spaces. The land belonged to the Castro family, who argued

that they were invaded by squatters. However, various testimonies mention that this family was fully aware of the occupation (Julia Zamorano, interview by author, San José, August 10, 2019; (Carrillo-Barrantes 2019).

The possible complicity of the owners in the occupation process is key to understanding the relationship between the occupants and the land ambiguity—occupants did not know if their actions were legitimate or illegitimate. Mrs. Julia Zamorano, a community leader, was one of the first occupants that later helped to organize the settlement process. In a personal communication, she argues that she came to live in LC because she was told that the owners were giving permission, so no one was going to evict her. She later realized that this was not true, that the owners could not urbanize the land, but by having an invasion of squatters, the government would buy the land from the owners and give people housing. (Julia Zamorano, interview by author, San José, August 10, 2019). These circumstances were similar in other members of LC; they were offered free land or at a very low price, as part of an organized occupation of the site, claiming that this was not legal, but it was a legitimate process. Squatting was a common housing solution at the time, since during the 1980s, 125 land invasions were established in the Great Metropolitan Area (Velazquez 2008). These events were part of the housing crisis and the difficult economic situation in Costa Rica at that time, when extreme poverty increased 50 percent from 1987 to 1991 (Velazquez 2008). For many years, these events gave a feeling of instability to LC inhabitants who were in the process of settlement; occupants did not know if they were going to get evicted, and government support was unclear.

Additionally, squatting in the site of LC came with a series of social stigmas, which led to discrimination and segregation between LC inhabitants and the other neighbors of Barrio México. These prejudices have been part of the lives of its community members and influenced their own relationship to their landscape. Mrs. Zamorano illustrates such experiences in one of her stories about the discrimination experienced by the community youth (Figure 3.2):

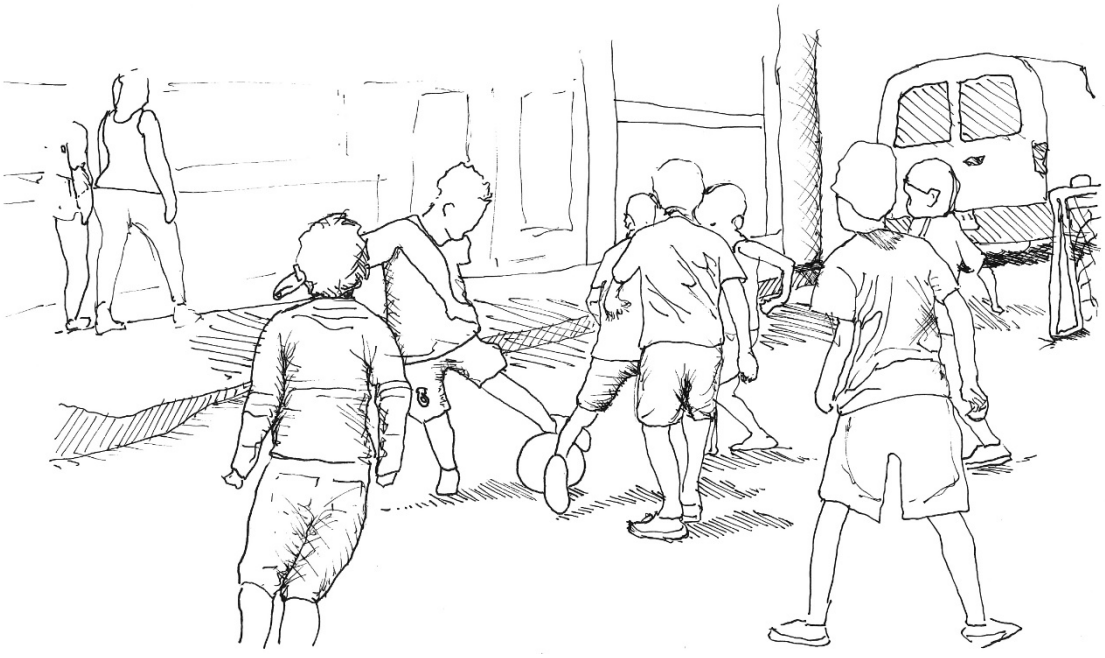


Figure 3.1: Youth playing soccer in LC. Drawing by Felipe Barrantes.

> A soccer field is missing. In fact, the youth from here go to Claret (the neighborhood next door) but have always been told they don't belong there—you are from the slum, go to the slum—they lived that discrimination. (Julia Zamorano, interview by author, San José, August 10, 2019)

Both community members of LC and neighbors of Barrio Mexico tell stories of discrimination like the one from Mrs. Zamorano, which reflects the social segregation between the formal and the informal neighborhoods. This segregation creates tension

between former neighbors of Barrio Mexico and recent inhabitants of LC, which leads to more isolation and self-sufficiency in the everyday life of the settlers.

The main cause of discomfort by surrounding neighbors and government institutions due to the squatting in LC site was environmental destruction. However, these environmental damages already occurred before the occupation. These annoyances have caused the stigmatization of the first settlers who consequently have developed an interest in improving the environmental conditions of their site. The first settlers were accused of two environmental damages: (1) clearing the forested areas for squatters' buildings and (2) receiving construction and soil debris from other parts of the city, thereby converting the site into a landfill. The first accusation is unfounded because the land was already cleared before the occupation as evidenced in Figure 3.2. Additionally, Mr. Masis, a case-study interviewee, also mentioned that the site was cleared before 1990, however, he did not mention by who or when the land was cleared (Miguel Masis, San José, August 9, 2019). The second accusation of landfilling already occurred before the occupation. In his ethnographical work in LC, Carrillo-Barrantes (2019) gathers the story of the community through inhabitant voices. In his text, Carrillo writes how community members of LC mention that before the occupation in 1990, this site was an illegal landfill for the whole Barrio México. This story is not hard to believe, as many river margins of the city of San José are used for the same purposes. However, stigmatization for being an informal settlement has been exacerbated as the site was known for being an open-air dump site. For this reason environmental pollution has been a cause of discrimination of LC inhabitants since its beginnings, but also serves as a reason for the community's interest in improving their GPS, partly as a form of reducing prejudices against them.

Figure 3.2: Aerial image of the site of LC in 1989. Source: National Geographic Institute of Costa Rica.

First inhabitants of LC had to settle in scarce resources and minimal infrastructure to new social and physical environment. These difficult conditions for LC have shaped their relation to the landscape—one of little reliance on external participation—in order to shape their habitats and improve their living conditions. María Gutierrez came to LC when the site had six months. She tells that squatters organized and built an improvised pipeline to bring down drinking water and that each shack had two hours to fill plastic buckets and barrels. (María Gutierrez, interview by author, San José, July 25, 2019). Mrs. María's stories exemplify the initial conditions of the occupation; there was no electricity, potable water, sewer, or streets. People had to rely on themselves and through rudimentary collective organization to fulfill their basic needs and build their houses using the materials they could get from their surroundings, such as cardboard, fabric and plastic. First inhabitants talked about these initial experiences as very difficult and traumatic, although they also looked back at them with pride, because they carried on

despite difficulties; now they have a roof over their heads and a house in the city. This resourcefulness reflects in the way people interact with their space, through active engagement and appropriation; for instance, building new room for their house, plant a crop in the hills, or help a neighbor to change the roof.

Despite LC settlement was built mostly through self-construction processes, there was an event that meant a larger involvement from government institutions into the community's spatial configuration: landslides. This hazard and the institutional reaction towards it have been determinant for the community's configuration. Two significant landslides occurred in LC; one in 1996, when 7 houses were destroyed and 27 families were relocated to housing projects in other parts of the city (Cordero Infante 1996), and a second landslide that occurred in 2005 where 28 families were relocated (Caravaca 2005). The delimitation of areas susceptible to landslides was determined by the National Emergency Commission and evictions were ordered by the Ministry of Health. An aerial image from 1998 shows how houses were scattered all over the site which meant that houses closer to the river were more susceptible to landslides and had less access to infrastructure (Figure 3). Most of the evicted families were relocated to housing projects in other areas of the city. These interventions meant a reduction of the number of houses and therefore, the community's population, since after these occurrences, housing areas were limited to less steep slopes farther from the river. The numerous evictions and the delimitation of areas of risk are the main reason why ¾ of LC is destinated open space. After these interventions, the community has kept these areas without occupation from anyone, despite the fact that some of the areas are suitable for housing. To this day,

landslides area a human health and environmental risk. Thus, this is one of the main factors that drive different stakeholders to improve LC GPS: to prevent more landslides.

Figure 3.3: Aerial Image of LC in 1998. Terra Project. Scale 1:40000. Source: National Geographic Institute of Costa Rica.

Initial years of occupation were characterized by continuous change, which was a result of the negotiation and delimitation between public and private space. Private space, during the first months and years had blurred continuously changing boundaries; they were margins in continuous dispute. Mrs. Gutierrez's stories illustrate these initial conditions. She explains that when she first moved to LC, she came with her young child when she was only15 days old, and had to sleep in a mattress on top of a dirt floor, with improvised walls made of bed sheets. The delimitation of space made with reclaimed materials was symbol of ownership, as "You must be here, otherwise someone will take the lot from you." (María Gutierrez, interview by author, San José, July 25, 2019). These initial years of occupation were characterized by change; people moving in and out; and sometimes, people settling land ownership by violent encounters. Shacks were being built

everywhere and continuous eviction attempts by the government kept settlers from improving their houses. The lack of security in ownership influenced the attitudes of initial settlers towards the space of LC as every gesture over space and every attitude of a visitor could mean the reclamation or appropriation of space. These attitudes are still reflected in many inhabitants 'distrusts towards people using LC open spaces, as it signals occupation of space.

Building Community: Self-organization and community's improvement

Although difficult and precarious, initial conditions in LC were only temporary. The community's perseverance paid off for the people who stayed, as their settlement progressed to become a healthy and prosperous neighborhood. The same progressive improvement happened with open spaces in LC, which advanced thanks to the time and effort of its inhabitants including the involvement of institutions and other external stakeholders, and the natural processes such as ecological succession. During the first four years of occupation, 350 families moved to LC and built shacks all over site. However, evictions by the government reduced the number of families to 92 by 1996, when the Neighbor Association was created. Before 1996, the families of Cipreses organized and protested multiple times in front of government institutions to stop eviction attempts and to obtain infrastructure and housing. These same families managed to collectively obtain, share, and create an improvised infrastructure system for potable water, electricity, and sewer. Moreover, houses transitioned from being ephemeral shacks to metal and concrete structures, and infrastructure and services became accessible to all dwellings. These improvements reflect the inhabitant's capacity to face to new conditions

by hard work, organization, and self-management. The tipping point in this progressive development happened in 1996, when the community became formally organized.

On November 12, 1996, LC inhabitants created the LC Neighbor Association (Figure 3.4), an important breakthrough regarding the community's organization; it provided them a self-organized governance system and a political coalition to ask for help to government institutions. The Neighbors Association's first accomplishment was buying one fourth of the land from its original owners. This arrangement took a great effort from all the community members, who spent two years paying a monthly fee for a share of the land. Becoming owners meant the community stopped facing evictions from the government. The second accomplishment of the Association was to establish relations with multiple government institutions who contributed to provide basic infrastructure and services. Despite institutional support, government involvement has been ambiguous and dependent on political interests. Infrastructure has been developed mostly through the community's efforts with partial assistance from institutions. Consequently, most of the infrastructure in LC is deficient or unfinished. The third accomplishment was internal organization; the Association began organizing and charging a fee for infrastructure, security, and other matters related to common spaces. This is when organized improvement of open spaces began, as the Association made calls for cleaning days, where the entire community worked to collect waste and cut the grass from open spaces. The Neighbor Association was the first sign of hope for LC, and it represented a change of mind for its community members. Inhabitants of LC realized that improving their life conditions within the settlement was not possible by relying exclusively on government

support; on the contrary, they knew that they had to rely on their own means and self-organization to improve the community.

Figure 3.4: First Neighbor Association Assembly, LC de Barrio México. Source: Daniel Carrillo Barrantes.

The families became part of the association and were not relocated by the government but stayed in LC and prospered. This prosperity is reflected in the improvement of the houses, infrastructure, and open spaces. Community members of LC mention with pride the events that represented landmarks in their struggle for improvement of the settlement. For example, in 2003 the community organized to build a community center, and in this same year, they negotiated with the power company the construction of powerlines and installation of individual electricity meters; before this installation, electricity was collective and obtained illegally, a practice that represented a significant fire risk. Between 2005 and 2010, a clear street layout was defined, initially

made of dirt but later by gravel. This allowed every house to be accessible by car. In 2012, with help from the National Institute of Aqueducts and Sewers, the community improved their water infrastructure, which enable them to provide potable water to every house in the settlement. In 2014, the community built basic sewer infrastructure, connected to the city's main sewer pipeline that crosses the site of LC parallel to the river. These achievements are common parts of the progression of informal settlements, and they are evidence of the organization though the Neighbor Association and the interest of community members to thrive; many other informal settlements did not have the same luck, disappeared over time, or they remained in the initial stages of precarious conditions.

Turning point: from open spaces to Green Public Space

Since the occupation of Los Cipreses (LC) in 1990, informal settlements processes have shaped its landscape. In 2014, a turning point occurred when new stakeholders became concerned about the environmental conditions of LC open spaces. Open spaces transitioned into Green Public Space (GPS), public spaces purposefully managed for their social and ecological significance. Open spaces in LC evolved parallel to the formation of the community and its residences. Open spaces became neighborhood streets, small parks, and the community's forest; these are LC GPS. This change of definition meant that open spaces acquired other purposes beyond meeting the basic needs of LC ' inhabitants. Therefore, planning, resources and manpower were intended exclusively for the purpose of improving these spaces. This shift of perspective towards open spaces in LC was triggered by a new set of stakeholders interested in the environmental improvement of LC as part of a larger initiative of urban environmental improvement.

After their initial involvement in 2014, these stakeholders influenced LC open spaces and the community's perception of them (see Appendix A). The new dynamics over GPS meant the introduction of new logics of spatial organization, new values, and new governance structures, all of them influenced by larger environmental movements seeking to increase landscape connectivity and citizen awareness of the ecological significance of urban rivers.

GPS in LC are collectively managed public spaces, used primarily by inhabitants of LC but also by people who visit urban wildernesses for different purposes. On the other hand, GPS also have ecological functions, which make them predominantly green spaces. Some of these ecological functions are as stabilizing slopes, increasing urban biodiversity and allowing water infiltration. GPS in LC have been shaped by: (1) LC inhabitant's everyday activities and their continuous efforts to improve their living conditions; (2) interventions from government institutions as part of risk management and slum upgrading initiatives; (3) biotic and abiotic processes such as erosion and landslides caused by runoff, ecological succession and hydrological processes associated to the Torres river; and (4) environmental initiatives that seek to rehabilitate the margins of the Torres River. Additionally, GPS in LC are also shaped through the different meanings and functions that its users assign to them. There are spaces for personal use, movement, meeting, and nature. Due to the condition of LC as an informal settlement, these meanings and functions of GPS are not assigned by a single stakeholder following a strict policy, nor are they directed by designers and contractors; GPS in LC evolved through the continuous interaction between different stakeholders and this landscape.

Spatial configuration of Los Cipreses and its Green Public Space

As shown in an aerial image from 2015 (Figure 3.5), Los Cipreses (LC) is divided in two large spaces: residential areas and green areas. The separation of these two uses is not rigid as it has changed over time, and reflects the fluctuating relationships between houses and open spaces (Figure 3.6**)** shows a sequence of diagrams that track the variation in land cover in LC. It uses 4 aerial images taken every 10 years. This is a simple form of visualizing the progression of housing and open spaces). The first diagram was based on the 1989 aerial image, taken before the occupation of LC; the diagram shows the area where earthworks were recently done for some type of development, and at this time there were no buildings within the site. 10 years later, in 1998, houses were distributed in most of the settlement, indicating that the population was possibly higher at the time. In contrast, the 2008 image shows a much smaller housing footprint and signs of earthworks in the immediate areas of the houses. These earthworks were done during government interventions due to the landslides. Finally, the 2018 image shows the current distribution of open spaces and houses in LC, and also reveals a clear separation between housing areas and open areas, which over time became LC Green Public Space (GPS). The progression of land use of LC exposes how the landscape morphology interacting with the informal processes of occupation have been key factors in the community's evolution and current shape. Because of these conditions, currently, ¾ of what the community considers theirs are GPS.

Figure 3.5: December 2015 aerial image of LC. Source: Image by Marcial Andres Porras.

Figure 3.6: Change of land use in LC based on historical aerial images from 1989 to 2018. Source: Drawing by Felipe Barrantes.

There are multiple types of GPS in LC, which vary depending on physical qualities of the landscape and the proximity to houses and infrastructure. These variations

give diversity to the uses of GPS, which sometimes are conflicting. Figure 3.7 has a color gradient that represents elevation of the digital elevation model. The image illustrates how houses are located in the flattest areas and with higher elevations (color red), while also showing the most significant patches of vegetation in the western part of the site and small patches near the river (dark blue). Differences in these physical qualities along with different uses and management approaches served to classify GPS in different types. Figure 3.8 shows the current distribution of each type of GPS and Table 1 lists the types of GPS (see appendix 1 for table). This classification of GPS was done using field observations, interviews, and maps as data. GPS of LC were classified in 11 types, depicted in figure 9 by a number and a color code. Number 1, the dark green, is the River Protection Area, the least used by community members and it is entirely destined to natural regeneration. This area is managed by stakeholders interested in ecological restoration of Cipreses such as HWD and IAFN. On the opposite side, there is a purple-colored area or number 11. This is the Central Intersection, an area entirely shaped and used by community members, and it is the most important public space in the community; this space hardly has any plants as it is entirely destined to human activities. These two areas can be seen as the extremes of a gradient that go from the spaces designated for biotic and abiotic processes and intended to be ecologically restored by their correspondent stakeholders; to the most humanized spaces, shaped by people through their everyday activities. In the middle, areas such as Back Yards (5), Steep Slopes (6) and Land Fills (7) are the transitional spaces; these are areas of change, tension and where conflicts between different uses and stakeholders; these conflicts are the topic of the further sections.

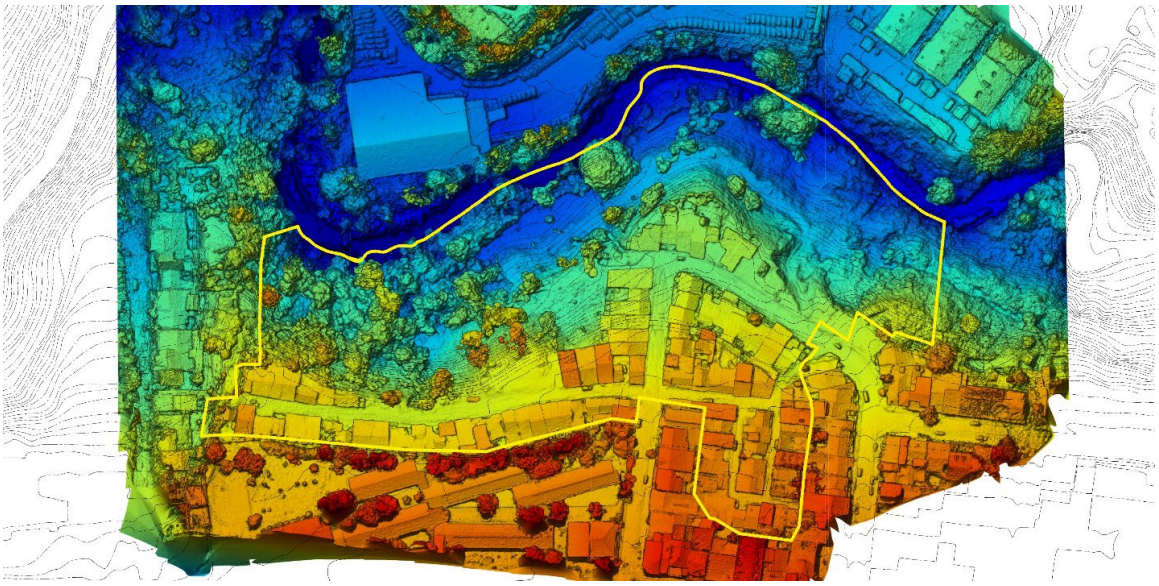


Figure 3.7: Digital elevation model of LC. Source: Image by Marcial Andres Porras.

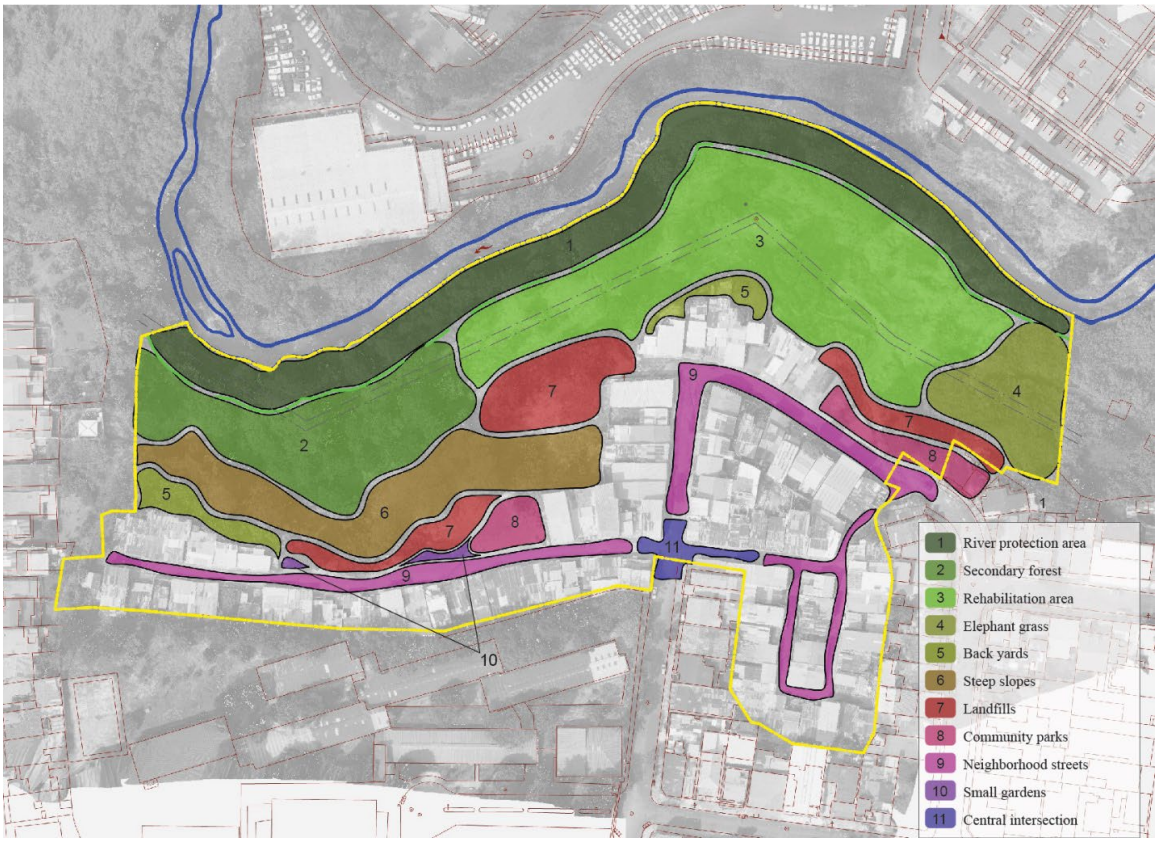


Figure 3.8: Types of Green Public Space in LC de Barrio México. Source: Drawing by Felipe Barrantes.

Upgrading activities for Green Public Space in Los Cipreses

Management of Green Public Space (GPS) in Los Cipreses (LC) can be understood by observing the activities conducted by different stakeholders with the purpose of upgrading these spaces (see Appendix A). The abundance and diversity of upgrading activities over GPS is what differentiates GPS in LC from other urban green spaces. A list of activities was gathered from interviews, observation, participation, and revision of documentation. Table 2 shows a classification of activities related to upgrading GPS between 2014 and 2019 (see appendix 2 for full table). 74 activities were documented, and these activities were grouped by their area of influence, which may be a physical space, a stakeholder, or a function. For instance, private space and large-scale activity groups are related to a spatial delimitation; but, communication, involvement, and education, or planning-and-organization are related to function. Academic activities are directly related to their leading stakeholders. However, it is important to point out a limitation of this process of research, as many activities over GPS conducted by community members are part of their everyday lives and therefore, difficult to identify.

Table 3.1: Types of activities related to improvement of GPS of LC between 2014 and 2019.

Name	Number of Activities
Private space	2
Academic	8
Large scale	6

Environmental initiatives and improvements	10
Communication, involvement, and education	16
Organization and planning	8
Green space maintenance and improvement	16
Community space maintenance and improvement	7

Despite this limitation, the identification and classification of multiple activities related to improvement of GPS provided two main findings: (1) GPS in LC are not just shaped and transformed by the everyday activities of their users and the regular processes pf urbanization in an informal settlement; but they are actively managed by multiple stakeholders, who have diverse backgrounds who invest energy and resources for different purposes using various approaches. This influence of stakeholders over GPS in LC is mediated by the different significances of this landscape for them. Understanding stakeholders, the motivations for their actions and conflicts between them is the topic of next chapter. (2) This convergence of stakeholders and their capacity to act over GPS in LC also comes from the irregular condition of this site. By being an informal settlement, LC GPS do not have a hierarchical governance structure; they are not entirely managed by a government institution, nor by the Community Association. Informal or irregular condition of this space has provided freedom to different stakeholders to act by seeking their own motivations and self-organization in multiple ways. This public quality bolsters

to its ecological significance and has enabled the synergy that takes place in these spaces. However, multiple stakeholders acting without a coherent governance structure has also led to conflicts and the neglect of key problems over GPS.

Detrimental processes over Green Public Space in Los Cipreses

Despite the abundance of activities that seek the improvement of Green Public Space (GPS) in Los Cipreses (LC) they are also shaped by processes that are detrimental to these spaces and its users. To identify and understand these processes will reveal the limitations of the collective management of these spaces. Detrimental processes in GPS are caused by a combination of biotic, abiotic, and anthropic factors that are interconnected between them. Detrimental processes over GPS were identified by some of their stakeholders in a focus group where they collectively explored some of the causes and consequences of these problems. During a focus group, stakeholders that were interested in improvement of GPS were summoned with the purpose of discussing challenges and concerned regarding their management (Figure 3.9). During this meeting, problems and conflicts associated with GPS in LC were analyzed using root-cause analysis (Rooney and Heuvel 2004) as an effort to identify the origins and challenges of GPS. Though brainstorming and joint thinking, stakeholders received facilitation by the researcher in the process. The result of these events was the creation of a causal factor chart that shows causes and interconnections between five main environmental problems: disposal of solid waste, elephant grass, erosion, slope instability and disposal of sewage (see appendix 3 for diagram). These issues have not yet been fully addressed, which reveals the inconsistencies in management of GPS in LC.

Figure 3.9: Focus Group: Green Public Space in LC. Organized by Felipe Barrantes: LC Community Center. August 2019. Source: Alonso Briceño Rodríguez.

Landfilling or disposal of solid waste over GPS is still being practiced and is still unpunished by authorities, despite its illegality, environmental impact, and risk to human health. This practice is the main evidence of conflicting uses of GPS. Landfilling consists of allowing trucks of different sizes to dump soil and construction debris into specific areas of the site. At the same time, community members receive money from truck drivers or the waste providers to allow this activity. These waste providers find these illegal practices profitable since they would otherwise have to spend larger amounts of money and drive longer distances to take this material to a legal landfill. Additionally, community members deal with truck drivers or waste providers to obtain earthworks services which are used to cut and fill certain areas to create more flatten land to build more houses. These practices are illegal and highly disapproved by authorities, neighbors of Barrio Mexico, environmental groups, and many community members who are concerned about the environmental impacts and the risk to human lives that these practices entail. However, debris is still disposed in LC and new houses are being built,

using this debris as part of the foundation. The environmental damage of this practice is evident, as portions of vegetated land in steep slopes are covered with debris, creating unstable slopes that get easily eroded (Figure 3.9).

Figure 3.10: Illegal landfill and earthworks in LC de Barrio Mexico, July 2019. Source: Felipe Barrantes.

Slope Instability is a detrimental process that is partially linked to landfilling. Slope instability has been an important limiting factor to the site's urban development. Therefore, slope instability is the main reason why most of LC are GPS and reducing the impact of landslides has been determinant to the housing processes. Two significant landslides have occurred in LC, one in 1996 and another one in 2005. Both occurrences meant large institutional involvement and expropriation of many inhabitants. Landslides are caused by a series of interconnected factors. Firstly, most of LC site has a slope above 40%, as a result of being part of the river canyon morphology. Consequently, urban development at this site—as with many others urban margins—is not allowed by urban

planning authorities. However, this has also meant that places near steep slopes and near river margins get neglected. Therefore, urban margins are subject to irregular uses such as informal settlement and landfilling which increase the probability of landslides. The houses built over steep slopes and over landfills, without adequate site planning causes enablement which increases the risk of landfills. The issue is reinforced as houses and urban infrastructure are comprised of impermeable surfaces which in turn causes increased runoff, yet another factor that increases the probability of landslides.

Elephant grass (*Pennisetum purpureum*) is an invasive grass brought from Africa and highly naturalized in the world´s tropics. Elephant grass is common along open areas along the Torres River sub-watershed and its removal is one of the main management challenges in LC (Figure 3.10). Elephant grass outcompetes other plants and therefore, inhibits the process of natural succession that would lead to the establishment of an ecologically healthy riparian forest, which contributes to increase urban biodiversity. However, elephant grass successfully colonizes cleared areas caused by landslides and landfills, and once established, it helps to reduce landslides, erosion and provides habitat to small wildlife, such as small birds (Sánchez et al. 2015). Removing this grass to allow growth of other plants has been one of the most difficult and expensive tasks in management of GPS in LC.

Figure 3.11: Elephant grass (Pennisetum purpureum) in Torres River. Source: Felipe Barrantes.

Erosion is another issue which is interconnected with the two previous ones. Erosion causes soil depletion and is evident in most of GPS of LC and its ubiquity is one of the main flaws in management of GPS. This issue occurs in LC by the increased runoff from the houses and streets. The most evident signals of erosion are the gully's caused by rainwater and sewage that concentrate in certain areas. Erosion causes impoverishment of soil and drastic modification of the onsite topography. It also increases the risk of landslides as it slowly increases the slope in certain areas of the site. To face this issue, in

2016 the community board with help from the Municipality of San José built street gutters to channelize some of the rainwater. However, this project was not finish and rainwater is still directly channelized into the GPS.

Sewage is being released directly into LC GPS, which represents a great human health and environmental risk. Despite many complaints, the issue has not been solved; this is another example of inefficiency and contradictory management of GPS. In fact, LC has two sources of sewage that are directly disposed over their GPS. The first one comes from the high school Liceo the San Jose, located uphill and adjacent LC. A complaint was presented by the Community Board to the National Institute of Water and Aqueducts regarding this issue; however, the issue has not been followed up on and noting has been done about it. The second sewer source comes from the community itself, which in 2015 was channelized and connected to the public sewer pipeline that goes to a water treatment facility. Part of the installation was destroyed by heavy runoff caused by a storm, because the community sewer pipeline followed the same path as the stormwater. Ever since, the sewer pipeline has not been fixed and it goes directly to the gully and then on into the Torres River (Figure 3.11).

Figure 3.12: Sewage falling directly into LC GPS. Source: Felipe Barrantes.

Los Cipreses formalization: The end of all sorrows?

Despite all these accomplishments, many of the works of infrastructure are deficient or remain unfinished due to lack of resources and inconsistent institutional support. To obtain full institutional support and end their condition of informality, in 2018 the Association made an agreement with the owners to purchase the rest of the land. This formalization of land tenure leaves many doubts about the community's future, especially when it regards its open spaces.

This purchase has been applauded by institution officials and other external stakeholders who have been involved with LC in the past. They argue that this purchase means a great accomplishment for the community and will provide prosperity to the community (Marcela Mendoza, interview by author, San José, August 6, 2019), (Vanessa Durán, interview by author, San José, July 25, 2019), (María Gutierrez, interview by author, San José, August 3, 2019), (Miguel Masis, interview by author, San José, August

9, 2019). This same ideal is supported by many community members, especially the ones that oversaw the purchase (Julia Zamorano, interview by author, San José, August 19, 2019). However, other community members were against the purchase; some opposed because they did not have the means to pay for the monthly fees that this purchase implied. Others believed that the purchase would benefit some community members and some would be harmed as the purchase would reinforce inequalities within the community (María Isabel Gamboa, interview by author, San José, July 29, 2019), (Mercedes Rodriguez, interview by author, San José, July 30, 2019). Becoming rightful owners will mean significant changes in the community's governance; it will entail more involvement of government institutions and regulations and it leaves uncertainty about how open spaces in LC will be managed and the degree of the community's involvement in this management.

Conclusion

Regardless of its formalization, GPS will keep their green and public statuses, since the current abundance of stakeholders interested in environmental improvement have successfully reshaped these spaces and engaged inhabitant relationship to the land. In retrospect, LC have once again become the spaces for recreation and enjoyment of nature for many citizens, just as they were before its occupation. However, informal processes of settlement have transformed these spaces and enabled current management so that the experiences and knowledge behind informal processes of settlement and the people who have dealt with them could become essential to management strategies of GPS without minimizing the difficulties that these people have experienced including structural inequalities that led to their socio-spatial segregation. In parallel, the physical site of LC

has also been marginalized and neglected, as shown by detrimental processes; neglected spaces and neglected people come together in the same place, strengthening the marginalization processes. Despite these downsides, environmental and social improvement activities on this site facilitated by its inhabitants (as well as external stakeholders), have created a synergy between stakeholders which has benefitted the environment as well as social conditions in LC.

This chapter was focused on the physical site of LC GPS, and the events that led to transformations of this landscape. It pointed superficially the people behind these events, and it divided them into two large groups: inhabitants of LC and external stakeholders. The following chapter will therefore further examine motivations and interactions of some of the people behind these events. It will use stakeholder analysis techniques to unpack the different groups of stakeholders behind management of GPS in LC. Understanding stakeholders 'motivations and interactions helps managers of GPS to integrate the social life and political struggles of users into GPS management.

CHAPTER 4

CONFLICTING VIEWS WITHIN MANAGEMENT AND USE OF GREEN PUBLIC SPACE IN LOS CIPRESES

Introduction

The previous chapter explored the events that led to physical changes as well as the current conditions, uses and management of Green Public Space (GPS) in Los Cipreses (LC). These are all factors that influence the creation and transformation of the physical setting of LC. The ethnographical exploration revealed how GPS are socially produced by an array of stakeholders, who's interests, and motivations are divergent and sometimes conflicting. These social dynamics reflect larger socio-ecological issues that occur along the Torres River, where informal settlements and environmental initiatives overlap. On one hand, there are issues related to the social and environmental vulnerabilities that began thirty to forty years ago and were caused by the informal human settlement processes which were a consequence of the larger urban housing crisis of the 1980s and 90s. On the other, issues related to larger environmental impacts that these settlements cause were made more visible by the greening initiatives that seek to clean the rivers and rehabilitate the environmental conditions of its margins.

This chapter explores how these issues unfold in LC, through the differences and conflicts that arise between people who support one of these issues more than the other. To focus on differences and conflicts has a practical cause, the primary reason being because irreconcilably divisive situations between stakeholders hinder opportunities for dialogue and participation. Understanding these conflicts can expose the exclusion of

certain stakeholders, unearth unaddressed issues over GPS, and probe possibilities that remain unseen (Calderon 2020). Thus, by understanding differences, practitioners such as designers, planners, and landscape managers can avoid making unconscious or assumed choices driven by the unseen power dynamics between stakeholders.

Conflicts are not only problematic but can be understood as part of the processes of how these spaces are shaped and controlled by different and changing forces. These forces are key components of the social construction of space (Low 1996). To explore antagonistic relations is a way to understand the different social identities that shape these spaces beyond the categorization of stakeholders into homogeneous groups of social antagonism. In fact, antagonistic relations can be seen as evidence of a process of "cultural negotiation:" through which GPS are continuously rearticulated and gain renewed meanings (Hernández 2002). For instance, landfilling and construction of new dwellings was seen by all inhabitants as the only way they could procure for themselves a home in the city; however, this perspective changed for some as they realized that this practice was dangerous and environmentally destructive. This is an example of how perspectives about GPS shift over time, as well as conflicts and power dynamics between stakeholders.

This chapter is divided into four parts, corresponding to the four main differences between stakeholders identified in this research. The first section describes the general topic of conflicts caused by uncoordinated actions on GPS. The second part discusses differing opinions regarding the relationship between LC inhabitants and their respective GPS apportionment. The third part explores the conflicts caused by the processes of land

formalization and titling. Finally, the fourth part explains the conflict between further urbanization and conservation of GPS,

Stakeholders

Stakeholders within the use and management of GPS were grouped into nine groups. Table 1 summarizes the nine stakeholder groups, their relation to management of green public spaces in Los Cipreses, and how many stakeholders were interviewed form each group. While the table provides an overview of the multi-stakeholder management of Los Cipreses, appendix A provides a more detailed description each stakeholder group.

Table 4.1. The nine stakeholder groupings involved in management of Green Public Space in LC (MGPS-LC).

Stakeholder grouping	In-text reference	Summary of relation to MGPS-LC.	Interviewees (no.)
Hydrographic Watershed Department	HWD	HWD is the municipal department in charge of managing green spaces along riverbanks of San José. They have worked in LC since 2014 conducting ecological rehabilitation and sanitation activities in GPS of LC.	1
Blue Flag Program and Commission	BAE	BAE is an award created by the National Institute of Aqueducts and Sewers. LC has been awarded with the Blue Flag for 5 consecutive years. Every year, BAE commission members develop a management plan and an inspector visits the site to evaluate the site's conditions.	1
Community Association´s Board of Directors	Board of Directors	The Board of Directors began in 1996 and is the main governing body over GPS of LC. It oversees all community activities within GPS. The board´s role in MGPS-LC depends on its members, who are elected every four years.	2

Community members	-	These are all inhabitants in LC. They relate to these spaces through their everyday activities and social interactions. Attitudes and relation to GPS are diverse and sometimes in conflict.	6
International Network of analog Forestry	IAFN	IAFN is an NGO that promotes analog forestry, an ecological restoration technique. IAFN became involved in LC in 2014. IAFN has been actively involved in multiple activities related to MGPS-LC, having a close relation to community members and other stakeholders.	1
Other associates inside CBI-RT Commission	CBI-RT Associates	Other institutions, NGO´s and citizen groups who are associates of the Río Torres Interurban Biological Corridor Commission. Specifically, two groups: Río Urbano and Amigos del Río Torres have been involved in MGPS-LC. Their involvement has been through specific members of these groups.	3
Citizens of San José	-	This group represents all citizens of San José, including inhabitants of Barrio Mexico and other individuals who are not represented by within any other stakeholder group. They are considered indirect beneficiaries of MGPS-LC. Their relation to LC mostly being informed of activities of MGPS-LC.	3
Business Social Programs	CSV	CSV programs are planned efforts that enable employees of a corporation to conduct community work. CSV are connected to MGPS-LC by invitation of other stakeholders who collectively organize workdays.	0
Academic Groups	-	Different academic groups have developed projects within GPS in LC. Two projects are worth highlighting: (1) Urban Activation Workshop (TAU) developed by Mario Villalta and (2) the environmental education research of Paola Gastezzi.	1

Conflicts and differences within the everyday use of Green Public Space.

As concluded in the previous chapter, GPS in LC are created and transformed through the actions of multiple stakeholders, and many of these actions occur in uncoordinated manners. This lack of coordination is the overarching source for conflict over GPS. However, some of the conflicting activities simply relate to the everyday life of the GPS users. For example: using GPS as a temporary shelter, consuming or trafficking drugs, littering, leaving domestic animals unattended over GPS, stealing and vandalism over GPS. Another key set of conflicting activities relate to territoriality and include such examples as the privatization of a space once used as public space or even the invasion of another dweller's private space. For example, building new houses or extending an existing house over a small park, or building a fence to privatize a green space for the exclusive use of a few. Other conflicting activities are ones that occur despite consensus about the negative impacts they have over GPS. These latter activities are causes of the environmentally detrimental processes explained in the previous chapter. Dissatisfied with all these conflicts, some stakeholders argue for better organization and a new governance structure of GPS, which overlays the existing ones to provide a voice for those who actively seek GPS improvement.

Uncoordinated efforts in management of GPS can be seen in areas with conflicting uses of space. As explained in the previous chapter, these areas are the small parks, back yards, steeps slopes and landfills. These spaces are in continuous transformation and dispute between their users. The areas in conflict correspond to the strip of land between urbanized and non-urbanized areas and between private and public spaces (Figure 4.12). For instance, a few unurbanized portions of land with low slopes near houses have been

the subject of conflict because some community members want these spaces for building more houses. Others want small parks for recreational activities, seating, a playground for small children, a community garden, and a small soccer field. Disputes like this are often settled by giving priority to whomever appropriates the space first, by building fences or small infrastructures; physical demonstrations that show the use and appropriation of space. Even so, ephemeral interventions are not a guarantee of a settlement. Use of these spaces can suddenly change by violent appropriation by another group of people. Community members argue that conflict of land use and property ownership has been the main cause of violent encounters in LC.

Figure 4.1: Map conflicting areas in LC. Source: Felipe Barrantes.

Differences also occur when there is a difference of criteria when conducting activities related to improvement of GPS. These divergences of criteria show how GPS

management is not prescribed by a single stakeholder, but it is an evolving process of continuous learning and negotiation. For example, a difference of opinions has occurred between three groups of stakeholders when selecting which plants should be planted over GPS. HWD stakeholders promote the exclusive use of native plants, which can restore ecological functions by mimicking the original ecosystems whereas the IAFN also tries to mimic original ecosystems, but instead also promotes the introduction of agricultural dynamics that are compatible with the restoration process. A third group, the residents, have a set of plants which they like to propagate for aesthetic, nutritional and functional purposes but focused on low maintenance and security factors as some plants might increase visitation and robbery. Despite these differences, the varying opinions about plants are far from being rigid and over time have changed and expanded. Currently, LC GPS reflect a collage of stakeholders and interventions that support differing interests and goals. Sometimes this collage is organized in parcels, but mostly overlap and mix, becoming a diversly expressive landscape (Figure 4.2).

Figure 4.2: Collective informal Green Public Space in Los Cipreses. Source: Felipe Barrantes.

Despite the diversity of stakeholders involved in the use and management of GPS significant issues remain overseen. These are activities that cause a negative environmental impact over GPS and represent the most significant conflicts for all supporters of greening initiatives. Detrimental processes over GPS are mostly caused by current and previous human actions over GPS and their neglect points to lack of evidence regarding functionality of the governance structure of LC GPS. For instance, during the fieldwork, landfill practices conducted by the Board were reported to institutional officials from HWD and BAE. These officials recriminated these practices, but no official notice or punishment has been done to the Board or any other community member involved in these practices. Another example of neglect is that sewer coming

from all houses in LC and other parts of Barrio Mexico is still being released directly to LC GPS. This issue was officially reported to the National Institute of Aqueducts and Sewers, but as is the case with LC landfilling practices, the problem has not been stopped. Additionally, stakeholders involved in these activities, either deny their involvement or argue that it is not possible for them to do otherwise. During interviews, every stakeholder agreed that these detrimental activities should be eliminated, however, none of these activities have been stopped or reduced.

Los Cipreses inhabitants 'relation to Green Public Space

A particular difference between the stakeholders while managing GPS is the perceived lack of interest and involvement in GPS management activities. This difference was frequently mentioned during fieldwork, and it's related the degree to which inhabitants of LC should be involved in collective activities regarding improvement of GPS. This issue is considered a conflict by some stakeholders who believe that the community should take more responsibility in improving GPS; while many community members remain unaware, have other interests or the lack of time and resources to get involved in these activities. While most of community members are not directly involved in GPS improvement activities, they are direct uses and their everyday practices shape and transform these spaces. This section can be summarized though three key questions raised by participants regarding community involvement: How are community members getting involved into GPS management activities? Should they be more involved? What stops them from becoming more involved into these activities? The answers to these questions situates in the conflicting opinions held between stakeholders.

Various stakeholders argue that community members should be more involved in GPS improvement for different reasons. A number of external stakeholders argue that local community involvement is a fundamental component of the improvement of GPS while on the other hand, some local community members argue that there is an ethical responsibility to do so. Despite these claims, direct community involvement in GPS improvement activities remain scarce and only a few people participate. Examples of the first group are academic researchers such as Paola Gastezzi and Mario Villalta, who's projects over GPS in LC focused their efforts on developing community awareness of environmental issues and public spaces respectively. One of the main goals of their projects over GPS was that community members would later appropriate these spaces and propose solutions based on new relationships, attitudes, and values. Both stakeholders ' projects successfully achieved engagement between specific groups of community members and GPS. However, as stated by other stakeholders and as observed during fieldwork, most community members remain unengaged and unaware of these and other activities occurring within GPS.

The concern about the lack of involvement is also stated by some community members who participated in the focus group who are continuously involved GPS improvement activities. Their argument is that neighbors have a ethical responsibility of maintaining and improving these spaces since they are the main users and theherefrore main cause of environmental damage. They also feel embarrassment because many external stakeholders come as volunteers and engage into GPS improvement activities more often than community members. They give great value to mandatory community workdays organized by the Board, because it engages all neighbors into these activities.

These two views, one that argues that local community involvement is essential within greening initiatives and the other that community involvement is a moral responsibility, are ubiquitous underlying positions among stakeholders interested in improving GPS.

Despite most of stakeholders give great value to community involvement, the reality is that most of the community members in LC remain uninvolved in GPS improvement activities, although they are the main users and beneficiaries of these spaces. During fieldwork, all stakeholders expressed great concern regarding the lack of involvement of community members. Despite this claim, the community members are the main users and beneficiaries of GPS, and they transform these spaces through their everyday activities. In the previous chapter, the activities carried out to improve GPS were identified; yet a limitation of this research is that data-gathering processes does not grasp all inhabitant's everyday activities that shape and transform GPS. For instance, houses that face their backs to GPS, use and shape these spaces for private purposes such as planting different crops. For example, during a site visit Mr. Andrés, a Cipreses ' inhabitant, was working in a cleared area to plant maize, cilantro, and beets. His agricultural dynamic is independent from other activities over GPS as well as other stakeholders. Mr. Andrés remarks that agriculture is a hobby for him because it reminds him of his rural past, and he is not interested in getting involved into any other activities or working with other stakeholders regarding GPS (Conversation with Andrés Moreno, July 15, 2019). There are many community members like Mr. Andres, who care for GPS but work independently from other stakeholders. Although disjointed, his and many other community members work over GPS is a form of community involvement that often remains unacknowledged.

Despite the fact that community members are involved in managing GPS through their everyday lives, most of these activities occur in the most urbanized GPS such as the neighborhood streets and parks. For instance, Roberto Zuniga, an interviewed neighbor, expresses great care for LC GPS; however, his nocturnal job doing pest control does not leave him much time to get involved in these activities, so he became the main proponent of creating a small soccer field in front of his house, a public area for young people to play and interact. Another community member, Maria Isabel Gamboa (who lived in LC since its occupation in 1991) has health conditions that prevent her from working in GPS and which reduce her involvement in GPS to administrative activities inside the board. Moreover, during informal conversations many community members showed a lack of knowledge and interest in getting involved in activities related to MGPS. Some inhabitants rent a room or spend most of their days outside of LC; these are lifestyles that disconnect them from community activities such as GPS improvement. Many community members work from Monday to Saturday, which leaves them only one day for their family and leisure activities. Additionally, most of the work conducted in GPS requires removing invasive grass, walking steep slopes, and collecting waste materials like glass, metal, and plastic—activities that are sometimes dangerous and physically demanding for many.

Additionally, although it became thriving community, people that live in LC came to it as an informal settlement most often because they were in difficult economic conditions and had suffered from other types of vulnerabilities. These conditions left many neighbors little time and resources to engage into GPS. Thus, the diverse circumstances of community members of LC justify the lack of involvement of some

people. This shows that activities over GPS should be diversified, and stakeholders interested in improving GPS should also acknowledge the relatively adverse circumstances of the community members. This dynamic validates why many neighbors remain unable or uninterested in getting involved in activities.

LC inhabitants 'relation to LC does not equate with community involvement in GPS improvement activities as perceived by external stakeholders. This relation is mediated by the uncertainty of their land tenure, or in other words, what they consider theirs and what they consider private or public space. For this reason, the purchase of the land generates many expectations for all stakeholders.

Land titling and formalization of Los Cipreses

Another dimension of the conflicts regarding the use and management of GPS in LC is related to the future of these spaces in respect of their legal status. The process that LC is going through, from informal to formal, is decisive for the future of the GPS. In 2018 a new Board got elected and Julia Zamorano became president with the single purpose of finalizing the purchase of the land by LC Neighbor Association to provide a piece of land to each associate. This accomplishment would mean—in her own words—*the end of many years of struggle and marginalization* (Julia Zamorano, interview by author, San José, July 29, 2019). Most community members and other external stakeholders manifested their support for the land purchase lead by Mrs. Zamorano, however, some community members expressed their disagreement as the process was not done transparently and did not consider economic inequalities among community members. These same arguments are supported by an array of literature about

formalization of informal settlements. Additionally, this shift raises questions about the future of GPS and its management.

For some stakeholders purchasing the land is a great accomplishment since in doing so irregular land tenure situation will be solved and governmental support would be guaranteed. For these stakeholders, it will mean that the government will provide the infrastructure and additional support to improve the GPS. According to Miguel Masis, the Association's lawyer, neighbor of Barrio Mexico and self-defined supporter of LC settlement; purchasing the land is a great accomplishment since the irregular land tenure situation will be solved and the government will officially recognize the landholding. As the official lawyer of LC Association, he carried out the legal work for the Association's Board, such as the agreement of purchase of the land between the former owners—the Castro family—and the Association. However, he mentions that the election of Mrs. Zamorano and the purchase of the land was not supported by a group of community members, who refused to accept both decisions. This same support in purchasing the land was given by Marcela Mendoza, a sociologist from the San José Municipality, who worked for three years in LC conducting multiple social programs. Although she stopped working in LC in 2014, she has great affection for the community, and she believes that purchasing the land was the right choice. She mentions that during her experience working in many informal settlements with the Municipality of San José, this is the first time an informal settlement neighbor association has the level of organization and economic capacity to purchase the land by themselves, and without any government support. She also mentions that once the community acquirees complete land rights, multiple government institutions are obligated to provide support, such as public

infrastructure and housing. Mrs. Mendoza´s testimony shows how, after 29 years LC community has proved to be a highly resilient settlement. According to her, land titling will provide the necessary support to improve the community´s public spaces.

However, for other community members, the story of LC and the purchase process is different, it carries many injustices and violence. This creates division between the community, something that is reflected in the social fragmentation of space and exemplified in the lack of involvement by some sectors of the community. Mercedes Rodriguez is one of the community members against the purchase of the land and Mrs. Zamorano's leadership. She argues that the purchase has not been done transparently and it will deepen economic inequalities among community members. Mrs. Rodríguez is daughter of an original community member and she and her family have been the main critics of the purchase process spearheaded by Mrs. Zamorano. Their argument is that this process has not been done democratically and many community members are in a very difficult economic situation. To pay a monthly fee for the land is not a possibility for them, Rodriguez argues, and this is an opportunity for the Board to evict the poorest families in the community. Mrs. Zamorano says that the initial vision for LC to fight so that each family has their own home has been lost. Rodriguez counters that in the past, Mrs. Zamorano and other community members have been evicted inhabitants using violence without clear reasons and afterwards the same people that committed the violent acts get to sell the land or use it for their own purposes. Other community members have the same mistrust standing that the process of purchase has been done too fast and with little transparency. Additionally, no government institution or any other external stakeholder has audited this process. Mistrust and old resentments between community

members have clouded the process of purchase as some think that the initial vision of LC, which revolved around solidarity, has been lost. Nevertheless, by the time of this research the purchase was carried and out fifty percent of the total cost of the land was already paid to the Castro family.

Researchers have also documented similar negative situations in other informal settlements, regarding land titling and social issues. Although they studied these subjects in different contexts such as other countries in Latin América, India or Africa, some circumstances are similar, and serve as an example of what could happen in LC after the land purchase. (Roy 2009) for example, argues that land titling normalizes the community as a singled homogeneous entity, without considering the multiple internal divisions and hierarchies that formalization and titling can reinforce. Roy refers to Janice Perlman´s study about slum upgrading processes in the Favelas of Rio de Janeiro, where she documented how physical improvements regarding land titling and upgrading are not guarantee of social improvement and in many cases have worsened other dimensions of life in these places. For instance, violence caused by drug trade, unemployment and decrease of political capacity are three examples of structural exclusion that have been reinforced in the Favelas of Rio. In LC, equivalent social problems are seen, as people are face difficult economic pressures to pay their share of land, often forcing them to acquire informal loans and mortgages to their houses. These issues cast many doubts about land purchase, which might reinforce economic inequalities between community members in LC, and it force the poorest members out of the settlement once the purchase is done.

Land titling also raises questions about the future of GPS in LC. Formalization might cause further social fragmentation, something which is already evident and

displace vulnerable members of the community—an issue that has happened in the past. Alternatively, formalization might bring institutional support and provide the necessary help and infrastructure to improve these spaces. Besides these positions about formalization processes, there is also concern about direct impacts of formalization over GPS, namely with regards of reduction and damage.

Further urbanization, reduction, and damage to Green Public Space

Further urbanization and earthworks are other concerns expressed by some community members which may be exacerbated once LC becomes property of the Association and formalizes community. Some community members argue that once LC is titled, large parts of GPS will be segregated, cleared, and sold for housing. The situation of landfilling and urbanization has happened in the past, when earthworks were done using backhoes provided by the same people that used LC GPS as a landfill. Afterwards, new houses were built in the site. After land titling, government and developers might promote these same processes, and as more machinery and technical knowledge will legitimize the development of more land for housing. This possibility presents a great threat to LC GPS, since land is in a highly dense urban area of the city of San José and effected by high-pressure urbanization.

As mentioned in the previous chapter, even before LC was a human settlement, the site was used as a landfill. Currently, these practices exist and represent significant environmental damage risk for its inhabitants. The practice of receiving soil and construction debris is not without the complicity of community members and the Board, who receive money and earthworks services to allow the illegal deposit of these materials to different parts of LC. During site visits, the author witnessed the areas of landfill, these

practices and the complicity of some community members and the board was mentioned by many stakeholders during the focus group and interviews. However, the complicity was denied by the community's board (Presentation to Board of LC Neighbor Association, August 9th, 2019). Furthermore, images of these practices were showed to stakeholders who were government officials; their response was negative, and they condemn these practices for being environmentally damaging, dangerous, and illegal.

Besides being a lucrative practice, a purpose of receiving soil and construction debris is to obtain material to modify the topography of the site with the purpose of creating more flat areas to build houses. According to some community members, these areas have been sold or given to community members as well as people from outside the community so they can build a house. This practice, although considered unethical by many, is seen by others as the essence of how space is produced in LC, as mentioned by Mrs. Zamorano: most of the settlement is built over a landfill (Julia Zamorano, interview by author, San José, July 29, 2019). During an informal conversation with anthropologist Daniel Carrillo—who worked in LC in the past—condemning these practices might be a form of double exclusion, as the community of LC relies on practices of illegal settlement and reuse of materials and because they were excluded from the formal process of urbanization. Afterwards, a second form of exclusion appears, as they are condemned for seeking their own means, such as landfilling, to provide themselves a place to live and a right to the city (Daniel Carrillo, conversation by phone, February 23, 2020).

Despite the fact that landfilling has been a common practice in LC, during the focus group, many community members expressed their disagreement, concern, and willingness to end practices of landfilling and further urbanization. They have fought in

the past to end these practices and to focus on improving GPS, especially GPS near the houses, which have potential for becoming small parks and holding community amenities. This is why some fear for formalizing the settlement; once the Association acquires land rights over 100% of LC, developers will come and offer housing project designs that will decrease the percentage of GPS to make their project profitable. Formalization might become a license for more development, and perhaps the reason why ¾ of LC has remained GPS is its irregular condition.

Currently, earthworks and further urbanization of GPS are the most evident conflicts within LC GPS. It provides proof of the continuous transformation and negotiation of boundaries between public and private space and as part of the uncoordinated actions regarding GPS.

Conclusion

The exploration of antagonistic relations between stakeholders showed how GPS is an indeterminate space, continuously negotiated thorough the contestation between divergent interests. These issues are shaped by larger socio-environmental issues and complex power dynamics such as the conditions around the informal settlement's development and formalization process, and the environmental initiatives that seek to restore the river margins. However, the empirical findings indicate that these conditions and their supporters are far from being in dualistic opposition, as the interests diverge between stakeholder groups and continuously change over time. For instance, the dispute over territory varies over time depending on the perceived level of appropriation of a space by a specific individual or a group. This appropriation is rendered through different symbolic gestures over space, such as placing fences, improvising urban furniture, a well-

maintained garden, or even the high frequency of visitation by certain individuals. These symbols are also demonstrative of how the different stakeholders struggle to articulate their identity within these spaces. Thus, the significance of exploring conflicts not only resides in understanding their repercussions over physical space, but also because they reflect how this space is socially constructed and continuously rearticulated.

Understanding these social dynamics through conflict is rather useful for designers, planners, and landscape managers when it comes to working in spaces such as the GPS in LC; where there is no clear governance structure, it's use, and management is continuously negotiated by the different stakeholders. First, understanding conflicts will help practitioners to acknowledge the contested social situation in which the design process unfolds and the contingent social dimension in which their projects will eventually be situated (Till 2013). Second, exploring conflicts uncover power dynamics between stakeholders, which in turn expose the exclusion of stakeholders and possibilities that remain undermined (Calderon and García 2019, Wolf and Mahaffey 2016). Third, the role of designers, planners, and landscape managers is not one of problem solvers but is instead firstly to acknowledge these forms of production of space. Secondly, a practitioner's role is to illustrate hidden possibilities unexplored by stakeholders. Thirdly, practitioners can work to facilitate situations were stakeholders can better understand the legitimacy of what constitutes a problem for them and for their opponents (Calderon 2020). These considerations will be further explored in the following discussion chapter, where the main findings regarding the production of space and strategies for designers, planners, and landscape managers will be proposed.

CHAPTER 5

DISCUSSION AND CONCLUSION

Introduction

This thesis has explored the prevailing social challenges of the use and management of Green Public Space (GPS) in Los Cipreses (LC). The focus has been on how these spaces are a result of the continuous interaction between different stakeholders and the landscape. More specifically, it has aimed to understand the role of conflict in how GPS is socially produced and constructed. To achieve this, a mini-ethnographic case study was conducted to produce contextual knowledge about the creation and transformation of these spaces by a multiplicity of stakeholders. Data gathering methods such as participant-observations, interviews, archival documentation and focus group provided critical information to establish categories assigned to GPS by the different stakeholders. This data was then interpreted using the frameworks of social production and social construction of space as a way to uncover the social differences and power relations that continuously shape these spaces.

This chapter presents a conclusion to this thesis by returning to the research question. It uses an example of a conflict over GPS to illustrate the various interlinked issues. Afterwards, it discusses the main findings of this research, by drawing together the results generated throughout the different chapters. The third part of the chapter provides recommendations based on this study for practitioners who may work in similar

conditions as those of LC. The fourth section identifies areas for further research and development. The chapter finalizes with thoughts about the significance of Los Cipreses.

Reflecting on the research question: what is the role of conflict in the creation, transformation, and management of Green Public Space in Los Cipreses?

The initial observations and interviews of this research were conducted to understand material aspects of GPS such as its history, management, and organization. From this baseline, conflict emerged as a common theme among stakeholders and exposed the existing struggles over the different identities assigned to GPS. Conflict also highlighted the material aspects in dispute such as critical locations, detrimental processes, and the individuals in confrontation. It also revealed battles for control over symbolic resources (Low 2017).

The conflict over the location of the Ecological Blue Flag at LC is a clear example of the above statement: how GPS is shaped by the struggle over material and symbolic resources. One group claimed that the flag had to be located at the center of the community (Figure 5.1), while the other said that the forest entrance was a better location (Figure 5.2). To resolve the conflict, the Blue Flag Committee decided to issue two flags and place them at each location. While the immediate situation was resolved, the underlying conflict remained, which involves the hidden and repressed meanings assigned to this flag.

Figure 5.1. Ecological Blue Flag celebration at the Community Center. Source: Felipe Barrantes.

Figure 5.2. Forest entrance park with the Ecological Blue Flag. Source: Felipe Barrantes.

The group who wanted the flag at the heart of the community considered their housing efforts to be the main accomplishment of LC. They were not against the greening initiatives, nor the forest. Rather, they were concerned that the flag would take away from the original purpose of LC, the thirty-year battle for having a right to the city through self-housing. They wanted to reframe the symbol of the flag as the recognition of the community itself as a whole, not just for the greening initiatives alone which were led by stakeholders who did not identify with this struggle.

On the other hand, the second group was composed of external stakeholders as well as residents who supported the forest initiatives. They wanted the flag to represent the efforts of the conservation of a significant green space in a heavily urbanized area called LC Forest. This group initially applied for the flag to raise awareness about the importance of greening initiatives in LC. For them, the flag belonged to the Forest as a signpost for designated entrance. It had the purpose of providing a sense of pride to all stakeholders.

The flag is an example of the value of the symbolic gestures over GPS—e.g., political acts that denote who manage and use the territory, and how it is done. As recounted in Chapter Three, LC settlement emerged outside of any existing legal and regulatory framework, where people resolved land ownership through informal negotiations and violent encounters. Although private land tenure became more defined over the years, GPS remained as a space with indeterminate ownership, tacitly defined as a collective space. This is why any symbolic gesture might be perceived as a form of reclamation and appropriation of space (Figure 5.3).

Figure 5.3: Small Garden in Los Cipreses. Source: Felipe Barrantes.

Within these circumstances, a new set of stakeholders—the promoters of environmental initiatives—became involved in the management of GPS. These stakeholders came to Los Cipreses wanting to use and manage GPS, carrying a discourse of "greater good and improvement of the environment for all citizens." Additionally, these discourses currently have great economic and political support. In contrast, residents of Los Cipreses came from a background of marginalization and struggle characterized by the lack of government support, threats of eviction, and rejection from their formal neighbors who stigmatized them as invaders and destroyers of the environment. Consequently, these two groups collided because the promoters of greening initiatives were treated as competitors for GPS.

Figure 5.4: Volunteering activity in Los Cipreses, 2019. Source: Felipe Barrantes.

The Ecological Blue Flag is a simple example that exposes some of the underlying reasons why conflicts are common when managing GPS: they are territories in dispute. After thirty years of opposition, confrontation, and resistance, conflicts over GPS are now resolved through symbolic gestures instead of direct action or violent encounters.

Discussion of the Main Research Findings

Conflicts of territoriality: territory, defined as the degree of ownership and control over physical space by an individual or a group (Madanipour 2003) has been the main source of conflict in Los Cipreses since its initial occupation in 1990. At the social scale, Los Cipreses represents a group of people that occupied a piece of land without any legal

support. As a group, they fought against government evictions and discrimination from their neighbors. At the individual level, territoriality is expressed through the establishment of boundaries that define private space. The definition of these limits has occurred through symbolic gestures over space such as fences and hedges, or through violent encounters. The informal condition of Los Cipreses, characterized here by a lack of legal boundaries and a sense of instability in land ownership, has shaped GPS through territorial disputes and negotiations. Consequently, whoever has more political, economic, or physical power gets to make decisions about territory.

Although private space has been more defined over the years, public space, particularly GPS, has ambiguous boundaries. This has led to the fragmentation of GPS into separate territories, each used or managed by stakeholders with common views about this space. However, certain areas within the narrow strip of land between the houses and the forest are in active territorial dispute between stakeholders through different physical and symbolic gestures over space. These areas are the main source of conflict and are more susceptible of becoming privatized, and the areas most affected by environmental impairment.

Within these conflicting areas, internal and external stakeholders who represent environmental initiatives are considered competitors for the territory, because they seek to have a stake over because they seek to have a stake over GPS with interests that directly conflict with other stakeholders. Although environmental initiatives are diverse, they tend for fall under the perception of being a homogeneous group defined as “The Forest Group.” However, this is far from the truth as these initiatives are scattered around different projects proposed by people from different backgrounds. Consequently,

management of GPS has partially split into two groups: those representing "the forest" interests and those representing the "community's interests." Although this division is understandable—because supporters of each respective group have shared interests that stand in opposition to those of the other group—the polarization has caused the division of GPS and a struggle over territory between these two groups.

The symbolic dimension of GPS: as explain in Chapter Two, is connected to Lefevre's notion of "representational space" or "the space of inhabitants and uses through its associated images and symbols" which is directly related to the construction of people's identities of these spaces. Identity of GPS in Los Cipreses is, in part, shared symbols such as the Ecological Blue Flag, the name "Los Cipreses," or even Los Cipreses as an "Informal Settlement." However, this research emphasizes the identity within differences which is associated with conflict because people or groups define their

Figure 5.5 Children playing soccer in the streets of Los Cipreses. Source: Felipe Barrantes.

identity in relation to what they are not. For instance, some community members pursue landfilling practices not just because there is an economical incentive, but because it

differentiates them from their neighbors, restates their difficult past, and reinforces their capacity to self-build. It's also a form of protest against the lack of governmental support. Therefore, when identity is produced through differences, conflicts are an expected interaction.

Despite conflict and opposition, however, there emerges a natural need for collaboration and verbal agreement over shared values. This is one of the reasons why stakeholders have had a high level of freedom in acting over GPS without being disturbed by other stakeholders. The Ecological Blue Flag is an example of how differing interests can be conciliated by finding a shared value that helps stakeholders to encounter a middle ground. The shared value in this example is that everyone wanted the improvement of the community, and the flag symbolized this commitment and accomplishment (Figure 5.4). Other shared values among stakeholders are:

- Environmental impairment is negative and should be stopped.
- The forest should be kept and protected.
- Greening initiatives have a positive impact over the community.
- Community organization through democratic processes is essential.

Shared values were explored in 2017 in the Urban Activation Workshop (TAU) (Figure 5. 4), an initiative from the School of Architecture of the University of Costa Rica that focuses in connecting people and public spaces through artistic and cultural activities (TAU - Taller de Activación Urbana 2017). During this event, shared values over public space was discussed among stakeholders. One on the conclusions of the workshop was the creation of a community mural in the Board's office. This mural had two whiteboards that had the purpose of increasing communication among community

members. Additionally, the community motto “Los Cipreses, Building Community” was collectively created. The example of the TAU reflects how promoting spaces where stakeholders can identify their shared values are an opportunity for conciliation and improvement of GPS.

However, the communication and recognition of different values is equally important as sharing values. For instance, the solution to the Ecological Blue Flag was to issue two flags —a gesture that symbolized the respect for two different sets of needs within the community. Additionally, spaces where stakeholders can feel the freedom communicate their values are important for the use and management of GPS. In the TAU example—in addition to the community’s mural and motto—a chalkboard was created to allow anyone to express their ideas about the community (Figure 5.5). This gesture over the public space was one of the proposed solutions addressing the lack of communication between community members and the whiteboard. These two examples show how communication and recognition of values are central to management of GPS. Stakeholders who believe that their ideas, values, and feelings might be undervalued, are less likely to participate and find common grounds.

Figure 5.6. Urban Activation Workshop. Mario Villalta, University of Costa Rica. 2017. Source: Taller de Activación Urbana.

Figure 5.7 Community board. Taller de Activación Urbana 2017. Source: Felipe Barrantes.

Detrimental processes over GPS are a source of conflict and represent the main challenges to management of GPS. Chapter three delineates five processes over GPS that contribute to the impairment of GPS. These processes are disposal of solid waste, elephant grass, erosion, slope instability, and disposal of sewage (see appendix 3 for the root-cause analysis diagram).

Landfilling or the disposal of solid waste is the most evident source of conflict in LC. For some community members, landfills symbolize an opportunity for control over territory that no other stakeholder has. Landfilling and earthworks have allowed residents to self-build a space for a house of their own, and through landfilling, GPS is seen as an opportunity to procure a house for their offspring in the future. Contrarily, supporters of greening initiatives see GPS as a communal and a public space primarily intended for enjoyment of nature in a heavily urbanized context, and landfilling represents the most evident drastic environmental impairment to GPS and their activities.

Landfilling is considered by all stakeholders as an unethical practice that should be stopped, although some stakeholders continue to secretly benefit from these practices. By talking about conflict, the researcher was able to understand the motivations behind these hidden practices. For some community members, landfilling is a form of appropriation of the territory which implicates special privilege. Landfilling and earthworks have allowed residents to self-build a space for a house of their own, and GPS are seen as an opportunity to procure a house for their offspring in the future. Contrarily, supporters of greening initiatives see GPS as a communal and a public space primarily intended to enjoy nature in a heavily urbanized context, therefore landfilling represents

the most drastic environmental impairment to GPS and their activities. When talking about the actual physical space, most stakeholders acknowledged to a certain degree both perspectives about GPS, but differences remained in the boundaries between rooted perspectives. For example, once a group of stakeholders felt that their point of view was being undermined, the opportunity for negotiations faded out.

Detrimental processes and its related conflicts also reveal a problem at a larger scale and common across GPS in informal settlements, that is the involvement of the government in form of provision of infrastructure among other interventions that can stop these detrimental processes.

The ambiguous role of government institutions and the legal status of LC: the relation between government institutions and GPS in LC have been shaped by the irregular condition in land tenure of its inhabitants. Within a timeframe that ranges from the occupation of Los Cipreses to the present, the government's main role has shifted from enacting evictions of settlements to then attempting to address-social needs of the community until finally mainly focusing on the improvement of environmental conditions of the site. More importantly, the government relation to Los Cipreses has been ambiguous and irregular without established formal agreements between institutions and other stakeholders. Despite these irregularities, there have been multiple activities organized by government institutions and many stakeholders look forward to formalizing agreements in order to receive help form public institutions.

What will be the role of the state once LC is formalized? On one hand, formalization might bring institutional support and provide the necessary help and infrastructure to improve these spaces. On the other hand, formalization might cause further social

fragmentation —something which is already evident— and displace vulnerable members of the community, an issue that has happened in the past. Besides these positions about formalization, there is also concern about the implications of formalization regarding GPS. How will these spaces be managed, and will GPS be reduced?

Marginalization of LC residents by the neighboring population: Landfilling, among other practices, reflects the isolation and self-sufficiency that residents of LC had to develop due to the segregation from the adjacent formal settlements. Parallel to this segregation, the neighboring population stigmatized and excluded the residents of Los Cipreses as they considered them criminals and destroyers of the environment. These prejudices have been part of the lives of the community members and influenced their own relationship to their landscape, one of little reliance on external participation to shape their habitats and improve their living conditions. Nevertheless, it also contributed to the distrust and reluctance of residents to accept collaboration and support from external stakeholders.

Internal power dynamics and inequality within the community: this research exposes the diversity of conditions among community members. It is not a homogeneous group, but there is also an internal complexity which is reflected in how residents relate to GPS. Spatial location of residences and who maintains decision-making power over its use and management is determined by the sway that a particular resident has within the community. This power can be political, economic, or physical. The field work revealed these power disparities and injustices done to some community members who were violently evicted from their homes more than once; their house and therefore status given over to a family member of a more powerful resident. Additionally, areas previously

considered GPS were abruptly occupied to build houses for relatives of the Board in effect. Similarly, it is often that management decisions made over GPS are not taken democratically, but instead decided by the most powerful community members. Los Cipreses is a registered Neighbor Association established in 1996 under the Association Law (Costa-Rica 1977) and under this form of association, decisions have to be taken and registered by the board in an assembly were a minimum quorum of associates have to attend. However, multiple community members argue that key decisions regarding the future of the community and its GPS have not been taken fully into consideration in this manner sighting that some community members were not allowed to attend the assembly. Although these claims are unproven by this research, they reveal the internal division and disparities among community members.

Recommendations of this research for designers, landscape managers, and planners.

Conflicts represent a significant barrier for the improvement of GPS in LC. When confronted with complex social situations where is conflict is prominent, practitioners involved in the improvement of GPS can benefit from having certain guidelines for addressing them. These guidelines can be applied in situations similar to the ones of GPS in LC: where the role of the state is ambiguous, GPS is co-management by multiple stakeholders and there is exclusion and marginalization of certain groups. Below are two recommendations that may provide designers, landscape managers, and planners with considerations when tackling such situations:

1. Understand the underlying motivations behind attitudes and actions toward the use and management of GPS. If not considered, the power dynamics that lead to further

exclusion and marginalization may be unknowingly reinforced. As illustrated in the example of the Blue Ecological Flag situation, stakeholders not only compete over material resources but also over the control of symbolic ones as well (Low 2017). Therefore, practitioners should be able to understand the symbolic battle that unfolds behind certain attitudes over GPS. These deeper motivations reveal power dynamics that cause the exclusion and marginalization of certain stakeholders and can be reinforced by the actions of the practitioners. For instance, if only one flag had been raised in either of the two locations of the community, the group of actors that stood against it would have felt marginalized. This would have contributed to further fragmentation and conflict among stakeholders.

2. The role of practitioners should be to facilitate spaces for co-production where multiple forms of knowledge can be exchanged and recognized. In these spaces, conflicts are not just problems to be immediately neutralized but a reflection of larger issues on political and economic realities of the everyday lives of the GPS users. Co-production is a relation where practitioners, residents, and other stakeholders share power to plan and execute joint decisions together. In co-production processes, experiential knowledge is given an importance equal to the professional knowledge of practitioners and government officials (Swilling et al. 2016). Spaces of co-production should be an opportunity for mutual learning and capability development for all stakeholders (Argyris and Schon 1989). In LC, knowledge developed by residents over the years should be reinforced and given equal weight in the process of decision making and execution. Co-production of green spaces in LC is significant not just because they represent an opportunity for technical innovation, but also because they

may become the basis for social organization and network formation. Thus, spaces of co-production are an opportunity for social change and justice.

Limitations of the study and areas for further research

There are areas and directions that this research did not explore because of a focus on the research question as originally designed. The main view this thesis aims to explore is the role of conflict in the creation, transformation, and management of GPS. However, after exploring this question, other issues arose from the initial assumptions of the researcher. In this study three fundamental topics remained unaddressed: (1) What is the degree of publicness of GPS in LC? Related to this question is the subject of who should use GPS in LC and who should be involved in its management? Once LC becomes formalized, are GPS going to become private property? (2) The involvement of residents, or the lack thereof, has been a source of discomfort for stakeholders involved in GPS management. Community involvement is seen as an indisputable requirement for managing GPS. However, the framework of how this involvement should look and how many residents should be involved has not been clearly discussed among stakeholders. (3) The purchase of the land and the formalization of LC was never open for discussion. In fact, the opponents of the purchase were not allowed to be part of the discussion. Additionally, the process of this purchase and formalization was never publicized to all residents. Addressing these topics can be a way for researchers and practitioners to begin a conversation about exclusion and make significant contributions to the co-production of GPS.

Conclusion

Los Cipreses is a place where individuals from multiple backgrounds come together to improve its GPS. These activities are part of larger initiatives that focus on recovering the environmental quality of urban rivers. However, it is common that these initiatives do not consider the particular conditions of informal settlements and how the historical, social, and economical contexts that enable LC to become a site with such opportunity for experimentation is something that has shaped the current use and management of its GPS. Thus, the value that is emphasized here is that LC enables the co-production of its GPS at least where diverse forms of knowledge and points of view coexist.

Through this case study, this research sheds light to the increasing interaction between greening initiatives and informal settlements in San José, Costa Rica. Greening initiatives in San Jose are expanding in multiple areas of the city. However, none of these initiatives have specific plans to address the particular conditions of informal settlements. Los Cipreses is an example of this intersection, where over the past years, individuals, academy, governmental and non-governmental organizations have interacted with residents to improve their GPS. This interaction has resulted in many successful processes of co-management as well as barriers to the accomplish the greening initiatives goals, all of which revolve around environmental as well as social improvement in these settings. The barriers to improve these spaces are caused by the same conditions that facilitated the co-management of GPS in Los Cipreses: informality. Conflict was seen here as an opportunity to access social dynamics that shape these spaces and expose social differences and power relations that reflect larger cultural issues. The results of this

thesis can inform localized tactics as well as larger scale strategies to address environmental issues in informal settlements.

Conflict is a natural and inevitable result of co-management. It mirrors how the landscape and built environments are shaped by different meanings assigned to them. As this thesis argues, the understanding of conflict is particularly useful for practitioners to act upon complex social situations characterized by inequality and exclusion. Hopefully, this perspective can encourage practitioners involved in greening initiatives to value and acknowledge conflict as an inherent part of the processes of improving the environmental conditions of GPS.

REFERENCES

Albertazzi, José Manuel Cerdas. 1994. "El marco socio urbano de los obreros manufactureros josefinos:(1930-1960)." *Revista de Historia* (29):89-123.

AlSayyad, Nezar. 2001. *Hybrid urbanism : on the identity discourse and the built environment*: Praeger.

Amigos del Rio Torres. March 20, 2020. "Nuestra Historia."

Argyris, Chris, and Donald A. Schon. 1989. "Participatory Action Research and Action Science Compared." *American Behavioral Scientist* 32 (5):612. doi: 10.1177/0002764289032005008.

Banks, Nicola, Melanie Lombard, and Diana Mitlin. 2020. "Urban Informality as a Site of Critical Analysis." *The Journal of Development Studies* 56 (2):223-238. doi: 10.1080/00220388.2019.1577384.

Beardsley, John, and Christian %J Harvard Design Magazine Spring Werthmann. 2008. "Improving Informal Settlements."31-34.

Bergoeing, Jean Pierre, and Luis Guillermo Brenes Q. 2013. "El río Tárcoles, desaguadero del Valle Central Occidental, Costa Rica." *Revista Geográfica*:143-156.

Bhabha, Homi K. 2012. *The location of culture*: routledge.

Bissen, Sara. 2016. "Housing as a Verb: A Critique of Habitat III's New Urban Agenda —An Interview with Robert Neuwirth,." *Journal of Biourbanism* Vol. V:143-151.

Bower, Richard. 2016. "Who decides and Who provides? The Anarchistic housing practices of John Turner as Realizations of Henri Lefebvre's Autogestive space." *Alternatives* 41 (2):83-97.

Calderon, Camilo. 2020. "Unearthing the political: differences, conflicts and power in participatory urban design." *Journal of Urban Design* 25 (1):50. doi: 10.1080/13574809.2019.1677146.

Calderon, Camilo, and Jaime García. 2019. "Bottom-up public space design and social cohesion: The case of a self-developed park in an informal settlement of Bogotá." In, 140-157.

Caravaca, Marvin 2005. "Policía desalojó a 28 familias de precario." *La Nación* https://www.nacion.com/sucesos/policia-desalojo-a-28-familias-de-precario/V7FFZDLCSVGGTML5BVJZUQOT64/story/.

Carrillo-Barrantes, Jorge Daniel. 2019. "Los barrios del olvido: desigualdad y exclusión social en Costa Rica." Anthropology Facultad de Ciencias Sociales, Escuela de Antropologia Universidad de Costa Rica.

Certeau, Michel de. 1984. *The practice of everyday life / Michel de Certeau*

translated by Steven Rendall. Edited by Steven Rendall. Berkeley: Berkeley : University of California Press.

Chase, John, Margaret Crawford, and John Kaliski. 1999. *Everyday urbanism : featuring John Chase*: New York, N.Y. : Monacelli Press, 1999.

Cordero Infante, Cárol 1996. "Dos derrumbes destruyen 7 casas " *La Nacion* http://www.nacion.com/ln_ee/1996/julio/04/derrumbes.html.

Costa-Rica, Congreso Constitucional de la Republica de. 1977. Ley de Asociaciones. Imprenta Nacional.

Cranz, Galen. 2016. *Ethnography for designers*: Routledge.

Davis, Mike. 2006. "Planet of slums." *New Perspectives Quarterly* 23 (2):6-11.

De Soto, Hernando. 2000. *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*: Civitas Books.

Elmqvist, T., H. Setälä, S. N. Handel, S. van der Ploeg, J. Aronson, J. N. Blignaut, E. Gómez-Baggethun, D. J. Nowak, J. Kronenberg, and R. de Groot. 2015. "Benefits of restoring ecosystem services in urban areas." *Current Opinion in Environmental Sustainability* 14:101-108. doi: 10.1016/j.cosust.2015.05.001.

Fitchett, A. 2014. "Adaptive Co-management in the Context of Informal Settlements." 355-374.

Fusch, Patricia I., Gene E. Fusch, and Lawrence R. Ness. 2017. "How to conduct a mini-ethnographic case study: A guide for novice researchers." *The Qualitative Report* (3):923.

Gabriela Pérez, Gómez, García Virginia Alvarado, Rodríguez Jorengeth Abad Rodríguez, Herrera Federico, and Gutiérrez Rolando Sánchez. 2021. "Calidad fisicoquímica y microbiológica del agua superficial del río Grande de Tárcoles, Costa Rica: un enfoque ecológico." *Cuadernos de investigación UNED* 13 (1). doi: 10.22458/urj.v13i1.3148.

Gastezzi-Arias, Paola. 2019. "Educación Ambiental no formal para el mejoramiento del entorno urbano del río Torres, Costa Rica."

GeCos, Red de Gestión y Conservación de Vida Silvestre y Salud. 2020. "Paola Gastezzi-Arias,." https://investiga.uned.ac.cr/gecos/paola-gastezzi-arias/.

GIZ. 2019. "Biodiver_City San Jose." accessed 4 November. http://biocorredores.org/biodiver-city-sanjose/sobre-el-proyecto/el-proyecto.

Group, The World Bank. 2019. "Population living in slums (% of urban population)." https://data.worldbank.org/indicator/EN.POP.SLUM.UR.ZS?most_recent_value_desc=true.

Habitat, UN. 2007. "Slum dwellers to double by 2030: Millennium development goals could fall short." *21st Session of the Governing Council of UN-Habitat, http://www.preventionweb.net/files/1713_463146759GC202120Slum20dwellers20to20double.pdf*.

Hall, Peter Geoffrey, Peter Hall, and Ulrich Pfeiffer. 2000. *Urban future 21: a global agenda for twenty-first century cities*: Taylor & Francis.

Harvey, David. 2018. "Contested cities: social process and spatial form." In *Transforming cities*, 19-27. Routledge.

Henrik, Ernstson, E. van der Leeuw Sander, L. Redman Charles, J. Meffert Douglas, Davis George, Alfsen Christine, and Elmqvist Thomas. 2010. "Urban Transitions: On Urban Resilience and Human-Dominated Ecosystems." *Ambio* 39 (8):531.

Herbert, Steve. 2000. "For ethnography." *Progress in human geography* 24 (4):550-568.

Hernández-García, J. 2013. "The production of informal urban space: The barrios of Bogota." *Researching the Contemporary City. Identity, Environment and Social Inclusion in Developing Urban Areas*:151-168.

Hernández-García, J. 2017. "Underlying Language and Meaning of Informality." *Marginal Urbanisms: Informal and Formal Development in Cities of Latin America. Cambridge, Reino Unido: Cambridge Scholars Publishing*.

Hernández, Felipe. 2002. "On the notion of architectural hybridisation in Latin America." *The Journal of Architecture* 7 (1):77-86.

Hernández, Felipe. 2010. *Bhabha for architects*. Vol. 4: Routledge.

Hernández, Felipe, Peter Kellett, and Lea K. Allen. 2010. *Rethinking the informal city : critical perspectives from Latin America*, *Remapping cultural history: v. 11*: Berghahn Books.

Hernández, Felipe, Mark Millington, and Iain Borden. 2005. *Transculturation: Cities, spaces and architectures in Latin America*: Rodopi.

Hernández García, Jaime. 2010. "El parque de mi barrio: production of consumption of open spaces in popular settlements in Bogotá." Newcastle University.

Hernández García, Jaime. 2012. "Espacios Públicos en Barrios Informales. Producción y uso entre lo público y lo privado." *México: Infonavit: UAEMex* 202.

Hernandez, Jaime. 2009. "Production, use and language of open spaces in popular settlements, two case studies from Bogotá." FORUM Ejournal 2008-09 Editorial Committee.

Huchzermeyer, Marie. 2004. *Unlawful occupation: Informal settlements and urban policy in South Africa and Brazil*: Africa World Press.

Imparato, Ivo, and Jeff Ruster. 2003. *Slum upgrading and participation : lessons from Latin America*, *Directions in development*: World Bank.

Instituto Costarricense de Acueductos y Alcantarillados. 2015. "Programa Bandera Azul Ecológica." https://www.aya.go.cr/laboratorio/banderaAzul/Paginas/default.aspx.

International Analog Forestry Network. 2020. "About the International Analog Forestry Network." http://www.analogforestry.org/about-us/about-iafn/.

Jackson, Jean E. 1990. ""I am a fieldnote": fieldnotes as a symbol of professional identity." *Fieldnotes: the Makings of Anthropology*:3-33.

Jones, Thomas M. 1980. "Corporate Social Responsibility Revisited, Redefined." *California Management Review* 22 (3):59-67. doi: 10.2307/41164877.

Kellett, Peter. 2018. "Going beyond shelter. A longitudinal study of homemaking in rural Colombia." [Youtube Video]. https://www.youtube.com/watch?v=kNPEXyX49Ck.

Kellett, Peter, and Mark Napier. 1995. "Squatter Architecture? A Critical Examination of Vernacular Theory and Spontaneous Settlement with Reference to South America and South Africa." *Traditional Dwellings and Settlements Review: Journal of the International Association for the Study of Traditional Environments* 6 (2):7-24.

Kotler, Philip, and Nancy Lee. 2008. *Corporate social responsibility: Doing the most good for your company and your cause*: John Wiley & Sons.

Krstic, Predrag. 2017. "Thinking identity with difference: Society and theory." *Filozofija i drustvo* 28:136-152. doi: 10.2298/FID1701136K.

Le, Corbusier. 1973. *The Athens charter*: Grossman Publishers.

Lefebvre, Henri, and Donald Nicholson-Smith. 1991. *The production of space*. Vol. 142: Oxford Blackwell.

Lefebvre, Henri, Smith Nicholson, and David Harvey. 1991. *The production of space*: Blackwell Publishing.

Lewis, Oscar. 1969. "The culture of poverty." *Anthropological realities: Readings in the science of culture*.

Lombard, Melanie. 2014. "Constructing ordinary places: Place-making in urban informal settlements in Mexico." *Progress in Planning* 94:1-53. doi: https://doi.org/10.1016/j.progress.2013.05.003.

Low, Setha M. 1996. "Spatializing culture: the social production and social construction of public space in Costa Rica." *American ethnologist* 23 (4):861-879.

Low, Setha M. 2017. *Spatializing culture : the ethnography of space and place*: Routledge, Taylor & Francis Group.

Lydon, Mike, and Anthony Garcia. 2015. *Tactical urbanism : short-term action for long-term change*: Island Press.

Madanipour, Ali. 1996. "Design of Urban Space: An Inquiry into a Socio-Spatial Process ".

Madanipour, Ali. 2003. *Public and private spaces of the city*: Routledge.

Maffesoli, Michel. 1989. "The sociology of everyday life (epistemological elements)." *Current Sociology* 37 (1):1-16.

Malavassi, Rosa Elena. 2010. *Proyecto Barrios de Costa Rica: Barrio Luján y Barrio México*: Ministerio de Cultura y Juventud, Museo de Arte Costarricense.

Martínez, Tomás, and Keren Ruíz Agüero. 2015. "Treinta años de metamorfosis urbana territorial en el Valle Central."

McCallin, B, I Scherer, and J Duyne. 2015. "Urban informal settlers displaced by disasters." *IDMC. Available at: https://www. internal-displacement. org/sites/default/files/publica tions/documents/201506-global-urban-informal-settlers. pdf (Accessed: 13 May 2020). Law and policy addressing displacement* 51.

Mehaffy, Michael, and T. Haas. 2018. "Informality in the new urban agenda: A “new paradigm?”." *Berkeley Planning Journal* 30:6-22.

Merriam-Webster.com, Dictionary. 2020. "Hybrid ". Merriam-Webster, accessed 27 March. https://www.merriam-webster.com/dictionary/hybrid.

Mitchell, Katharyne. 1997. "Different diasporas and the hype of hybridity." *Environment and Planning D: Society and space* 15 (5):533-553.

Municipalidad de San Jose. 2014. "Proteccion y manejo de cuencas hidrograficas." https://www.msj.go.cr/informacion_ciudadana/ambiente/SitePages/cuencas_hidrograficas.aspx.

Nations, United. 2016. Resolution adopted by the General Assembly on 23 December 2016: New Urban Agenda.

Neuwirth, Robert. 2005. *Shadow cities : a billion squatters, a new urban world*: Routledge.

Pérez, M. 2005. Bosque Urbano: proyecto modelo de comunidad verde. El ejemplo de Los Guido-Orowe. Lincoln Institute of Land Policy.

Perlman, Janice. 2019. "Ciudades sin tugurios, ciudades sin alma. Repensando los conceptos y las consecuencias de la marginalidad en las favelas de Río de Janeiro." *Andamios* 16 (39):207-233.

Perlman, Janice E. 1979. *The myth of marginality: Urban poverty and politics in Rio de Janeiro*: Univ of California Press.

Rapoport, Amos. 2016. *Human aspects of urban form: towards a man—environment approach to urban form and design*: Elsevier.

Rio Urbano Costa Rica. 2015. "Río Urbano. Memoria Gráfica ".

Romero, Gustavo. 2003. "Social Production of Habitat: Reflections on its History, Conceptions and Proposals." *TRIALOG* 78:8-15.

Rooney, James J, and Lee N Vanden Heuvel. 2004. "Root cause analysis for beginners." *Quality progress* 37 (7):45-56.

Roy, A. 2005. "Urban Informality: Toward an Epistemology of Planning." 147.

Roy, Ananya. 2009. "The 21st-Century Metropolis: New Geographies of Theory." *Regional Studies* 43 (6):819-830. doi: 10.1080/00343400701809665.

Roy, Ananya. 2011. "Slumdog cities: Rethinking subaltern urbanism." *International journal of urban and regional research* 35 (2):223-238.

Sánchez, G, D Valle, F Scorza, S Feoli, and R Artavia. 2015. "Protocolo de Reforestación para la Rehabilitación y Mantenimiento en Áreas de Protección de la GAM." *San José, CR. MINAE, Municipalidad de San José y CNFL*.

Senanayake, Ranil, and John Jack. 1998. *Analogue forestry*: Dept. of Geography and Environmental Science, Monash University.

Stake, Robert E. 1995. *The art of case study research*: Sage Publications.

Swilling, Mark, Lauren Tavener-Smith, Andreas Keller, Vanessa von der Heyde, and Berry Wessels. 2016. "Rethinking Incremental Urbanism: Co-production of Incremental Informal Settlement Upgrading Strategies." In *Upgrading Informal Settlements in South Africa: A Partnership-Based Approach*, edited by Liza Rose Cirolia, Tristan Gorgens, Mirjam van Donk, Warren Smit and Scott Drimie, 261-277. Cape Town: Juta, UCT Press.

TAU - Taller de Activación Urbana. 2017. "TAU - Taller de Activación Urbana." https://www.facebook.com/talleractivacionurbana/photos/a.435631949875119.1073741832.433883783383269/895360600568916/?type=3.

The University of Sheffield. 2020. "Dr Melanie Lombard." https://www.sheffield.ac.uk/usp/staff/melanie_lombard/index#tab01.

Till, Jeremy. 2013. "The negotiation of hope." In *Architecture and participation*, 23-41. Routledge.

Trujillo Acosta, Angélica, Manuel Jesús Peraza-Estrella, J. Marina-Hipólito, and Sergio Feoli Boraschi. 2016. "Evaluación del Corredor Interurbano Río Torres, Costa Rica." *Revista Forestal Mesoamericana Kurú* 14:53. doi: 10.18845/rfmk.v14i34.3001.

Turner, John F. C., and Robert Fichter. 1972. *Freedom to build; dweller control of the housing process*: Macmillan.

Tzoulas, Konstantinos, Kalevi Korpela, Stephen Venn, Vesa Yli-Pelkonen, Aleksandra Kaźmierczak, Jari Niemela, and Philip James. 2007. "Promoting ecosystem and human health in urban areas using Green Infrastructure: A literature review." *Landscape and Urban Planning* 81 (3):167-178. doi: https://doi.org/10.1016/j.landurbplan.2007.02.001.

UCLA Luskin School of Public Affairs. 2017, November 30. "Anaya Roy." http://unequalcities.org/ananya-roy/.

UN-Habitat. 2004. "The challenge of slums: global report on human settlements 2003." *Management of Environmental Quality: An International Journal* 15 (3):337-338.

Velazquez, Melissa Renee. 2008. "Formalization of housing in San José, Costa Rica: A community pathway to legal incorporation." University of Kansas.

Viales Hurtado, Ronny José. 2005. *Pobreza e historia en Costa Rica : determinantes estructurales y representaciones sociales del siglo XVII a 1950*. 1. ed. ed, *Colección Nueva historia*: Editorial de la Universidad de Costa Rica.

Ward, Peter M., Edith J. Jiménez, and María Mercedes Di Virgilio. 2015. *Housing policy in Latin American cities : a new generation of strategies and approaches for 2016*

UN-Habitat III / [edited by] Peter M. Ward, Edith J. Jiménez and Mercedes Di Virgilio: New York, NY : Routledge.

Werthmann, Christian. 2021. *Informal urbanization in Latin America : collaborative transformations of public spaces*: Routledge/Taylor & Francis Group.

Werthmann, Christian, and Jessica Bridger. 2015. "Kinetic City Ephemeral City." In *Metropolis nonformal*. Applied Research and Design Publishing.

White, K. L. 2009. "Meztizaje and remembering in Afro-Mexican communities of the Costa Chica: implications for archival education in Mexico." 2009.

Wolf, Garrett, and Nathan Mahaffey. 2016. "Designing difference: Co-production of spaces of potentiality." *Urban Planning* 1 (1):59-67.

Woodward, Kathryn. 1997. *Identity and difference*, *Culture, media, and identities*: Sage in association with the Open University.

APPENDICES

A Description of Stakeholders

Hydrographic Watershed Department (HWD): While GPS in Los Cipreses are managed informally through the actions of multiple stakeholders, HWD is the official governmental department in charge of managing the river margins within Los Cipreses. HWD is a department from the Municipality of San Jose created in 2009 with the purpose of managing and recovering the upper-middle part of the Virilla Basin, which corresponds to San Jose's metropolitan area (Municipalidad de San Jose 2014). This department is one of the creators of the Torres River Inter-Urban Biological Corridor (CBI) which resulted from a collaborative process between multiple governmental and private institutions, and over the last four years, they have managed to establish several interurban biological corridors within Costa Rica's metropolitan area. HWD conducts ecological rehabilitation in multiple locations of the river margins of San José. Their extensive work has provided them experience about the condition of GPS in a wider urban context. In 2015—along with other public institutions—they published the "Reforestation protocol for the rehabilitation and maintenance of GAM protection areas." This document summarizes multiple strategies used for managing green spaces like Los Cipreses. However, HWD´s large scale of action prevents them from having specific and updated knowledge about Los Cipreses conditions or to engage into long term relations with the local community. Therefore, they invited other stakeholders to participate into

Los Cipreses reforestation and rehabilitation activities. In 2014, HWD started working in Los Cipreses in coordination with other departments form the Municipality of San Jose, Los Cipreses Neighbor Association, The International Network of Analog Forestry, and the National Institute of Aqueducts and Sewers to sensitize residents and promote ecological sanitation and rehabilitation of the site. The HWD's role has been to involve multiple stakeholders in the rehabilitation activities, conduct workshops with community members about solid and liquid waste management, manage invasive grass, organize tree plantings, and provide materials and financial support for rehabilitation activities.

Although interaction from HWD with other stakeholders—specially community members—has been low, this stakeholder group has a special interest in Los Cipreses. In an interview, Marta Guerrero from HWD expressed great admiration for the community organization and involvement in rehabilitation activities. However, she also expressed concern and disappointment about the environmental damage that is being caused to the site. For Guerrero, Los Cipreses has several conditions that make this site ideal for ecological rehabilitation: community organization, community involvement, security, accessibility to the site, and involvement of multiple external stakeholders into rehabilitation activities. Furthermore, for HWD—as a part of the Torres River Interurban Biological Corridor Commission—Los Cipreses represents a demonstrative site of ecological rehabilitation because for the last 6 years activities of improvement over green spaces and involvement of local community and other stakeholders involvement has been consistent.

Nevertheless, during the interview she expressed her disappointment when she realized that construction and soil debris were still being deposited in the site, regardless

of the great risk to the community and the environmental damage that these actions entail, not to mention that they are illegal activities. These actions caused her great discomfort, as the site of Los Cipreses, the community´s involvement and their greening initiatives represent an ideal example of citizen participation and rehabilitation within the Torres River Interurban Biological Corridor initiative (Marta Guerrero, interview by author, San José, August 7, 2019). Therefore, contradictions between stakeholders ʾuse and management of GPS are perceived by HWD as highly problematic. Currently, frictions between HWD, community members and community board arise because of these practices.

Blue Flag Program (BAE): Just like HWD, BAE is another governmental department involved in MGPS-LC. Although this program has little physical incidence in Los Cipreses GPS, BAE's flag and the award it stands for has a great significance for all stakeholders. It represents continuity and community commitment to environmental improvement of Los Cipreses. BAE a program from the National Institute of Aqueducts and Sewers; its purpose is to administrate the Blue Flag award. This distinction is granted to organizations and local communities that seek to improve sanitary and environmental conditions, and at the same time mitigate and adapt to climate change. BAE is free, voluntary and it promotes competition and community organization in multiple categories (Instituto Costarricense de Acueductos y Alcantarillados 2015). In Los Cipreses, BAE has been awarded for five consecutive years under the category of watersheds. Every year, a committee integrated by community members, board members, HWD and IAFN collaborate to submit a report of all management activities conducted during the previous

year and propose a schedule of activities for the following year. BAE Award has two main purposes within Los Cipreses: (1) It helps stakeholders to summarize and elaborate basic planning for the management activities of GPS and (2) It gives a sense of pride to the community, since every year BAE gives a flag to the community as a symbol of the award (Figure 1).

Figure 1. Ecological Blue Flag. Source: Felipe Barrantes.

However, BAE's accuracy and direct influence in MGPS-L is scarce because there is little monitoring from its administrators; even so, this does not detract community members from pursuing the award each year. In an interview, BAE inspector from the

National Institute of Aqueducts and Sewers Diana Vanegas, revealed the lack of involvement, and knowledge of BAE's administrators about the site's situation; she argued that BAE has over 5000 sites in Costa Rica and there is little personnel to closely inspect all sites (Diana Vanegas, interview by author, San José, August 5, 2019). Therefore, BAE personnel relies on the yearly reports to account for the site's conditions and activities. This report is usually written by a single individual and results are not shared to the rest of the committee nor the community. However, Mrs. Vanegas mentioned the importance of BAE committee and report in attracting and promoting environmental activities not only within Los Cipreses community but also influencing surrounding communities. BAE as a stakeholder has a hands-off role within management activities in Los Cipreses nevertheless their flag has become an important symbol of pride within the community.

Board of Directors: HWD and BAE are the main government organizations involved in MGPS in Los Cipreses, the Board of Directors is the main internal organization. In 1996, under the Law of Associations N° 218, Los Cipreses Neighbors Association registered with a total of 92 members (Carrillo-Barrantes 2019). Since then, the Association, its Board of Directors and the General Assembly have been the main forms of community organization. Being an informal settlement, the board of directors is the main governing body that oversees organization, resources, and it sets the rules regarding community, housing, and open spaces in Los Cipreses. Historically the board has had three roles over GPS in Los Cipreses: (1) It controls housing growth and decrease, though the concession of permit to make modifications to houses and to public spaces, and to remove houses, (2) It provides resources and organizes community

activities regarding infrastructure and improvement of GPS, and (3) It oversees activities over public spaces in Los Cipreses by surveilling and informing the community about events and rules over public space. The board of directors changes every four years and members can be re-elected consecutively two times, therefore, MGPS-LC is influenced by the interests of the current board in duty.

Between 2010 and 2018, the Board of los Cipreses was highly involved in multiple activities in GPS as they were part of the initial approaches of the HWD and the achievement of the Ecological Blue Flag. Roberto Zuñiga, former member of the 2010-2018 board, commented in an interview that activities over green public spaces are an opportunity for social and environmental improvement, because these activities attracted multiple stakeholders from within the community as well as from outside, and promoted an image of Los Cipreses as a working and resourceful community that is highly interested in upscaling from the precarious conditions of its beginnings (Roberto Zuñiga, interview by author, San José, July 30, 2019). This board developed a connection between community members and other stakeholders, and designated many of its resources to these activities. Their main interest was to improve the community´s environmental conditions.

In 2018, a new board got elected and their main interest was to buy the rest of the land of Los Cipreses with the purpose of ending the irregular condition of the settlement. The board´s role as a connector between stakeholders in management of GPS ended as resources and people's attention was directed to the land purchasing process. Julia Zamorano, one of the new board members summarized their goal as: "we have a single interest: become rightful owners of Los Cipreses. Once we become owners, the

government will provide us infrastructure and services" (Julia Zamorano, interview by author, San José, July 29, 2019). Consequently, the board of directors 'role has been to secure monthly payments and community involvement in green public spaces has decreased. Buying the land has been one of the most controversial issues within the community and it has caused disagreements between community members. This issue will be discussed in following sections.

Community Members: Unlike other groups who relate to GPS in Los Cipreses as organizations, community members relate to MGSP-LC as individuals, families, and neighbors. Community members are a large and diverse group that includes all inhabitants of Los Cipreses. As mentioned in the past chapter, the community began in 1990 with 350 families but many of them where relocated in the first four years of occupation. Currently, Los Cipreses has a population of 380 inhabitants distributed among 92 families. Some of the families and their offspring are original settlers; they have experienced the difficulties and changes of the community over the past 29 years. Other inhabitants have moved into Los Cipreses later, after buying a right to settle; this purchase was made to the board or to a community member. These two groups, original settlers and buyers have representation within the neighbor's association and have the right to attend and vote as a family in the community assemblies. There is a third group that corresponds to inhabitants that rent an apartment in Los Cipreses. This population of renters has increased over time and they have not been properly identified by the Community Association.

Los Cipreses inhabitants are the main users of the Los Cipreses GPS. Through their everyday activities and social interactions they create and transform these spaces. Some inhabitants are highly involved in management activities of GPS, they organize or participate in the forest activities and they are in close communication with the other stakeholders. Other community members connect to the GPS as an extension of their private space; for instance, the back of their houses faces some GPS so they use these spaces as their backyards, or they plant fruit trees, medicinal plants, and occasional crops which provide enclosure and privacy to the back of their homes (Figure 2 and Figure 3). However, the majority of community members relation to GPS is limited to the urbanized areas of los Cipreses and they do not frequent the forest spaces. They relate to GPS through their everyday activities; they hang out with other neighbors in front of their houses, they walk to the bus stop, go to the *pulpería* (local grocery store) and play or gather in small areas designated as community parks.

Figure 2. Member of Los Cipreses community planting maize in the slopes of GPS in Los Cipreses. Source: Felipe Barrantes.

Figure 3. Edible crops in people's back yards. Source: Felipe Barrantes.

Six community members were interviewed for this research. Their perception about GPS is divergent, however, they all agree with the importance of the green public spaces for the community´s wellbeing and they value all the GPS improvement activities. Their differences reside how these spaces should be governed and who should spend time and resources creating and maintaining them. The next paragraphs describe specific experiences of two community members; their relation to GPS in Los Cipreses reveal the diverging interests in GPS withing community members and how the experience of coming to live in this community has shaped this relation.

For Ms. Sonia Vargas-Mendoza—who has lived in Los Cipreses since its occupation—working in GPS, specifically the land surrounding her house, has meant a way to claim her space and get recognized as a legitimate inhabitant of the community. She built the first tire retention wall in the community, which served as risk management strategy to stabilize slope and reduce erosion behind her house. Her effort is a symbol of reclamation of space to the rest of the stakeholders (Figure 3). Mrs. Vargas says that she has received criticism from other community members arguing that her intense involvement into GPS is a form appropriating GPS space for herself. However, Mrs. Vargas disagrees, she argues that through her arduous involvement she is seeking to secure tenure and make her property safer, which she bought some years ago from the Board. Additionally, she has helped and encourages other community members to use her same methods of tire retaining walls (Sonia Vargas, interview by author, San José, August 8, 2019). The relation between Mrs. Vargas and GPS unveils how working over GPS is a form of appropriation of space, which can be interpreted by other community members as privatization of space. Because Los Cipreses is an informal settlement; individual ownership and the definition of boundaries between public and private space is not defined in a map and mediated through regulations; therefore, attitudes toward GPS can be seen as a form of occupation.

Figure 4. Doña Sonia Tire Wall. Source: Felipe Barrantes.

Despite personal difficulties Ms. Sonia is also highly involved in other activities related to improve GPS. Her enthusiasm is an example of how GPS in Los Cipreses and transforming GPS are an important part of many community members everyday life. Mrs. Vargas has been highly involved in the creation of the forest entrance park where she has organized multiple activities with community members and other stakeholders (Figure 4). Regarding her involvement in GPS she points: “Look Felipe, time flies when I'm working in the fields. I have various ailments but when I grab the machete and the shovel, I forget everything, and I get to work” (Sonia Vargas, interview by author, San José, August 8, 2019). Mrs. Vargas also talks about her difficulties living in the community and experiences of marginality, poverty and violence that led her to choose in an informal settlement and build her house using mostly her hands and limited resources.

Despite these difficulties, her commitment to improving the community's GPS is undeniable.

Figure 5. Children Activities in Forest Entrance Park. Source: Felipe Barrantes.

María Isabel Gamboa, another initial settler, associates Los Cipreses 'GPS with the vicissitudes of the initial years of occupation. Her memories about these spaces are wrapped with feelings of pain caused by the difficulties and violence surrounding the occupation. She feels guilt for occupying this space illegally and she believes the difficulties they lived symbolize a penance for the crimes of illegal occupation. Despite this feeling, Ms. Gamboa expresses gratitude of her life in Los Cipreses. She proudly mentions how she and her husband raised their family and progressed from precarious

conditions to having a house for her and her children. Her stories reflect how many inhabitants thrive despite the difficulties of the initial conditions of occupation in Los Cipreses. Ms. María Isabel is also committed to improve the community's GPS. Due to her age and health problems, she does not go out of her house often. However, she has held various roles in the Board, and she has cooked many times for activities conducted in the GPS. She believes that the community has the duty to improve Los Cipreses GPS as a form of demonstrating the value, resilience of this community and their commitment to the environment.

The roles and perceptions of Ms. Sonia and Ms. María Isabel are just two of many other community members. These stories reflect the close connection between the lives of Los Cipreses inhabitants, the landscape they occupied and their condition as an informal settlement. Nonetheless, over the year's, generations change and new settlers have move into Los Cipreses; these new inhabitants have different interests over GPS. Thus, migration and generational change are one of the key qualities of community members as stakeholders.

International Network of Analog Forestry (IAFN): Although community members relate to GPS in Los Cipreses though their everyday lives, other stakeholders such as IAFN have a primary interest in restoring the environmental conditions of these spaces. IAFN is an NGO who works in partnership with other organizations, government institutions, but particularly with small farmers and indigenous communities to restore productivity of degraded land and provide new sources of food and income for local communities (International Analog Forestry Network 2020). IAFN promotes Analog

Forestry, an approach to ecological restoration developed by system ecologist Dr. Ranil Senanayake from Sri Lanka. The Analog Forestry approach is based on mimicking indigenous forests in climax state, understanding ecological succession processes, and considering general concepts of landscape ecology to create ecologically stable landscapes that at the same time are socio-economically productive (Figure 5). Parallel to the understanding of local ecosystems, analog forestry also focuses on the knowledge and discernment of the indigenous people who have a close relationship with the forests and It uses both knowledges to introduce economically viable crops in the landscape (Senanayake and Jack 1998).

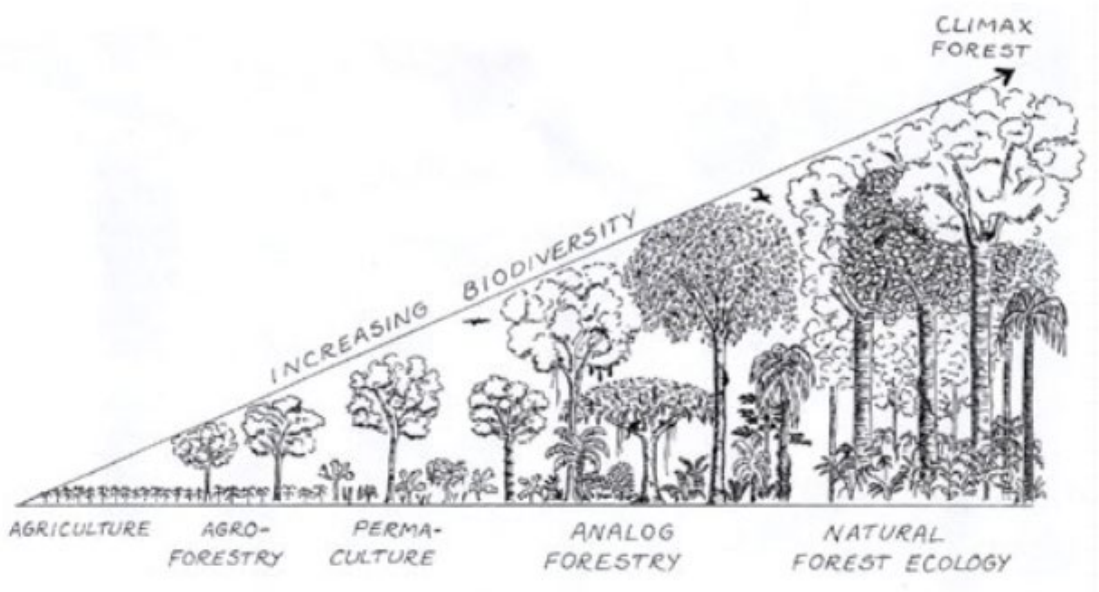


Figure 6. The complexity of Analogue Forestry in relation to other forestry practices (after Mallet 1997)

In 2014, IAFN members started working in Los Cipreses as part of their interest in applying Analog Forestry techniques to urban settings. At the beginning, the role of

IAFN was to develop a reforestation plan and involve community members into various environmental activities. Through their network, IAFN members also involved other stakeholders such as environmental groups and local businesses. One of IAFN initial projects was the elaboration of a planting design based on Analog Forestry methodology. This process implied taking a reference ecosystem consisting of a climax native forest located in a close by area with similar environmental conditions. Then, the analog forestry expert elaborated a physical and ecological evaluation of the site and analyzed the gaps between the climax forest and the restoration site. The result served as an initial restoration design for Los Cipreses, which included a selection of native plants and productive crops (Figure 6). The implementation of the initial plan was developed in collaboration with local community and businesses. A YouTube video was elaborated and summarizes the initial process: https://www.youtube.com/watch?v=bNl-ARa_5As. However, the initial planting plan was not followed. Firstly because the planting and management conditions were did not fit the initial plan; secondly, because there wasn't a trained Analog Forestry technician on site in every restoration activity; finally, other stakeholders involved in MGPS-LC had different restoration criteria for the GPS, such as exclusively using native plants. This lack of coordination and planning in restoration and other types of activities over GPS revealed that creation and transformation of GPS in Los Cipreses required a more complex management system, where different stakeholders acted in parallel but in multiple directions and it wasn't going to be easy to have a single and coordinated management strategy.

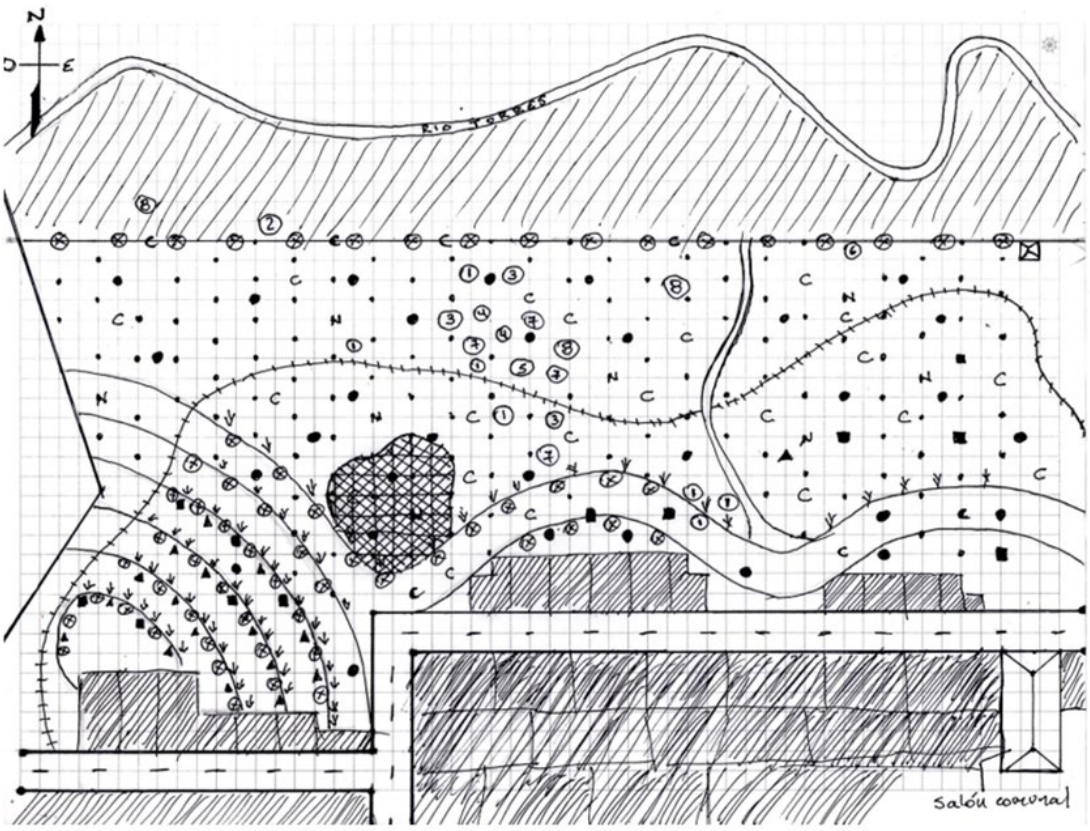


Figure 7. Analog Forestry design - Los Cipresess de Barrio México. Source: International Network of Analog Forestry. Drawing by Oscar Fonseca.

Eleonora Castro has been the main stakeholder from IAFN in Los Cipreses. Her role has been highly influential in GPS of Los Cipreses because she has served as a link between many stakeholders inside and outside of the community. She mentions that one of the initial reasons why IAFN was involved in Los Cipreses restoration activities was the active interest and involvement of the local community into these activities. From the beginning, IAFN and Ms. Castro's main role has been to link multiple stakeholders and lead various activities in GPS0, such as organize tree plantings, conduct community workshops, manage volunteers, and involve other stakeholders. These activities and their stakeholders are listed in the GPS management activities. Over the years, Ms. Castro's

knowledge and connection to the community and its GPS has given her legitimize her leadership in management of GPS of Los Cipreses. Her role as a connector between stakeholders and her consistent involvement over multiple activities have been essential to the improvement of these spaces.

Other associates inside CBI-RT Commission: The Commission for the Torres River Inter-Urban Biological Corridor is a group of stakeholders in charge of management of the Torres River Biological Corridor. This commission is integrated by multiple government institutions, business, NGO´s, and citizens that represent different interests and disciplines within the corridor. In addition to HWD, two other members of this commission have been actively involved in Los Cipreses GPS: Río Urbano Collective and Amigos del Río Torres. These two groups have collaborated in different activities in Los Cipreses, and just like IAFN, the representation of these two groups has been through specific individuals who over the years, have developed a close relationship with Los Cipreses.

Amigos del Río Torres is an NGO who seeks to educate, inform, and promote the protection of the Torres river. They organize cleaning days, educational talks and school environmental programs and support for homeless citizens who live along the river (Amigos del Rio Torres March 20, 2020). This NGO has organized multiple volunteer activities in Los Cipreses, where volunteers from different parts of the city help to collect waste, plant trees, and remove invasive grass in the GPS. Their activities have attracted media and generated public awareness about Los Cipreses GPS and its environmental activities.

Camilo Mendoza, from Amigos del Río Torres has participated in multiple GPS activities in Los Cipreses since 2015. His involvement in Los Cipreses started with Amigos del Rio Torres but soon it changed to be on a personal basis. Mr. Mendoza´s leaded—along with Jorge Vargas from Río Urbano—a monthly Torres River Tour for two years. Their aim with this project was to recreate the history and present of the Torres through organized hikes along the river. They gathered groups of citizens, foreign tourists and visited key sites (Figure 7). Mr. Mendoza relates that the importance of these tours was to make visible the importance of the river, its ecological as well as its cultural significance.

Figure 8. Torres River Tour Poster. Source: Río Urbano.

Another project that Mr. Mendoza recalls as important is the “Children´s Club” developed in conjunction with Eleonora Castro from IAFN and community members. This project was significant due to its continuity over three years in involving the community´s children and the consistent maintenance of a forest parcel. Children’s Club, children’s forest, and children’s library among others, became a monthly activity that

integrated community's children and their families with Los Cipreses GPS. Every month, different activities were developed under the subject of environmental education of the community´s children. Children´s club became an important dynamic between the community, Los Cipreses GPS and other stakeholders that were interested in participating into these activities. Mr. Mendoza´s role was instrumental for the development of this club.

Along with many other activities not mentioned, Mr. Mendoza´s relation with Los Cipreses in mainly through its GPS which he calls "the forest." He has a vision of creation and conservation of a well stablished forest that will be enjoyed by future generations. He mentions that over the last years, he comes by himself once or twice every week to work in this site, he usually plants trees and removes invasive species. However, he is concerned about the difficulties such as the lack of community involvement into the forest activities, he feels like a "lonely wolf" as he finds difficult to relate to other stakeholders, specially community members. However, his love and involvement in the GPS, specially the forest activities are well recognized by the board and other community members.

Another associate of the CBI-RT Commission who over the past years has been frequently involved in activities over GPS of Los Cipreses is the Río Urbano Collective and specifically Jorge Vargas, its main collaborator. Río Urbano is a citizen initiative that began in 2012 and seeks to generate a cultural change towards rivers and its urban environments; it claims that San José should be recognized as a "city of rivers surrounded by beautiful mountains" (Rio Urbano Costa Rica 2015). This initiative sees inhabitants as protagonists of this cultural change, and it proposes three tactics to generate this

transformation: (1) Transforming imaginaries by shedding light and appropriating urban rivers, (2) Modifying habits by education and training, and (3) Regenerating and integrating these environments to the rest of the city. Throughout the years Río Urbano has continuously conducted multiple activities using these tactics as lines of actions, these actions have made many people aware of the conditions of San José´s rivers.

Jorge Vargas, founder of Río Urbano, started visiting Los Cipreses within the initiative of the Torres River Tour, along with Camilo Mendoza. They had the initial goal of allowing people from other environmental initiatives along the Torres to get to know other projects related to the improvement of environmental conditions of the river and its sub-watershed. During the Torres River Tour that happened every month, community members were contacted through the community board to engage visitors in their visit to Los Cipreses and part of the profits were used to pay community members to provide visitors a snack in the community center. Mr. Vargas mentioned that the exchange between community and visitors ended when the board of directors changed, as there was less interest in the forest activities. As mention earlier in the board's stakeholder groups section, the board's change in 2018 meant a significant shift in management of GPS, as many activities over GPS stopped attention from the new board.

Mr. Vargas second approach to the community was through an academic activity named Urban Activation Workshop (TAU). TAU initiative will be described in academic stakeholder section. Within this workshop, Mr. Vargas worked a collaborator and trainer, he´s collaboration was to reinforce the communication networks withing the community through the creation of two WhatsApp groups; one for community´s GPS activities that involved outside stakeholders and one exclusively for the neighbors internal

communications. Although this activity was mostly developed by Mr. Vargas and other workshop participants, the groups were successfully appropriated by the community. To this day, the WhatsApp groups are the main vehicle of communicating community and GPS activities.

Citizens of San Jose: This is a large stakeholder group, which considers all citizens as stakeholders, because they are indirect beneficiaries and many of them are invited to participate of activities in GPS of Los Cipreses. On one hand, different stakeholders promote their activities over GPS in Los Cipreses using social media. For example, Amigos del Río Torres and Río Urbano publish adds in Facebook and Instagram about river cleaning, planting, or touring activities. These adds are invitations to anyone interested in getting involved into these environmental initiatives, and with the proper planning, Los Cipreses provides an optimal setting to host novice participants into these ventures. Additionally, some community members of Los Cipreses manage an official Los Cipreses Facebook site, where people from other places can view and get informed about the activities conducted in the GPS. On the other hand, citizens are passive stakeholders, which means they are not involved in any way other than being indirect beneficiaries of the improvement of GPS in Los Cipreses. These benefits are the main discourse behind the involvement of stakeholder groups such as the HWO and Amigos del Río Torres, who´s main purpose is not only the benefit of immediate neighbors of Los Cipreses, but all citizens of San José and larger care about nature as a whole (Camilo Mendoza, interview by author, San José, August 2, 2019) This wider perspective and involvement to MGPS-LC provides them a different perspective, that goes beyond acting on an isolated neighborhood, a segment of a river or a patch of green space, and connects

these activities to bigger systems, with wider ecological significance and involving larger and multiple social movements.

Within citizens of San José stakeholder group, there is a subgroup with characteristics valuable to highlight: neighbors of Barrio Mexico. This group has a larger relation with MGPS-LS and many neighbors recall experiences of Los Cipreses before 1990. Neighbor and community leader of Barrio Mexico Sandra Villegas expressed during an interview her admiration for Los Cipreses community and the environmental efforts to improve this place. When she was asked about her relation to Los Cipreses she refers to the people that occupied this place and she has a positive opinion of them because this community is one of the most active and organized communities within the Mercedes District:

> *Un terreno que han sabido aprovechar, es admirable ver lo que han hecho en las laderas que van hacia el río y la orilla del rio también. Gente con mucha conciencia, yo diría ambiental; son Bandera Azul Ecológica, es un orgullo para este distrito que una comunidad como Los Cipreses se les haya otorgado el premio. Eso significa mucha organización, participación y planificación, esas son cosas que otras comunidades con mejores condiciones no tienen. Yo los admiro y les tengo mucho aprecio*. (A land that they've know how to take advantage of, it is admirable to see what they have done on the slopes that go towards the river and the riverbank as well. People with a lot of conscience, I would say environmental conscience; they are Ecological Blue Flag, it is a pride for this district that a community like Los Cipreses has been given the award. That means a lot of

organization, participation, and planning, and those are things that other communities with better conditions do not have. I admire them and I really appreciate them.) (Sandra Villegas, interview by author, San José, August 8, 2019).

Opinions like that of Mrs. Villegas are often heard among neighbors of Barrio Mexico and citizens aware of environmental activities within the Torres River. The efforts in improvement of GPS has given Los Cipreses a reputation of an environmentally active community and an example to others within the margins of urban rivers. This view of Los Cipreses as an organized and environmentally active community represents a shift in the mind-set of citizens and neighbors of Los Cipreses as an illegal or informal settlement, which carries stigmas of being socially and environmentally problematic. This shift is evident in neighbors 'opinions as well as community members, who express their pride in their Blue Flag.

Business Social Programs: Corporate volunteering programs are planned efforts that enable employees of a corporation to conduct community work. According to Kotler and Lee (2008) corporate volunteering involves organizing the willingness of employees to perform voluntary work, mobilize them and stimulate their involvement in causes aimed at collective interests. It also educates employees in matters of citizenship and sustainable development. Corporate volunteering is a part of corporate social responsibility (CSR), which relates to the notion that corporations have obligations to society beyond what is prescribed by law or a union contract (Jones 1980). Hence, CSR is a self-regulating organizational system that enables a business to be socially

accountable. In San José, corporate volunteering programs have become popular within the corporate environment. Additionally, local, and international business dedicated to volunteering provide services that channelize resources and volunteers to social and environmental needs. These resources have become important for many local communities and environmental initiatives.

Several busines conducted corporate volunteering in GPS of Los Cipreses. Their activities provided significant results in the GPS and motivated community members to participate as well. Volunteer groups come to Los Cipreses by invitation of other stakeholders such as IAFN, Amigos del Río Torres, and the Community Board. Their visit lasts half a day and the groups range from 8 to 60 individuals. During their visit, volunteers start with a general explanation about the site and the activities they will conduct during the day, then they are divided into subgroups and a supervisor leads the group to the working site. The volunteers conduct activities such as removing invasive grass, planting trees, picking solid waste, and building trails (Figure 8). After a workday, many volunteers mention that they feel identified and proud of their work, and they express interest in returning to the site.

Figure 9. Volunteers planting trees in Los Cipreses. Source: Felipe Barrantes.

However, corporate volunteering in Los Cipreses has also had its downsides. On one hand, volunteering activities require previous planning and supervision that business are not able to provide and are not willing to pay. Many times, corporate volunteer groups come to Los Cipreses as a form of not employing proper volunteering

organizations that provide resources, support, and previous coordination with local stakeholders. Most stakeholders involved in management of Los Cipreses work without payment, which makes difficult for organizers to achieve the level of effort needed to manage volunteers. On the other hand, corporate volunteers only come during weekdays, times in which community members and other stakeholders are working in their regular jobs. Consequently, community members often do not engage or participate in volunteering activities, and some volunteers have complained about the lack of coordination and involvement of stakeholders such as local communities. Despite its downsides, corporate volunteers provide a significant amount of effort and their work reflects in GPS of Los Cipreses. When volunteers come to Los Cipreses assisted by a proper intermediary, activities and volunteers 'efforts provide better outcomes.

Academic Groups: Over the last years, several academic groups have visited Los Cipreses as part of a class project to conduct research or university community work. The academic groups identified as stakeholders come from three local universities: University of Costa Rica (UCR), National University (UNA) and Distance State University (UNED). Some of the disciplines involved are biology, natural resource management, architecture, and anthropology. Some of the projects carried out in Los Cipreses had significant outcomes for the community and its GPS. Two projects will be described in the following paragraphs: (1) Urban Activation Workshop (TAU) developed by Mario Villalta and (2) the environmental education research of Paola Gastezzi. These projects had academic outcomes as well as significant results for the community and its GPS.

The Urban Activation Workshop (TAU) is an initiative from the School of Architecture of the University of Costa Rica that focuses in connecting people and public spaces through artistic and cultural activities (TAU - Taller de Activación Urbana 2017). TAU in Los Cipreses consisted of a one-week workshop were community members, students, faculty, and trainers form diverse backgrounds developed multiple activities that promoted reflection of how people inhabit public spaces in Los Cipreses. Trainers in TAU came form multiple backgrounds and their goal was to develop tactical interventions to activate public spaces in Los Cipreses. The workshop participants collectively decided to focus on the relation between community and their urbanized public spaces, and to improve systems of communication between the all community members and the board. TAU had various outcomes: they developed a community mural in the Association's board office (Figure 9); they created two WhatsApp groups (this project is explained in the Other associates inside CBI-RT Commission section) and they organized a party where workshop participants and many community members shared food, and played games in Los Cipreses 'public spaces. Even though they were ephemeral, TAU´s projects succeeded since they remained in time, they were successfully accepted and appropriated by the community. A reason for this, argued by it's organizers, is that since the beginning, the project ideas were developed with and for the local community, also they were planned for the local community to take over after TAU workshop was over.

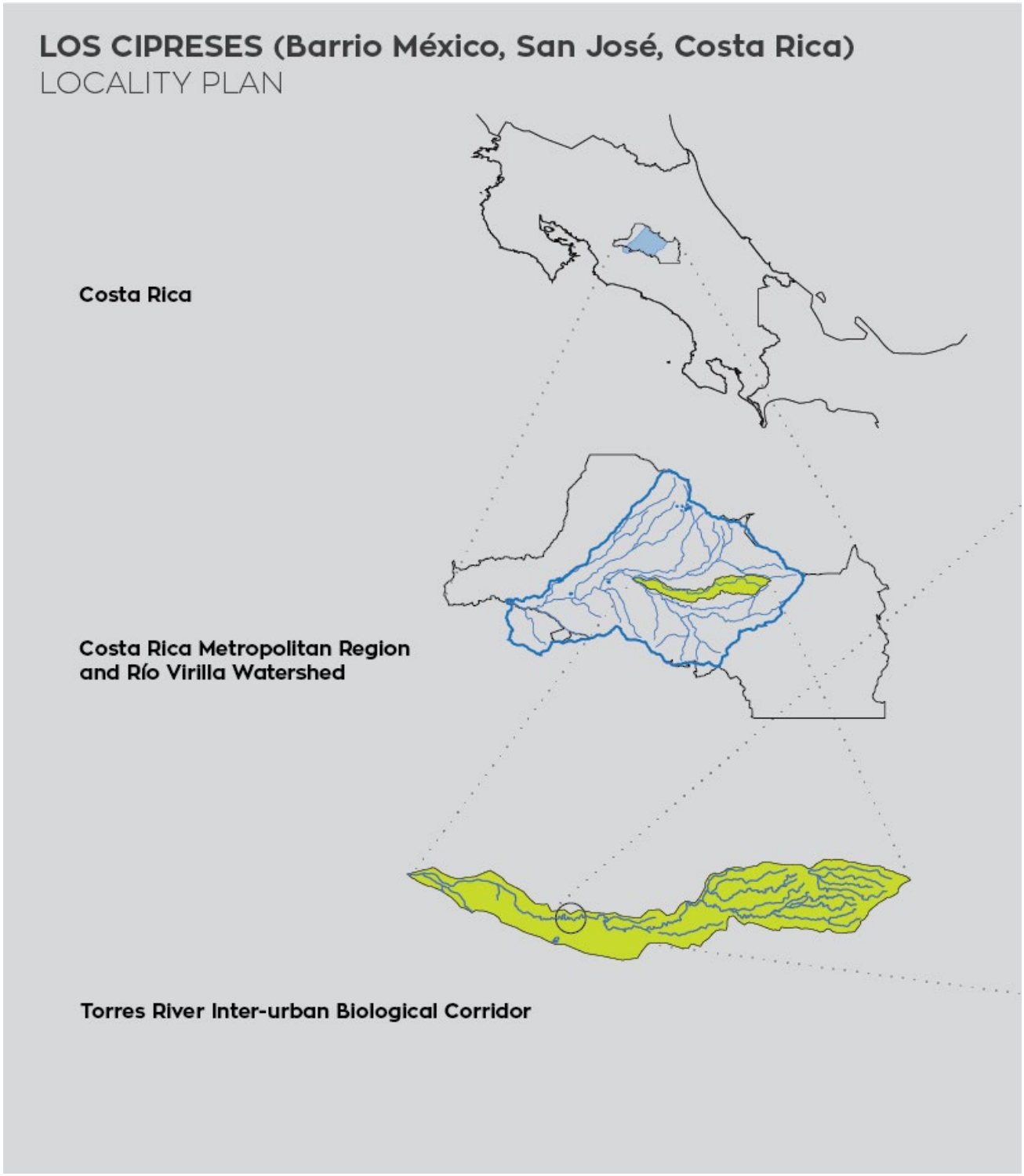
Figure 10. Group picture of TAU members next to the community mural. Source: Taller de Activación Urbana, University of Costa Rica.

Another relevant stakeholder related to the management of GPS in Los Cipreses is researcher Paola Gastezzi, a researcher in conservation and natural resource management from the Distance Stake University of Costa Rica (UNED). Over the past years, she has researched and published about environmental mitigation in the Torres river, were she has studied measures of its rehabilitation and conservation (GeCos 2020). In 2017, she conducted a series of environmental education workshops which she published later in: "Non-formal environmental education for the improvement of the urban environment of the Torres river, Costa Rica" (Gastezzi-Arias 2019). During these workshops, she conducted different activities related to ecological rehabilitation, human health, and

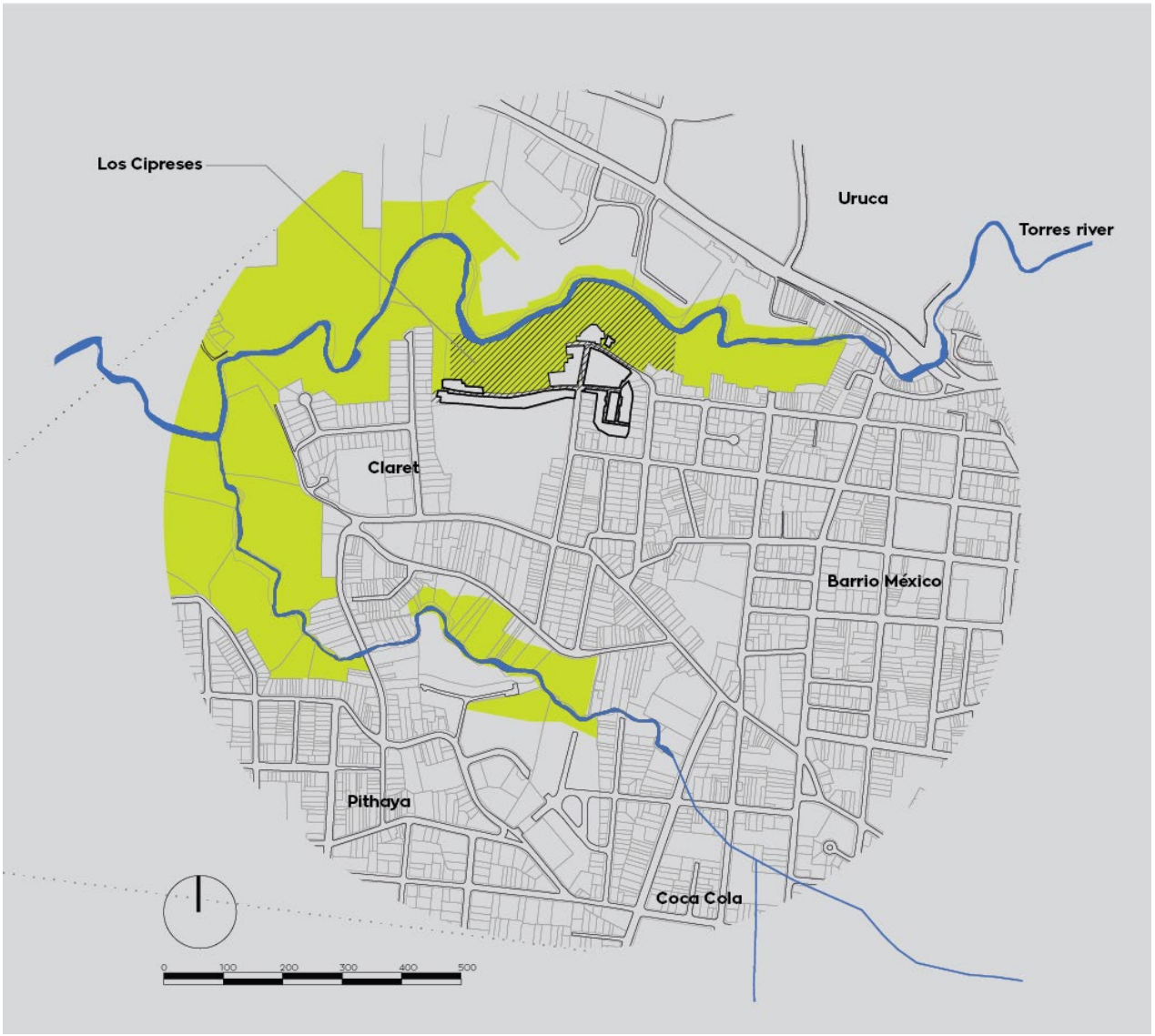
environmental sanitation. She worked with children ranging from 4 to 12 years old. These activities were developed in coordination with the association's Board of Directors, UCR students and IAFN. Her goal was to facilitate information to children so they could recognize the environmental issues and at the same time propose viable solutions to these problems within their community (Gastezzi-Arias 2019). In an interview with Gastezzi, she mentioned that her environmental education activities consisted of 8 workshops about landscape, sanitation, and recycling; subjects that were developed under the "children's club", an activity already developed by other stakeholders. Gastezzi also mentioned that compared to other communities, working in Los Cipreses was very easy; she claims that the community is very well organized, as well as the activities in its GPS. However, she argues the need to strengthen administration of this site and set clear limits to the growth of the community.

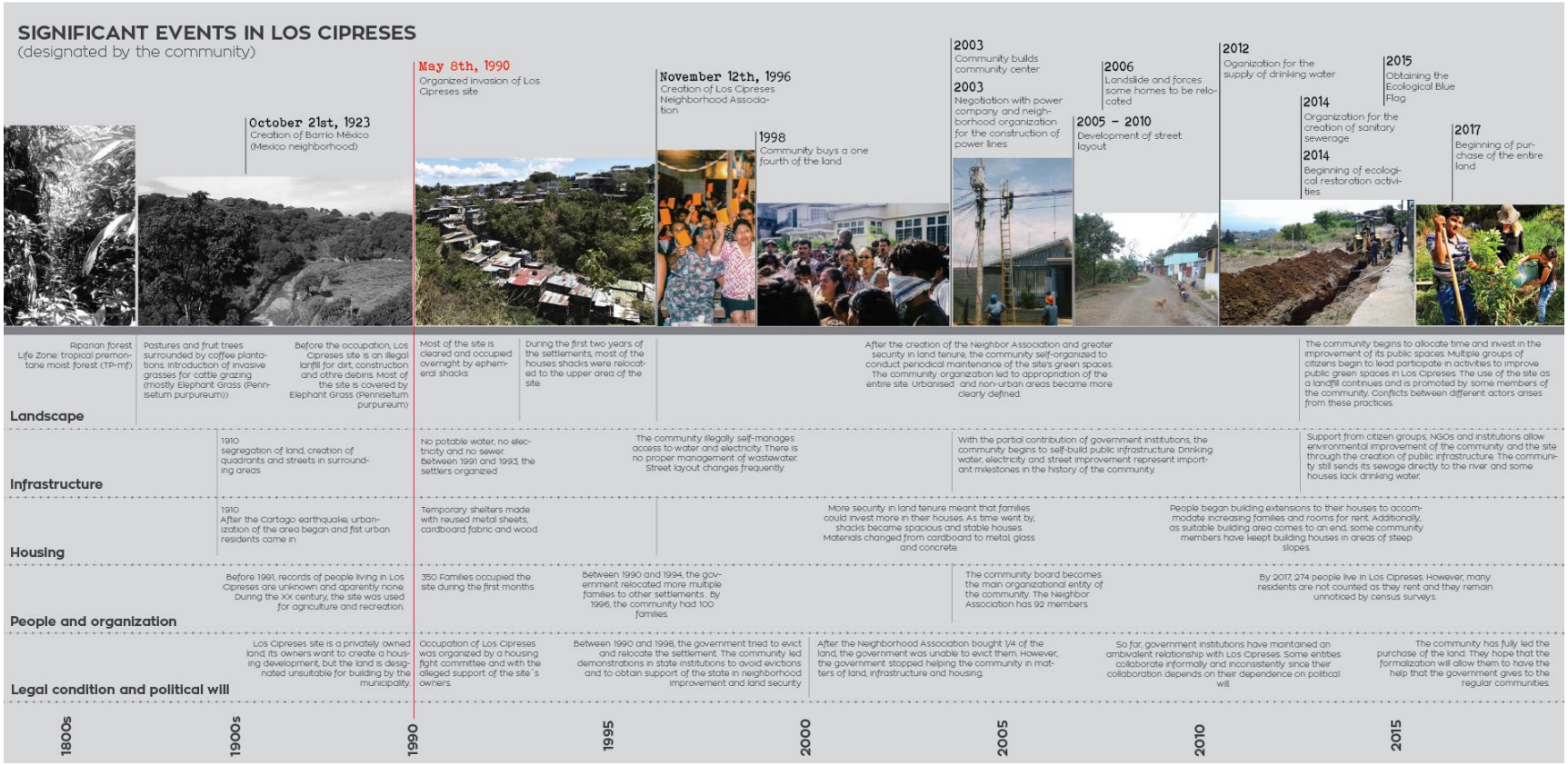
Other academic stakeholders have been sidelined in this description, as their involvement was not as continuous and relevant as the ones mention in this section. However, multiple academic groups have appeared over the past five years; and their contributions have marked important milestones in Los Cipreses. Proximity to many universities, accessibility, security, organization, and the community's willingness to work with external stakeholders facilitates the arrival of researchers and educators.

B LC Location Map 1

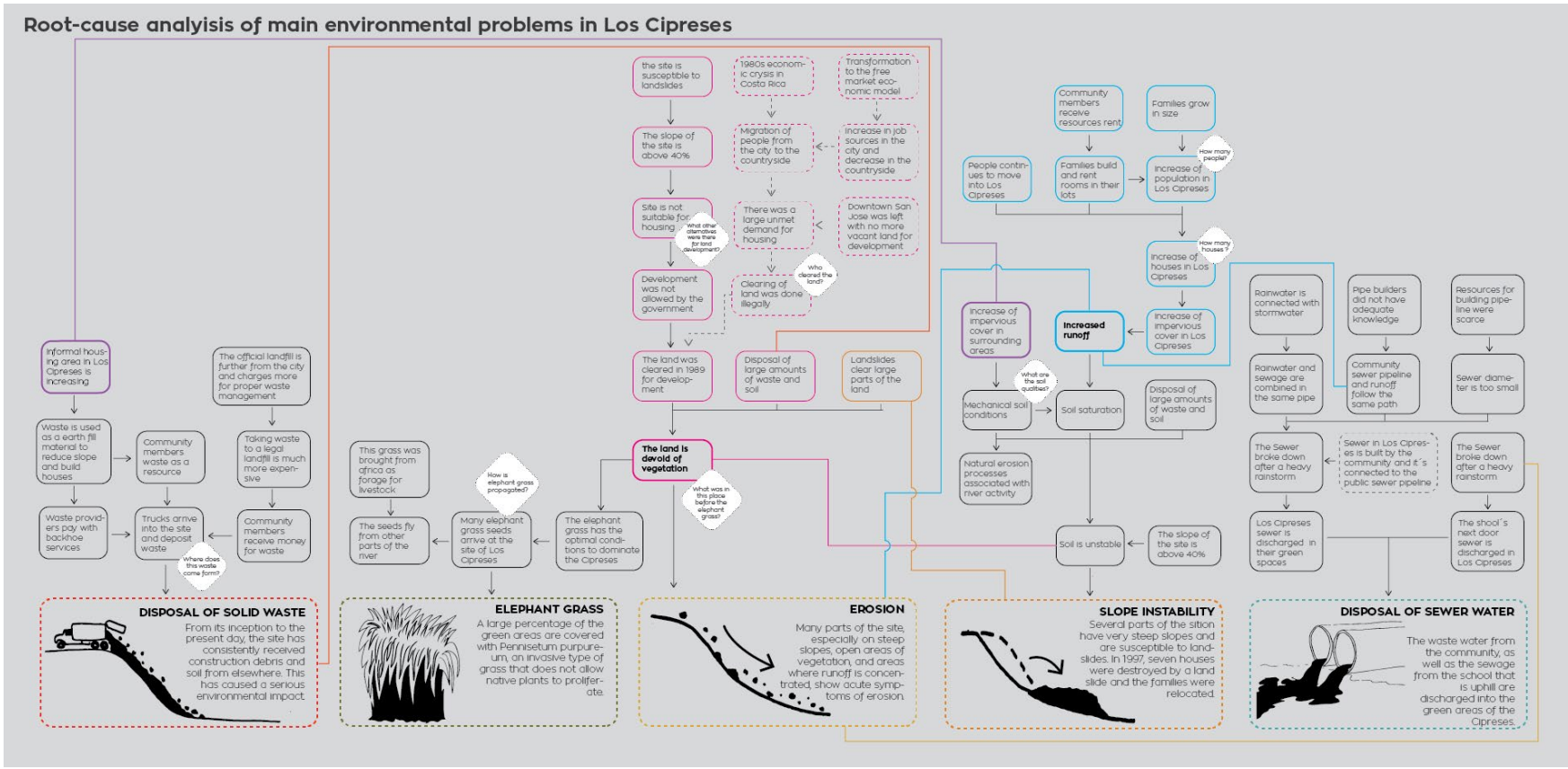


C LC Location Map 2





D Timeline of significant events in Los Cipreses



E Root-cause analysis of the main environmental problems in Los