The Thesis Committee for Christeen Alexandra Pusch

certifies that this is the approved version of the following thesis:

An Analysis of Informal Housing:

The Case of Los Platanitos, Santo Domingo Norte, Dominican Republic

APPROVED BY

SUPERVISING COMMITTEE

Supervisor: _____

Bjørn Sletto

_____

Peter Ward

An Analysis of Informal Housing:

The Case of Los Platanitos, Santo Domingo Norte, Dominican Republic

by

Christeen Alexandra Pusch, B.S.

Thesis

Presented to the Faculty of the Graduate School

of the University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Science in Community and Regional Planning

The University of Texas at Austin

December 2010

ACKNOWLEDGEMENTS

An Analysis of Informal Housing:

The Case of Los Platanitos, Santo Domingo Norte, Dominican Republic

By

Christeen Alexandra Pusch, M.S.C.R.P.

The University of Texas at Austin, 2010

SUPERVISOR: Bjørn Sletto

Many Latin American countries have transitioned from agricultural to service-oriented societies since the 1950s and have consequently seen a vast migration of people from rural to urban areas in search of new jobs created in cities. The vast majority of migrants have not been able to afford or obtain formal or government- built housing. They have, consequentially, turned to the informal sector, settled land that was owned by another and built their houses there despite in many cases not having services. The Dominican Republic has seen a similar sequence of events and has also seen a large increase in urban populations and informal housing in its cities. This paper examines the housing in one of these informal settlements, the community of Los Platanitos, located in the municipality of Santo Domingo Norte and among the poorer settlements in Santo Domingo. Specifically, this study examines the process in which the community was settled and consolidated as well as residents' ability to improve their situation through acquisition of this property. It also looks at the current state of housing in Los Platanitos in terms of spatial distribution and existing and needed support systems.

TABLE OF CONTENTS

Introduction to the Community

This paper centers around residents' struggles to build and improve their homes in Los Platanitos, an informal settlement located in the municipality of Santo Domingo Norte, Dominican Republic. I first visited Los Platanitos in January 2010 as one of ten students from the University of Texas, who worked with community members to document the problems associated with inadequate municipal trash collection services and design a community-based solid waste management program. This class project was a follow-up study to a risk and vulnerability assessment conducted by UT students in spring 2008, where students had mapped the area and documented the fundamental needs and assets of the community. Several students have also returned to the community to conduct research for their theses. Combined, these studies have begun to paint a relatively complete picture about the challenges faced by residents in Los Platanitos. However, there was and still is much to be learned and done to improve the situation in the community.

Thus, I chose to conduct the research for my master's thesis study in Los Platanitos because I was familiar with this area and could build on previous studies, but also because this community is among the most marginalized, poorest, and vulnerable informal settlements in Santo Domingo. Even Dominican NGO representatives, familiar with conditions in informal settlements in Santo Domingo, were surprised to see the

extent of the poverty in Los Platanitos. In many ways, Los Platanitos resembles other

informal settlements and faces many of the same problems, just even more so. To begin,

the community lacks an adequate sewage system. Instead of pipes below the ground that

carry waste out of the community, waste from portions of the community flow directly

into an uncovered channel that passes by people's houses. Odors from this open sewage

directly impact residents' health. Furthermore, this sewage water enters people's houses

after heavy rains. The community also lacks adequate trash services, and alleyways and

public spaces are littered with copious amounts of trash. Although the community does

receive limited water and electricity, potable water is only available two days a week

through a system of cracked PVC pipes, and electricity service is only available

intermittently a few hours each day.

Like many other informal settlements, much of Los Platanitos is located in areas

that pose great environmental risk. The community extends across the sides and bottom

of a steep valley, with hundreds of houses located in the floodplain. Homes located in the

floodplain quickly fill with water even during relatively short rain events. The lack of a

proper sewage system worsens the impact of this flooding: the channel that bisects the

community is already filled with waste water, and when it rains, the channel overflows

and sewage water enters people's houses. Furthermore, the hundreds of houses built in

the hillside are prone to landslides. Still, even though some residents have built houses in

an unsuitable area or with incomplete or inadequate construction, they have made Los

Platanitos their home through their own efforts. This thesis explores the strategies people

in Los Platanitos use to build and improve their houses, and the support systems—or lack thereof—that residents can rely on.

Introduction to Informal Housing in the Dominican Republic

By examining housing in the informal settlement of Los Platanitos, this study also seeks to contribute to the scholarly work on informal housing elsewhere in Latin America. It therefore attempts to place the findings of this study within the context of the broader literature on informal housing throughout Latin America and the historical context of Santo Domingo and the Dominican Republic. It also compares survey data and findings from this ethnographic work with national and regional census data in order to identify characteristics and history that make this community representative of informal settlements in the Dominican Republic—but also a unique community facing a particular set of problems.

Chapter 1 begins by describing the characteristics and history of informal settlements throughout Latin America, focusing on the issue of housing. During the twentieth century, Latin American countries transitioned from agricultural societies to more service oriented economies, greatly impacting the location of jobs and people. These countries have seen a dramatic increase in the demand for affordable housing in urban areas as large quantities of people have migrated from rural to urban areas in search of jobs. The formal housing industry has not been able to keep up with this demand, and many people have been forced to turn to the informal sector. Although the

3

government did not originally accept these informal settlements, they have progressively accepted them, impacting programs and policies.

Urbanization in the Dominican Republic has followed a similar trajectory to that of other Latin American countries, leading to similar problems with slum development, overcrowding and lack of housing in urban areas. As will be seen in Chapter 2, the housing deficit in the Dominican Republic has grown in tandem with the increase in urban populations, and many people, including those in Los Platanitos, have been forced to live in informal settlements in urban areas. Similarly, many people in Los Platanitos are originally from rural areas. Although not explored in this study, it seems likely that they originally migrated to Santo Domingo in search of these service sector jobs. However, rather than exploring this migration, this study provides insight into migrants' plights once they have reached these urban areas.

The Study

This paper aims to take a closer look at what it means to live in an informal community such as this one. It presents an assessment of housing types and qualities, documents residents' perceptions about their surroundings and their living conditions, and discusses the impact these have on residents' quality of life. Although the negative aspects of life in these informal settlements are the most noticeable, it is also important to consider the positive factors of life in such settlements to avoid painting a one-sided, stereotypical picture. Residents have, after all, left their rural homes in search for a better

life in the city. As will be seen in this paper, many residents lived in other parts of the city before choosing to settle in Los Platanitos, where living conditions have gradually improved over time.

To provide a better understanding of housing development and distribution in Los Platanitos and how housing relates to perception of well-being in the community, this paper poses the following research questions:

1) How was Los Platanitos settled and how did it develop over time? Specifically, have residents been able to improve their situation through progressive (self-help) housing?

2) What is the spatial distribution of housing typologies and quality in Los Platanitos and how is this related to geographic, economic, and socio-demographic factors? How has this spatial distribution changed and how have these dynamics played out over time?

3) What support systems exist to improve housing quality within Los Platanitos, and what other support systems are needed?

The methodology used in this study is discussed in chapter 3. Forty in-depth surveys were conducted at every fifteen house in the community, and visual surveys of every fifth house were conducted. Initial and follow-up interviews were conducted in the community and interviews with representatives outside the community were conducted in order to gain further insight into these findings.

5

Findings are discussed in chapters 4 and 5. In Chapter 4, I examine the founding and settlement of Los Platanitos, including when, why, and from where residents moved to the community. I also explore the process and costs of construction and the support systems in terms of social networks and capital, as well as in terms of financial support. The research indicates that Los Platanitos developed through both self-help and with the assistance of social networks, and reveals that although home ownership is not state-sanctioned, there are local property systems that provide for a relatively orderly development of the community. The study also suggests that housing should be understood as a source of social capital as much as a form of investment: typically, the amount invested in a house cannot be recouped through the sale of the house. However, at the same time, owning your home even without formal title provides a great measure of security for residents in Los Platanitos.

Chapter 5 reviews the current state of housing in Los Platanitos, examines differences in housing quality within the community, and compares these findings with those of other parts of Santo Domingo. The data used for this analysis includes self-assessed value of homes, density and the number of inhabitants in each home, building materials, the possession of certain household items, and community perceptions. The results show that Los Platanitos in fact is quite diverse, with relatively distinct neighborhoods and areas that are more marginalized and more at risk than others, suggesting that interventions by public agencies and NGOs must be targeted and sensitive to the diverse geographies of such slum settlements.

Part of the explanation for the relatively high level of poverty and greater vulnerability in Los Platanitos, compared to the rest of Santo Domingo Norte, is the relative newness of the settlement. Whereas the wave of urban migration began in Santo Domingo in the 1950s, Los Platanitos was not founded until the late 1980s. During our time in Santo Domingo, we visited several informal settlements that once faced similar problems with flooding, lack of infrastructure, and trash accumulations like Los Platanitos, but where conditions have now improved. Since these settlements are older, residents have had the opportunity to receive assistance from Dominican NGOs, they have developed community-based solutions to address problems with sanitation and infrastructure, and they have had more years to consolidate their houses. Although this suggests that conditions will also improve in Los Platanitos over time, the problems facing residents of Los Platanitos' require effective partnerships with outside entities. These partnerships, in turn, should be based on a thorough understanding of the unique histories, social contexts, and natural and built environments of such informal settlements.

Chapter 1: Introduction to Informal Housing in Latin America

Lack of Affordable Housing

Countries throughout Latin America have seen a large migration of people from rural to urban areas in search of economic opportunity. In 1972, the majority of people in 3 of 22 Latin American countries lived in urban areas. By 2000, this was true for 18 of 22 Latin American countries. With this urban migration has also come an increase in the number of urban poor. Whereas 37% of the poor in Latin America were urban residents in 1970, 62% of the poor were urban residents in 1999 (Steingart 2007, 1). This large migration can in part be explained by industrialization and the change from agricultural to service-based societies occurring throughout Latin America.

The large influx of people into cities has necessitated a large increase in housing stock, but the formal market has not been able to keep up with the growing need for housing. The lower-income populations that migrated to the cities have not been able to afford the majority of housing being offered in the formal market. Because most lower-income people in developing countries could not and still cannot afford formal housing, they have been forced to enter the informal market with "dubious legality" (Gilbert & Ward 1985, 5-6).

Specifically, this lack of affordable housing can largely be attributed to 1) the amount and distribution of income versus the cost of housing and an inability for most people to qualify for loans, 2) the unequal distribution of land in urban zones, 3) high population concentrations in small urban areas, 3) a lack of implementation of many

housing plans or policies (Torres 1992, 10), and 4) a lack of capacity of public service

institutions to meet the demand of services (i.e. water, electricity, sewerage, and trash

collection services).

There has been such a great shortage of formally built affordable housing that the

majority of housing in Latin America now has some type of informal beginnings. Formal

sector housing mainly reaches higher-income people and those living in developed

countries. There are also a small number of lower-middle income people who receive

housing through government programs (Gilbert & Ward 1985, 5-6). However, most low-

income people in developing countries have and continue to build their houses

informally.

State Response

For many years, informal development was not accepted by governments, and

policies sought to eliminate these informal settlements and build new formal settlements

in their place rather than making improvements to the settlements. However, these

policies often led to displacement because city or state agencies lacked funding to rebuild

the number of units that were lost. Over time, this informal housing was accepted, and

governments now seek to consolidate and improve existing areas rather than tearing them

down and rebuilding (Batista 2010).

Governments have had varying responses to housing, planning, and servicing.

These responses vary from country to country and have changed over time. Until the

1960s, there was little investment in housing or support for informal housing solutions.

"Few governments regarded housing as a productive sector… and therefore directed little investment in this direction" (Gilbert & Ward 1985, 12). Governments evaluated housing and servicing conditions in Latin America based on Western European and North American planning standards. They, therefore, found the majority of this housing to be below standard and demolished or removed much of it. These North American and European standards, however, seem "inappropriate to the environmental, social and economic conditions of Latin American societies" (Gilbert & Ward 1985, 12).

Beginning in the late 1960s, there were major policy shifts. Governments continued to invest in conventional housing projects, but they also began to support the existing informal settlements that they had once sought to demolish. They improved conditions in these houses by providing services and in some cases land tenure regularization (Gilbert & Ward 1985, 13)

Differences between Formal and Informal Housing

In terms of development and form, there are important differences between informal and formal housing as well as between various types of formal or informal housing, which can have implications for policy and planning strategies. Formal or 'industrialized' production, which is common in developed countries and among wealthier people in developing countries, involves large enterprises, high-level technology, and the intervention of several entities including financiers, commercial developers, and real estate agents. This type of housing is usually sold through exchange and financed through the bank and mortgage companies (Gilbert & Ward 1985, 5 & 9).

In developed countries, housing is "delivered complete to families by a sophisticated network of lenders, developers, title companies, and other organizations" (Ferguson 2003, 309). Furthermore, they have developed primary and secondary mortgage market institutions, the construction industry, title and land registries, and real estate agencies (310). Although the involvement of these various actors can improve services, it also usually makes this type of housing expensive and consequentially inaccessible to poorer populations in developing countries (Gilbert & Ward 1985, 5 & 9).

Most informal settlements initially lack services and are beyond the main service grid. People living in these settlements also often worry about the security of tenure (Gilbert & Ward 1985, 6). In developing countries, the majority of homes are built over the course of 5-15 years with little assistance from formal-sector institutions (Ferguson 2003, 310). Informal housing or subordinate 'petty commodity' production of housing is more accessible to the poor. There are two types of informal housing: the 'manufactured' form and the 'self-help' form. The 'manufactured' form involves the use of small-scale enterprises with few paid workers, the use of labor-intensive methods of production, and the use of local, non-standardized raw materials. In the 'self-help' form, the property owners build the houses themselves. Raw materials are purchased from the 'manufactured' sector or recycled or discarded materials are used (Gilbert & Ward 1985, 9).

In addition, informal housing also differs between different countries and within countries. For example, the strategies used by the poor to acquire land vary between different countries, between different cities, and within the same city. The poor may

invade the land, purchase the land from property developers, rent it from private landlords, or they may informally acquire temporary rights in places where community land is widespread (Gilbert & Ward 1985, 7).

Despite the differences between formal and informal housing, the two are interrelated, and drawing clear lines between the two may be problematic. Housing and land can fluctuate between being categorized as formal and informal. Informal settlements can obtain services and become regularized formal settlements. Conversely, formerly elite housing can be converted into slum rental housing that no longer meets government regulations (Gilbert & Ward 1985, 6).

Furthermore, the formal and informal sectors are related in terms of their production system. Studies have in fact shown that "various informal sector activities 'serve' the formal sector, directly, through providing the formal sector with inputs and, indirectly, through the provision of cheap services which lower production costs and cheapen the reproduction of labour" (Gilbert & Ward 1985, 8-9). For example, materials for informal housing are often obtained from the formal sector (8).

Social and Economic Value of Housing

There are both positive and negative implications of self-help housing. Informally, progressively built housing allows low-income residents who cannot afford the formally-built housing to own houses. They are able to slowly build their homes as they obtain money. Homeownership has a huge use-value in that it is "a haven for the radical uncertainty of sickness, job loss, and other emergencies" (Ferguson 2003, 310); in

other words, owing one's home provides some measure of security for people who otherwise live insecure lives. In fact, some argue that homeownership may have greater social value in developing countries than in developed countries (Ferguson 2003, 310).

However, despite its high social value, informal low-income housing in developing countries may not be able to perform the same economic functions as that of formal housing in developed countries. The housing industry, including building materials production, construction, real estate, and the finance industry, generates a large percentage of employment--approximately 9% worldwide. In developed countries, mortgages are a large part of the financial system. In the United States, for example, they constitute one third of the system. In developing countries, most families cannot build wealth by leveraging the equity in their house, mortgage markets are small to non-existent, and housing is a minor industry (Ferguson 2003, 310). Some people have found this inability of many developing countries to develop their housing industry as a major problem. For example, "In *The Mystery of Capital*, Hernando de Soto (2000) argues that the critical difference between successful and unsuccessful capitalist societies is the ability to build wealth through property ownership, mainly that of land and housing" (Ferguson 2003, 311).

Unlike in developed countries, most housing in developing countries has little economic value because 1) No credit finance is usually available to purchase, rehabilitate, or re-finance existing housing, 2) Families hold onto house for generations and there is a very thin housing market (partly as a result of a lack of credit finance), 3) Government regulations often make renting difficult and unprofitable (Ferguson 2003, 311).

Progressive housing that is unsupported and unguided can often be more costly than

formally developed housing due to greater public and private costs for infrastructure and

provision of services. Additionally, "… the progressive housing process condemns

families to live much of their lives in unsanitary and disruptive environments lacking

some or all the basic amenities of modern life…[and] the process of building their homes

is painstaking, burdensome, and long" (Ferguson 2003, 313).

Informal, progressive housing also often has several drawbacks if not supported

or guided. Improving or consolidating these neighborhoods can be much more expensive

than planning and developing communities with proper services and amenities from the

beginning. Governments often have to re-plat lots to create space for infrastructure and

community facilities. Anywhere from 5-20% of residents may need to be relocated, and

retrofitting infrastructure such as roads, drainage, sanitation, and water may cost 2-4

times what it would have cost if developed initially (Ferguson 2003, 313).

Advantages of Regularization and Obtaining Titles

As mentioned earlier, an informal settlement can eventually be developed to the

point where it is considered a formal, consolidated community. Regularization of an

informal settlement is therefore often seen as a means of improving the situation of those

living in informal settlements. Hernando de Soto points out that "'legal title enables the

poor to use their assets as collateral for a successful business and gain access to formal

banking'" (Steingart 2007, 8). He argues that obtaining titles to land and businesses

could provide community members with the legal protection of the law and could also lead to further economic development of the communities (Strange 2010, 123).

However, having the title to property does have its limitations and does not necessarily help the poor obtain loans for home improvement. Many may still not be able to obtain loans because of low income or lack of regular employment (Steingart 2007, 17). Even with a title, residents without work cannot obtain loans or enough funds to maintain their property.

Obtaining legal title to the property can lead to a greater sense of security and lessen fears of eviction. However, this fear of eviction may be greater in certain areas than others, and the value of regularization may therefore vary. Massive evictions of poor populations in Latin America primarily occurred under dictatorships or undemocratic governments. More recently, negotiations with poor populations have become more frequent. People who live in settlements near middle-class neighborhoods that are attractive for speculation or real-estate development may also face a much greater threat of eviction than those who live in less desirable areas for development (Steingart 2007, 17). Regularization, therefore, seems tied to improvement primarily when the security of land ownership was threatened. It is not "indispensable when land and homeownership was not threatened" (Steingart 2007, 9).

Furthermore, some claim that formalization can lead to the erosion or displacement of existing social networks. Jan Nijman (2009) suggests that existing practices and livelihoods are more effective at creating senses of place and security than large titling programs. Espen Sjaasted and Ben Cousins (2008) emphasize the

15

importance of paying attention to the area and implementing site-specific solutions (Strange 2010, 122). In Santo Domingo, Dominican Republic, the Plan de Desarrollo Urbano para Ciénaga y Los Guandules argues that housing projects and policy should not only be site specific but also involve the participation of the government, community members, and civil sectors (Strange 2010, 123). It seems, therefore, that although formalization is extremely important for communities, its impact is also limited and it may prove to have a greater impact in particular places and if done in particular ways.

Review of housing programs in Latin America

As seen in this chapter, there are notable differences between formal and informal housing and between housing in developed and developing countries. However, many housing programs and policies in developing countries have tried to replicate those of developed countries by producing complete new units to be sold through mortgages. The results of these programs have been limited. They often require large subsidies or only meet the demands of a small portion of the population (Ferguson 2003, 310). Since this public housing costs more than most people can afford, the government must choose to either largely subsidize a small amount of housing or provide more unsubsidized housing that is still unaffordable for many people. In addition, state housing programs often fail to "generate the market mechanisms necessary to convert homeownership into an economic as well as social good" (Ferguson 2003, 310). In order to be successful, programs must take these differences into account.

In order to address the inefficiencies in housing, Ferguson mentions three types of program interventions emerging in Latin America: 1) Housing microfinance, 2) Low/ moderate income land development (developing land at lower costs than traditional formal market), and 3) Direct demand subsidies (Ferguson 2003, 310). He mentions that a sustainable housing program "… builds and strengthens the mechanisms that the low/ moderate-income now use to build their homes progressively…" (Ferguson 2003, 310).

In terms of microfinance, Ferguson recommends unsubsidized interest rates and short term loans. In countries like Venezuela, the government has offered highly subsidized loans. These loans have mainly benefited the middle-class because many of the poor do not qualify for loans. These subsidized loans have raised substantial sums for housing investment and often use private-sector institutions to develop and finance housing. However, they also distort the financial market, crowd out private non-subsidized lending, produce high-cost, high-subsidy units, and assign more units to middle-income families than to low/moderate-income households. The "immediate political pain of ending these schemes usually outweighs the long-term potential benefits of moving to more market-oriented and better income-targeted approaches" (Ferguson 2003, 315). Due to these problems with subsidized loans, unsubsidized loans may be more advantageous.

Additionally, loans need to be relatively small and short term. Most low-income people in developing countries cannot afford traditionally sized loans due to their low incomes. Furthermore, many have informal jobs with highly fluctuating salaries. Many low- and moderate-income people, therefore, fear defaulting on their loan and resist long-

term loans (Ferguson 2003, 316). Traditional mortgages may also be problematic for low-income and moderate-income people in developing countries due to the macroeconomic instability of the country. Many developing countries experience fluctuations in foreign exchange rates and inflation of their currency that can make lending money for periods longer than 1-3 years problematic. Financial institutions in developing countries can also hold a substantial portion of their assets in risky investments, making microcredit a safer bet than larger loans (Ferguson 2003, 317).

Furthermore, most Latin American countries had successful savings and loan systems in the 1960s and 1970s, but high inflation during the late 1970s and 1980s destroyed this system in most countries (Ferguson 2003, 318). Instead, many of the largest microfinance institutions have recently begun to finance housing as well as businesses. They usually provide somewhat modest loans of $300-$5,000 to be paid back over 2-10 years at rates that are much lower than typical mortgage rates, but higher than typical microfinance credits. These loans seem to hold promise for ... add in a few words here to show promise for what (Ferguson 2003, 317). In addition to innovative lending strategies, Ferguson also advocates for direct demand subsidies that should be delivered up-front, rather than providing below-market interest rate mortgages. This method has worked well in Chile and Costa Rica, but requires a large amount of mediation in order to function well in most other Latin American countries (Ferguson 2003, 320).

However, the cumbersome development approval processes and high standards for housing development have reduced land supply and contributed to raising land costs.

Ferguson argues for reducing these barriers in order to promote low-income land development, such as in the case of El Salvador, where reducing land-development standards and streamlining regulations has led to a decrease in lot prices and increased accessibility for low-income people (Ferguson 2003, 320).

In implementing strategies to improve housing, cooperation between non-governmental Organizations (NGOs), community-based organizations (CBOs), and households is critical (Muraya 2006, 152). In fact, Petronella Muraya argues that several top-down approaches to develop low-income housing in the Dominican Republic and elsewhere failed, in part, because government officials assumed that community members did not know their own needs and that the community would be unwilling and unable to pay for services. She argues that these strategies failed because they did not engage the community in the planning, decision-making, and implementation process (Muraya 2006, 152-153). Top-down strategies are often associated with problems of displacement, low affordability, and lack of replicability.

Despite the importance of community involvement, there are certain limitations of this involvement. Low-income groups often lack important information about the shelter sector, financing, and credit options (Muraya 2006, 154). Although this is not often the case, community leaders may also be corrupt, exploitative, and opportunistic. Participation in community organizations may be particularly high immediately after being settled or during times of crisis. However, after the time of crisis, people often become less involved, leaving decision-making in the hands of a small group of community members (Gilbert & Ward 1985, 16).

Conclusion

The large influx of people from rural to urban places in Latin America has changed housing dynamics and led to the proliferation of informal settlements. These informal settlements were originally not accepted by governments and were in large part demolished; however, governments have since been forced to accept them due to their abundance. These informal settlements seem in many ways to be inferior to formal settlements. In one key respect, they fail to serve important financial functions. However, they do have high social value and provide people a place to live, raise families, and in some cases, also provide homes for relatives or future generations. Because there is such a lack of affordable housing and they help to fill this gap, they cannot merely be demolished. Rather, governments and organizations must adapt their strategies to the social and economic realities of such informal settlements.

There are major differences between informal and formal housing and housing in developed and developing countries that must be acknowledged when implementing housing policies or programs in informal settlements. The way in which housing is acquired and built as well as the differences between income level and income and economic stability are important. Loans can be beneficial, but should be fairly small (and ideally unsubsidized). Furthermore, reducing costs through the reduction of standards and legal barriers can also be beneficial, but should also be done with care so as not to reduce them too much. As with other community and economic development, the involvement of the community is important.

Chapter 2: Informality in Los Platanitos and the Dominican Republic

Urban Migration and Housing Deficiency in the Dominican Republic

The Dominican Republic has traditionally been a large exporter of sugar, coffee, and tobacco. However, the recent expansion of tourism and free trade zones has caused the service sector to replace the agricultural sector as the economy's largest employer. According to a 2005 estimate, 63.1% of Dominicans were employed in the service industry, 22.3% worked in the industry sector, and 14.6% worked in the agricultural sector (CIA 2010).

As of July 2010, the Dominican Republic had a total population of 9,650,054. The 2009 exchange rate was $ RD 36.141 (Dominican pesos) per dollar, and the 2009 total Gross Domestic Product (GDP) in terms of purchasing power parity (PPP) was estimated to be $79.65 billion with a GDP per capital in terms of PPP of $8,300. However, there are great inequalities between the rich and the poor. The poorest half of the country receives less than one-fifth of the GDP while the richest 10% earns almost 40% of the GDP. In 2004, 42.2% of the population was estimated to be below the poverty line. This means that although there are some very wealthy people in the country and some consider the Dominican Republic to be close to becoming a developed country, there are still many people like the inhabitants of Los Platanitos who have very little (CIA 2010).

The Dominican Republic, like many other Latin American countries, has seen an overall boom in population and a recent influx of migrants from rural to urban areas.

The total population increased from 2.1 million in 1950 to over 7.1 million in 1990 (Cobb 1991, 51). It has increased by another 2 million in the past 20 years. The majority of the growth has been in urban areas, in part tied to the transition from an agricultural society to a more service-oriented economy. Most agricultural jobs are located in rural areas, and most service industry jobs are located in urban areas. In 1920, over 80 percent of the population lived in rural areas and only approximately 30,000 people lived in Santo Domingo. In 1950, 75% of people still lived in rural areas; however, the rural-urban migration started shortly afterward. During the 1950s, 1960s, and 1970s, the urban population increased by approximately 6 percent annually. By 1970, the population of Santo Domingo had doubled from its 1950 population (Haggerty 1989). By 2008, 69% of the total population lived in urban areas (CIA 2010). Currently, approximately 56 percent of Dominican urban residents, or 9.65 million people, live in Santo Domingo. Santiago de los Caballeros, the second largest city, has a population of 1.94 million, and La Romana, the third largest city, has a population of 250,000 (Haggerty 1989).

Like in other Latin American countries, the housing market and municipalities have not been able to keep up with the large influx of people and provide the necessary infrastructure and financial support. The rapid urbanization, the lack of an urban development plan, and the great housing deficit (estimated to be 400,000 in Santo Domingo in 1990) have all contributed to an increase in informal housing development.

According to Mark Pelling, "exclusion from the formal housing market, together with the forced clearance of established inner-city barrios for prestige development projects since the 1980s, has promoted the rapid growth of informal settlements on the fringes of the city, and in hazardous places adjacent to the rivers Isabela and Ozama" (Pelling 2002, 65; Strange 2010, 38).

Data from *Instituto Nacional de la Vivienda* or the National Institute for Housing, based on the 2002 Dominican Census, suggest that the total housing deficit in the Dominican Republic is 719,990 houses (Fig. 2.1). The deficit has been calculated by adding the number of houses with irreparable structural inadequacies to the number of additional houses that need to be built. In addition, more than 1 million houses suffer inadequacies in basic services, such as a lack of electricity, water, and sanitary services. In other words, the country is severely lacking in housing: at least another 25-30% of dwelling units are necessary to provide housing for its growing population.

Figure 2.1: Inadequate Housing in the Dominican Republic (Based on 2002 Census)

Total number of houses	2,181,149
Adequate Housing	602,679
Houses with only inadequacies of basic services	1,097,851
Houses with reparable structural inadequacies	111,487
Houses with irreparable structural inadequacies	*369,132*
Housing with overcrowding	567,085
Additional houses needed (based on the existence of secondary house and family within single home)	*350,858*
Total Deficit	*719,990*

Data source: Instituto Nacional de la Vivienda (INVI) 2009

Other estimates have found the total housing deficit to be closer to a million at 975,000. Unfortunately, the formal market is moving too slowly to fill this need for housing. According to a 2002 study done by FONDOVIP, the *Fondo Nacional de la Vivienda Popular* or the National Fund for Working-Class Housing, only 6,184 houses were formally sold in Santo Domingo and Santiago that year. This number only represents 3.6% of the 172,455 houses needed (INVI 2009, 4). Although estimates vary, all of these figures point to a lack of affordable housing and an even larger lack of affordable formal housing.

History of Displacement

Government response to this immense problem of a lack of affordable housing has been inadequate, and, for many years, has actually exacerbated the problem. The Dominican Republic was ruled by an authoritarian government for a large portion of the twentieth century. These leaders built a fair amount of government housing. However, as is the case with other dictators in Latin American countries, they also displaced many people living in informal settlements in order to make way for new construction (Chantada 1998). Rafael Leonidas Trujillo, who ruled with a notorious ruthlessness, was the president of the Dominican Republic from 1930-1952 with a brief break from 1938-1942. He built many public buildings such as the National Palace and was responsible for public works projects and a new road system, among other infrastructure improvements. He also built a limited amount of high quality housing for low-income people. However, he undertook this construction without any democratic process. He

displaced low-income residents without justly compensating them, forcing many to move to high-risk and environmentally sensitive areas (Torres 2010).

Joaquin Balaguer followed in Trujillo's footsteps and intermittently served as president from 1960-1996. He was not nearly as ruthless as Trujillo and is still highly regarded by many Dominicans today; however, he was also a dictator who did not rule completely democratically. He concentrated on making improvements in the capital, and in 1991, it was estimated that 70% of total investment in the country went to Santo Domingo. Over the course of four year in the late 1980s, the national government built 23,000 low-income housing units under the "urban renewal" program. However, these do not seem to have been part of an "integrated strategy to stimulate sustained development of a land market and a construction industry for longer-term supply of low income housing" (Cobb 1991, 54-55). Although the government focused on building new housing, INVI implemented a limited number of programs that provided housing upgrades for low-income families (Cobb 1991, 55-56). Although no exact figures were collected in regard to prices and they have fluctuated somewhat over time, the cost of this housing seems to have been approximately $RD 500,000 or a little less than $US 14,000 in current currency. Apartments could be paid off over 20 years, making each monthly payment affordable to low-income residents, although not to the very poor. As will be seen in this study, residents of Los Platanitos estimate the cost of building a moderately-sized house to be close to $RD 400,000, fairly close to the cost of this government-constructed housing. Ultimately, these two leaders constructed a relatively high number of high-quality housing units, but these were only available to a limited number of

moderate- to low-income people. Residents in informal settlements constantly lived in fear of being displaced during the era of Trujillo and Balaguer (Torres 2010).

Since the time of these two highly autocratic governments, the election process has become more democratic and laws have been put in place to protect residents from displacement without compensation. Although there are few state- or city-run home improvement programs and the amount of government-built housing has also decreased, several NGOs now provide support for making improvements to existing housing (Torres). However, the production of government-built housing has slowed dramatically, and residents of informal settlements still do not have complete security. In cases where homes are removed in informal settlements, the government must compensate people for their houses, but sometimes these people may not be compensated fairly.

According to Patricia Gomez with COPADEBA, a NGO concerned with tenure rights for low-income people, 176 families were recently removed in order to construct the metro in Santo Domingo, but only 50 received a house to replace their home. Most of the people displaced by the metro construction wanted money for their houses. Although they were paid anywhere from RD $105,000-350,000 in compensation for their homes, the majority received between RD $150,000-180,000. Although many residents thought this was a large amount of money and were content, it is not nearly enough to build another house of the same quality (Gomez 2010. As will be discussed later in this paper, residents report that modestly-sized houses in Los Platanitos cost approximately RD $400,000 to build (and are usually sold for less than $ RD 100,000). Many of those displaced were located in even more desirable places than Los Platanitos and had houses

that were worth even more. Rent in the *barrio* of Ensanchez Espallat, a centrally located but still fairly low-income area is RD $7,000 per month (COPADEBA). Rent in Los Platanitos is usually about $RD 1,500-2,000. As was discussed in the previous chapter, residents of informal settlements who attempt to sell their homes typically do not recoup their investment in home improvements.

Current Programs

Both private and public agencies are involved in housing development and could potentially help informal low-income communities like Los Platanitos. Banks and savings and loans associations provide housing loans, but these can be difficult for low-income people to obtain. Most of these associations do not provide loans to people who do not have titles for properties. Prominent public institutions that provide help in housing development include INAVI, the *Instituto Nacional de Auxilios y Viviendas*; INVI, the Office of the President; and SEOPC, the *Secretaría de Obras Públicas*. Institutions such as INVI, INAVI, and INIVIVIENDA, however, do not construct housing for the very poor (Torres 1992, 10).

Municipalities in Santo Domingo are now in the process of implementing a *presupuesto participativo*, or participatory budget, which could also provide further support to communities like Los Platanitos. It seeks to give communities a greater say in determining how public funds are spent in order to better address community problems. This type of budget was first implemented in Curitiba, Brazil, and has also been implemented in Santiago in the Dominican Republic, where it has had good results.

27

Some people are very hopeful about this type of budget and feel it may direct more money to informal low-income communities such as Los Platanitos. However, others point out that the already cash-strapped government may have problems coming up with this money and few results will be seen (Torres 2010).

As mentioned earlier, regularization has certain advantages, and some people see it as a way of improving the situation in informal settlements like Los Platanitos; however, titles are fairly difficult to obtain. The Dominican Republic uses the *Torrens System* for registering land. This process, which originally comes from Australia and is also used in part of the United States, can be somewhat lengthy and costly for low-income residents living in informal settlements. Furthermore, the *Ley de Mejora* requires residents to have titles for their land in order to obtain a loan for home improvements. After residents have settled and lived on a parcel for a certain amount of time, the government will recognize the improvements that they have made and the authorities are required to compensate them if they take the land. However, the state does not recognize them as *owners* of the land and people have historically not been able to obtain loans for their house and other benefits unless they are able to go through the lengthy process of obtaining the title. Recently, *Banco Caribe* announced a program to provide financing for houses without titles. However, these programs are aimed toward houses valued at $RD 800,000- $RD 1 million and will not likely reach the poorest homeowners.

Although it is currently difficult to obtain titles for land that was informally settled, it is somewhat easier to obtain titles for government-owned land than privately owned land. Property owners who own property worth more than $ RD 20,000 must visit

the office of *Bienes Nacionales*. If the property is worth less than $ RD 20,000, they may

go to the office of the *Presidente al Republica*. Property owners must then acquire

several items including both a *solicitud de compra* and *titulo provisional* (Torres).

According to Patricia Gomez at COPADEBA, the cost of taxes combined with the

judicial process to obtain a title valued at RD$ 1,000,000 may exceed RD$ 300,000

(COPADEBA). Due to this lengthy and costly process, many people choose not to

regularize their property.

Background on Los Platanitos

Previous research in Los Platanitos began in the spring of 2008 as part of a course

offered at UT-Austin, CRP 386: Applied GIS: Participatory Approaches to

Environmental Justice. As part of the course requirements, students conducted surveys,

interviews, and focus groups and worked with the community to map and model various

parts of the community, especially the more vulnerable residents located at the bottom of

the valley along the channel. The course culminated in the publication of a book, *El

Rincon de Los Olvidados,* and a video documentary. A second group of students

conducted a follow-up study Los Platanitos in Spring 2010 as part of the UT course,

Latin America Planning Studio. This time, the objective of this class was to document

the causes and consequences of the problem with trash in Los Platanitos and work with

residents to develop a community-based trash collection system. As with the other study,

findings were published in a book, *Hacia Un Camino Limpio.* Students from this class

also wrote grant proposals to fund a trash-collection program for Los Platanitos and

surrounding communities, and collected funds for a capacity-building program for community leaders held in summer 2010. In addition to these two group projects, several graduates of these classes have conducted their thesis research in Los Platanitos. These include Meredith Bossin, Shawn Strange, Omar Diaz, and Gina Casey, who conducted research on women's access to employment, the informal economy, children's health, and access to public transportation, respectively. Since no studies had been done in the community and little was known about it before 2008, most of the following information about Los Platanitos is based on these studies.

Figure 2.2: Streetscape in Los Platanitos

Figure 2.3: A Channel Runs Through the Lower Portion of Los Platanitos

Figure 2.4: Location of Los Platanitos
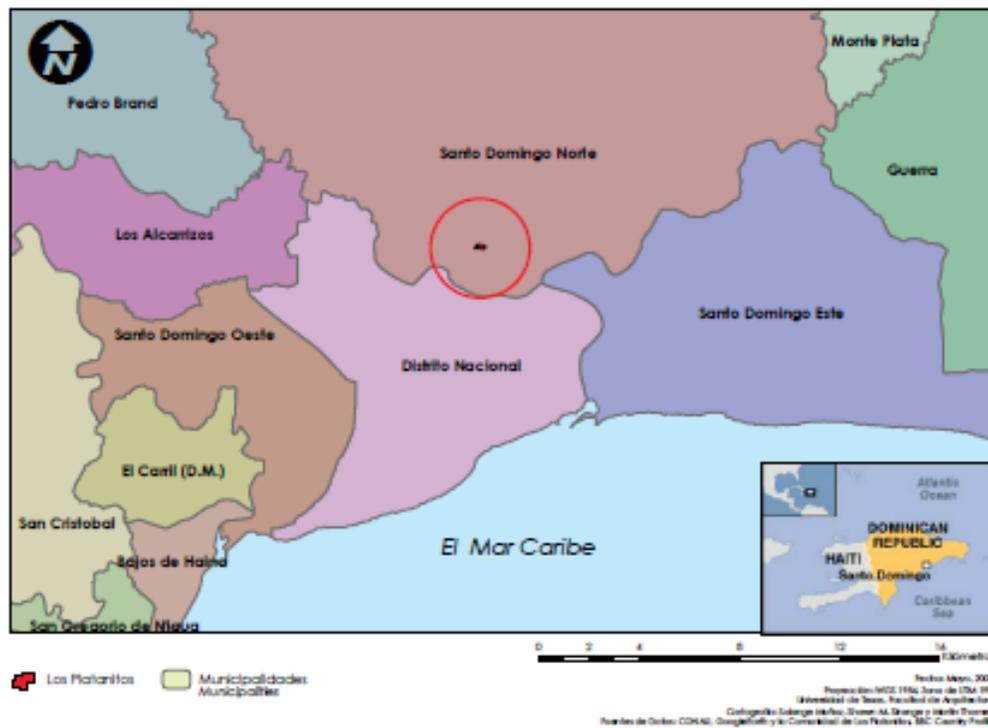
Source: Sletto, ed. 2008

Los Platanitos is located in the municipality of Santo Domingo Norte, which is just north of the Rio Ozama and borders the Distrito Nacional, the central municipality of Santo Domingo. Los Platanitos, which is approximately 1 km² and has a population of around 2000, is one of 30 *cañada* settlements in Santo Domingo Norte (Fig. 2.4). *Cañada* in Dominican Spanish refers to both the waterways that often run through such communities, but also indicates communities that are poor and marginalized.

Los Platanitos is a primarily residential settlement and was first settled informally on state lands in the late 1980s and early 1990s, and current residents have lived here for an average of 12.8 years. It is located on the site of a former city landfill that was moved to another location in 1987. Like other informal settlements, Los Platanitos has developed piecemeal without a comprehensive plan. This is reflected in an irregular street network and lack of distinct separation between land-uses (although many businesses are clustered along the Avenida Emma Balaguer, the major road) (Fig. 2.5). Also, like other informal settlements, portions are located on precarious land that is prone to flooding and landslides.

Figure 2.5: Streets and Land Uses
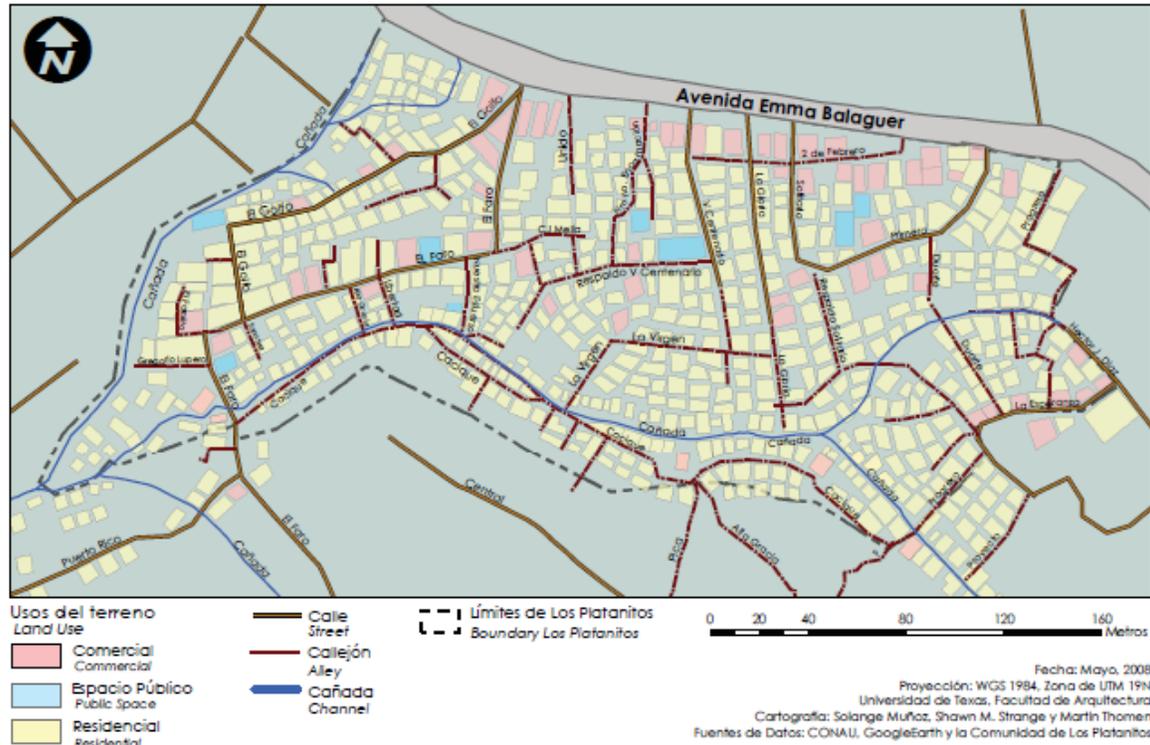
Source: Sletto, ed. 2008, 6

Residents in Los Platanitos do not have titles to their land and the community is characterized by self-help, informal housing, mostly of poor quality. Almost a fourth of houses are made of zinc and about an equal percentage do not have a septic tank or plumbing. Although many houses are consolidated, there are still many people living in quite precarious housing (Fig. 2.6). In comparing these numbers with those of the 2002 Dominican national census, it appears that Los Platanitos' level of consolidation is similar to other communities within Santo Domingo Norte but lower than those in the Distrito Nacional.

Figure 2.6: Los Platanitos at a Glance (2008)

|	
Estimated total population	2374
Average household size	4.75
Average monthly household income (pesos/ $)	7030/ 204
Average age	23.9
Average # of years for a family to have lived there	12.8
% unemployed (18+) who would like to work	39.6
Average age of homes	8.5
% of homes with no plumbing or septic tank	22.6
% of homes with walls made of zinc	24.5
% of homes made of concrete	76

Source: Sletto 5

Although the community now has some services, such as intermittent water and electricity, Los Platanitos is an extremely poor neighborhood with a high unemployment rate. In the Dominican Republic, the official *canasta familiar,* i.e. money required to pay for food for a family, is approximately $RD 20,000. The average salary for community members found by the 2008 study is $RD 7,030 or US $204 per month, meaning that most people in Los Platanitos are making much less than is required to feed a family. These salaries can also be compared to the average salary in the Dominican Republic. According to the CIA World Factbook, the annual per capital GDP in 2009 was $ 8,300 or almost $RD 300,000. This would mean that the monthly per capital GDP is almost $RD 25,000 or almost four times the average reported monthly income in Los Platanitos.

As part of the present housing study, residents were asked how many people in the household were employed, either formally or informally. Of the forty households surveyed, three reported that no one was currently employed in the household. Twenty-three reported that one person in the household was employed, eight reported that two were employed, and three reported that six were employed. There was only one person

employed in the majority of households (23 of 40 surveyed). Although the sex of the

employed person was not asked, this suggests that a large percentage of women stay at

home and are not employed (also see Bossin 2008). Furthermore, a large percentage of

residents have informal work. Of the total of fifty-seven people who reported being

employed, 35 or 74.47% were informally employed.

Income from informal employment is unstable and can vary dramatically from

month to month, making it difficult to calculate an average monthly salary. In the survey

conducted in this project, the average reported household income was $ RD 16,026 per

month (Fig. 2.8). Based on these rough estimates, residents who live in the higher

elevations of the community, away from the flooding problems, seem to earn a little

more. However, as will be seen through the analysis of housing, some in these upper

areas have income levels similar to those living below.

Figure 2.7: Declared Monthly Household Income

Income ($ RD)

> 8,000
8,000-15,000
17,000-50,000
Not Declared or Not Surveyed
Streets and Paths
Channel

In this survey, community members were asked about their education levels (Fig. 2.8). Of the total of 199 residents surveyed, only 63 or 31.66% have finished *primaria*. Twelve had started studying at the university, but only one of the surveyed residents had finished their university education. Most of those who have started university are currently taking classes. It seems that some of these students may leave the community after they have graduated and have more opportunities. Education levels may also be increasing: although not systematically asked as part of this project, conversations and casual observations suggest that younger generations have higher levels of education.

Figure 2.8: Education of Los Platanitos Residents

Education	Number of Residents	Percentage of Residents
Finished 'Primaria'	63	31.66%
Finished 'Secundaria'	31	15.58%
Attended a technical school	17	8.54%
Started university	12	6.03%
Finished university	1	0.50%

The 2008 study conducted by students from the University of Texas-Austin showed that residents are acutely aware of the challenges they face. In a visioning exercise, residents indicated that their main concerns are the lack of public services, precarious housing conditions, high poverty and unemployment, lack of education, and public health problems (Sletto 2008, 54) (Fig. 2.7). However, residents living in different parts of the community prioritized different issues. Those living in the lower parts (close to the channel that bisects the community) (Fig. 2.10) identified flooding and problems with trash accumulation as their principal concerns (Fig. 2.11), while people living in higher elevations (the "upper" area closer to the main street, Emma Balaguer) mentioned social issues like crime and employment (Strange 43).

This difference between the perception of problems between residents in lower and upper Los Platanitos reflects real differences in people's exposure to environmental hazards. Residences in the lower elevations, especially those located in the floodplain near the channel, are affected by intermittent flooding. This area is also worst affected by garbage accumulations, residents must climb steep and often crumbling staircases to reach upper elevations, and houses in general appear to be in poorer conditions. Surveys and interviews conducted by UT students indicate that education and income levels are lower among residents in the lower area, and that residents are more affected by respiratory illnesses and skin ailments (Sletto ed., 2008; Sletto ed. 2010). Because of the apparent differences observed between the lower and upper areas, in my research and analysis I focused on documenting whether, and to what degree, there were differences in housing qualities and typologies between these two areas, and whether perceptions of quality of life differed. In subsequent chapters, therefore "lower" and "upper" areas refer to sections of the neighborhood located in and near the floodplain, and in higher elevations near the main street, respectively. Figures 2.10 and 2.11 depict differences between areas.

Figure 2.9: Social Problems Identified by Focus Groups

Flooding	Trash	Lack of recreational space for
Contaminated Water	Mudslides	Children
Sickness	Deterorating streets	Unemployment
Deteriorating housing	Crime	Lack of food
Conditions	Public health	Lack of adequate schools
Lack of access to medical	Intermittent electrical power	Lack of churches
Care	High cost living	Lack of drainage
Lack of financial resources		

Source: Sletto 2008

Figure 2.10: Houses in Lowest Lying Areas are Located Near Channel Filled with Sewage Water that Floods After Rains


Figure 2.11: Upper Sections have Paved Streets that Allow for Entrance of Cars and Have Fostered the Construction of Larger Houses

Informality and Social Networks

In addition to lack of employment, low incomes and low access to education, residents of Los Platanitos face particular challenges due to the community's informality and lack of legal protection. This informality affects residents in many different parts of their lives, including but not limited to employment and housing. The municipality recognizes communities such as Los Platanitos, but they are not completely integrated into the urban network and are in large part excluded from the formal systems of electricity, sewage, and trash collection. For example, trash is only collected at certain points in Los Platanitos, and this is not done with regularity. The municipality has programs focused on other areas and is able to provide little assistance to these informal areas. Gabriel Baez, the former Planning Director with the municipality, points out that just as the settlements are informal, the assistance from the municipality and other entities is also informal. Electricity providers, for example, do not have any obligation to make repairs to the local grid, since these settlements are not located within their formal service area. Therefore, the municipality or NGOs must often make a donation to resolve problems that arise (Baez 2010). As the 2008 study found, partnering with government organizations can be problematic for communities because they often do not follow public works projects through to completion (Sletto 2008, 87).

This lack of municipal support is also due to the fact that Los Platanitos is a relatively new settlement and that it is located in Santo Domingo Norte, which is generally poorer with a low tax base and relatively low population, which means it receives little state funds than more populous municipalities. Unlike settlements in the Distrito Nacional that were first settled in the 1960s, many settlements in Santo Domingo Norte were not settled until the 1990s or 2000s. These older communities usually have more organizations such as churches, NGOs, parents

associations, and schools. People in Santo Domingo Norte are just beginning to organize (Baez 2008).

Although there has been little external assistance provided to Los Platanitos and the community suffers from a lack of formal employment opportunities, the community has still developed an economy that is relatively self-sufficient and meets the residents' needs. In fact, "in the absence of relevant formal rules, coping strategies – which enable the spontaneous settlements to operate – are formulated by suppliers and consumers" (Baharoglu and Leitmann 1998, 115). People who live in areas with informal economies such as Los Platanitos often avoid certain costs of legal and formal systems, but they also do not benefit from the laws that can protect these activities (Strange 2010, 120-121).

Residents have also formed several community organizations that provide some limited support systems, including the Junta de Vecinos La Unidad, the Junta de Vecinos Segundo de Febrero, the Consejo de Desarrollo, and the Comite Intermedio y Comunitario (Sletto 2008, 3). However, like in other informal settlements, many of these groups seem to be affiliated with certain political parties, not proactive enough, and not representative of the entire community. Despite the presence of some community organizations, the 2008 study found the need for improved organization and the development of social capital, or leadership to be a reoccurring topic (Sletto 2008, 87). A lack of organization can leave people open to abuses and exploitation by employers, clients, family members, and even police (Bossin 2009, 15). Due to both this lack and importance of organizations, students in the 2010 UT class took steps to improve the capacity of organizations in Los Platanitos through a capacity-building training program conducted by Centro Montalvo, a national NGO focusing on community development based in Santo Domingo.

In addition, there are several types of community organizations that do not currently exist in Los Platanitos but could potentially help residents, particularly in the task of building and improving their houses. These organizations include rotating labor association, rotating credit associations, and solidarity groups. In rotating labor associations, several people get together to form a group. As one person needs help with a project, they get together and help that person. Similarly, in a rotating credit association, people pool together their money. If someone in the group needs money to do a project, they can take out that money in a form of a loan. When the money is repaid or there is enough for someone else, they too can borrow money. Solidarity groups are similar to rotating credit associations, but differ in that they also meet with micro-lending programs as a condition of credit or training. They usually consist of groups of 5 to 8 people and have three components: 1) Credit for the sustainability and growth of micro-enterprise; 2) Training in the form of economic and social training modules; and 3) Organization of beneficiaries (Bossin 2009, 18-20).

Methodology

This study aims to complement and build on previous work conducted in Los Platanitos in order to learn more about the history and state of housing in the community. The methods chosen were also inspired by previous work, but adjusted in order to systematically capture necessary detail about housing typologies and quality, and to document residents' perceptions about their homes and neighborhood. Most of the data presented here originated with forty in-depth surveys conducted at every fifteenth house. Because these surveys were lengthy and time-consuming, I could only conduct a limited number. In addition, I conducted quick visual surveys of every fifth house, ensuring that I captured a cross-section of dwellings from the highest to the

lowest elevations (in "upper" and "lower" areas). While conducting research in Los Platanitos, I always walked with two members of the community due to safety concerns and in order to facilitate my research. In order to contextualize the empirical information I obtained in the field, I interviewed residents and representatives of key institutions in Santo Domingo, including NGOs and government agencies. Although I intended to use voice recorders to record interviews, I found that I got better responses without them, and therefore did not audio-record most interviews. Instead, I took notes and asked interviewees to repeat any answers I may have missed.

Initial Informal Interviews and Survey Testing

Before conducting the surveys, I conducted several initial interviews in the community, which helped to shape both the visual and in-depth surveys. I tested and discussed the survey with the help of community members who had previously worked with UT students, which helped me to rewrite questions and eliminate others that were best asked in interviews, instead of surveys. These informal interviews helped me improve my surveys and better analyze the information that I gathered, but they also provided valuable information that could not be easily obtained in a survey format. For example, I spoke with several founders of the community who provided new perspective of the early founding of Los Platanitos.

Visual Surveys

I conducted visual surveys of every fifth house using a random sample, again ensuring that I captured a cross-section of dwellings from the highest to the lowest elevations. For this survey, I recorded the material of the walls and roof, the number of floors, the relative size of the

house, and its relative condition. This survey was designed to be done quickly in order to obtain

information about many houses. Houses were not selected while in the community but rather

using a map created from the GIS data gathered by the students in the 2008 class. Not selecting

the houses while in the community helped to ensure that the survey was random and that my bias

did not influence which houses were surveyed. I also chose to use the same numbering system

that had been used by a 2008 study in order to ensure consistency and to facilitate combining

information later.

The houses are not laid-out in a grid or in any other pattern. Therefore, the selection of

every fifth house was a somewhat difficult process. Due to the complexity and maze-like quality

of some of the community, it seems that some of the community may not have been drawn

accurately in the 2008 survey. I got lost several times while walking around the community and

may have mixed-up houses as well. While conducting the visual survey, there were several

houses that were chosen that had been torn down or that turned out to be a vacant lot. In these

cases, a nearby house was surveyed in its place. I was assisted in this work by several older

residents of Los Platanitos, who all have construction experience and who are intimately familiar

with the range of materials and housing quality in the community.

In-depth Surveys

After conducting the visual survey, I conducted forty twenty-minute in-depth surveys at

every fifteenth house. These were all houses for which I had already collected information

through the visual survey. In other words, I conducted an in-depth survey at every third house

for which I had conducted the visual survey. After completing the survey, I asked permission

and took a picture of the house both outside and inside. If the building was not a place of residence or if I was unable to survey the resident, I substituted a nearby house.

According to data collected from the survey, the average age of the interviewees was 40.75 years. No one under 18 was interviewed. Twelve men and 28 women were interviewed. The large number of women interviewed is partly due to the fact that I am a woman, and because surveyed community members may have found it more culturally appropriate for me to speak with the woman of the household. Of those interviewed, 20 were in a civil union, nine were married, five were single, and four were widowed. Twenty-nine were owners and 11 were renters.

I asked all residents the same questions, with the exception of omitting several irrelevant questions when surveying renters. The questions for these surveys came in large part from surveys conducted by the two UT student groups, including the survey conducted in the community by students attending the 2008 applied GIS class. In turn, those questions were based on the Dominican Census in order to facilitate comparative analysis. In picking questions to use, I chose mainly those directly related to housing as well as some related to the general state of the community. I wanted to make sure that the data was consistent with other questions and that all results were for the same houses. Re-asking these questions also allowed me to conduct further analysis into the differences within the community and helped me to define various zones. In addition, I included several questions used in a housing survey in Monterey, Mexico. I had conducted this survey for a class led by Dr. Peter Ward, which was part of a larger study examining the "innerburbs" or old suburbs of various Latin American cities. However, because the community of Los Platanitos is a more recent settlement and not an

"innerburb" and the focus of this study was somewhat different, some questions from the Monterrey survey were omitted and some were slightly changed.

In addition, I formulated several questions of my own in order to answer any remaining questions not covered by these existing surveys. Finally, after combining my own questions with questions from these two surveys, I designed a first draft of the survey and discussed it with community members in informal focus groups. Based on these conversations, I was able to eliminate several questions that I found to be irrelevant or to which I had already found the answer, and I was also able to add new questions.

Follow-up Interviews

After conducting the visual and in-depth surveys, I needed to verify information I had obtained, and I wanted to learn more about events or topics that had emerged while I was conducting the interviews. For example, I decided I needed to further examine the question of payment for services such as water and electricity. I had asked several community members during an initial interview whether or not residents pay for water and electricity, and they had informed me that no one pays. However, during my surveys, I discovered that while no one in the lower-lying, poorer section of Los Platanitos seems to pay, several residents in the upper part do. My initial interviews had been conducted with only people from the lower part of the community. I therefore went back and asked several community members from the upper areas about their payments for water and electricity. I also spoke with several people outside of Los Platanitos. Community members sometimes lacked knowledge about certain topics, so I talked to people outside the community in order to gain information about the situation throughout

Santo Domingo or the Dominican Republic and to put the findings from Los Platanitos into perspective.

Data Entry, Analysis and GIS mapping

While in Santo Domingo, I rented an apartment in the Distrito Nacional, since lodging is not available in Los Platanitos and safety is an issue. Every day after returning home to my rental apartment from fieldwork, I transcribed interviews and entered survey data into Excel sheets. I made one Excel sheet recording my finding of the visual survey and another of the in-depth survey. In addition to entering data, I kept a journal where I recorded any interesting findings, observations or thoughts that occurred to me each day. Keeping this journal helped me to notice several reoccurring themes and to pinpoint missing information or questions that I wanted to explore further. Each day, I also downloaded and labeled all the pictures that took. I used the same numbering system for pictures of houses developed by previous groups of students, in order to be consistent and able to match up the house with its location on the map.

Upon returning to Austin, I entered the data into GIS in order to better visualize it. To do so, I joined the Excel sheets in which I had entered the results of the surveys with the GIS maps made by students who had conducted previous research in the community. The base information for these GIS maps had come from Consejo Nacional Urbano (CONAU) and GoogleEarth. In order to produce the footprint layer, students from the 2008 research project had traced rooftops using a fairly low-resolution GoogleEarth screenshot. Although these footprint maps have limited accuracy, they do provide a close approximation of the locations and sizes of buildings and were extremely useful in my study.

Chapter 3: The Settlement and Consolidation of Los Platanitos

Founding of Los Platanitos

As mentioned in the previous chapter, Los Platanitos is a relatively new settlement. According to interviews conducted with community members, people first moved to the community in 1987 after El Duquesa, the city landfill formerly located on the site, was moved to another location. The area was still filled with trash from the former landfill, so the founders had to prepare the land for them and others to live. They burned the trash, divided up the land into parcels, and planted trees in order to beautify the area. Among the trees that the founders planted were plantain trees, from which the community Los Platanitos derives its name. As part of the process of dividing up the land, these founders built a *tanque,* or small tin house, on each parcel.

The information gathered through surveys suggest that the founders began this "beautification" and informal subdivision of land in 1987 and 1988. The first year anyone reported having come to Los Platanitos was 1987, when one of the founders arrived. No one reported arriving in 1988. A larger number of residents began to move to Los Platanitos in 1989, when much of the area had been divided up and "beautified" enough to be inhabitable. In fact, many surveyed residents who arrived in the late 1980s or early 1990s, and who appear to be the first permanent residents, said that they did in fact purchase land with a *tanque* already present.

Although most residents moved in after the "beautification" process had occurred, some seem to have moved in before it had been completed. Founders recount that residents began to construct their homes and live in the higher areas while others continued to burn the trash below and make the land more suitable for living. They also tell that many of the original owners of the property left within a year or two of arrival. As a result, many of the surveyed residents who purchased their property in 1994 or 1995 report having purchased it from the previous owner. When asked why many of the original settlers left, one founder and current resident said that they just did not like it there. However, it is possible that many of these original settlers may in fact have been speculators, a common practice in Latin America where people buy the property, make minimal improvements, and then sell it for a small profit.

Furthermore, it seems that the lower portion of the valley was also at one time a lake. In order to build houses in this area, residents laid down sandbags, dirt, trash, and rocks to create foundations (Sletto 2008). Although some were able to do so successfully, the problem with the water did not go away altogether. This lower area is still located in a floodplain, and water often rises to levels making paths impassable, trapping people in their homes, or in some cases, entering people's houses and forcing them to temporarily leave. While conducting interviews for this paper, residents recounted stories of people who had already constructed several floors of their house. Due to their location in the area of a former lake, their houses sink. Once their houses

49

sink to a certain level, it becomes uninhabitable and they construct another floor on top of the old one.

Origin of Residents

Many of the people who came to Los Platanitos and nearby communities are originally from rural communities and came to Santo Domingo in search of employment opportunities. As found in the surveys, most did not come directly from rural communities to Los Platanitos. Rather, they first moved to another part of the city. When asked about their previous place of residence, 34 of 40 (85%) of surveyed community members reported having moved from somewhere else in Santo Domingo (Fig. 3.1). Many were renting or could not afford to buy a house in that area, so they chose to move to Los Platanitos where prices were relatively low and where they were able to purchase property. In addition to this movement within Santo Domingo, a fairly large amount (13 of 40 respondents) moved from within the same community and said that they had previously lived in another part of Los Platanitos before moving to their current residence.

Figure 3.1: Place of Residence before Moving to Current House

Same neighborhood	13	32.5%
Another part of Santo Domingo Norte	12	30%
Another part of Santo Domingo	9	22.5%
Another part of the Dominican Republic	6	15%

There also seem to be common trends in the movement of those who arrived from other parts of the country. Of the six who mentioned coming from another part of the Dominican Republic, four came from San Juan de la Manguana, a town just west of the Haitian border. Although not directly asked about it in the survey, it seems from conversations with community members that many residents may originally be from this area. Several residents with whom I worked or interacted mentioned having moved from San Juan de la Manguana or a nearby area.

Many residents moved to Los Platanitos in order to pursue a dream of homeownership (Fig. 3.2). Renters in communities like Los Platanitos have little security. They do not have contracts and can be evicted any time the owner decides to move back into the house, or to rent it to someone else. One resident explained that as a renter, you live searching for a house: *se vive buscando casa.* Of those residents who were previously renting and moved to their current place of residence in order to buy a house, 4 had previously lived in the same community, 5 came from another part of Santo Domingo Norte, and 4 came from another part of Santo Domingo. In other words, all came from another part of the metropolitan area.

Figure 3.2: Reason for Moving to Current House

They were renting before and wanted to own a house	13	32.5%
They wanted to move into a bigger/ better house	5	12.5%
The owner of the house was asking for the house (renters)	3	7.5%
They did not have enough money to pay for other house	3	7.5%
Crime	2	5%
Displaced	2	5%
For work	2	5%
To be along the road	1	2.5%

Many residents who moved in order to live in a bigger or better house mentioned that the other house had been too crowded. One young couple mentioned that they had been living with their parents and wanted to have their own place. Others just mentioned that they felt better in this house or just liked it better.

As will be seen later, crime is a major issue in Los Platanitos, and it too was mentioned. Two people reported crime as their reason for moving to their house. Whereas one mentioned that there had been more crime in her other neighborhood, another mentioned that she had moved into this house because *tigres* (criminals, or gang members) had begun using it to sell drugs when no one had been living in it. Both residents who had been displaced came from the Distrito Nacional portion of Santo Domingo.

Migration to Los Platanitos

As mentioned earlier, founders first arrived in Los Platanitos in 1987. However, the first wave of migration did not occur until 1989 and 1990. Of 40 residents surveyed, eight (20%) report having purchased their property in those two years (four each year). The survey data then suggests a lull in migration from 1991-1993. Of those surveyed, only one person reported having purchased property in 1993. None reported having purchased property during 1991 or 1992.

Another wave of migration seems to have occurred in 1994 and 1995, in which nine (22.5%) of the surveyed residents reported having purchased their property: five in 1994 and four in 1995. Of those who purchased their property these years, several said that they purchased it from the individuals who lived there before, suggesting that many of the settlers from the first wave of migration sold their houses, left the community, or moved elsewhere within the community. The relative short period in which they lived in the community suggests that some may have been speculators; however, this cannot be confirmed without further research. These early residents may have moved because they did not like the many changes that were occurring during this time, as explained by one community member. Residents recount that with the increasing population also came an increase in crime. Among one of the positive changes during these years was the provision of services. Community members informally tapped into electrical and water lines around 1991 in order to obtain these services, and then individual residents were responsible for bringing these services to their individual houses.

Around half of those surveyed (17 of 40 residents or 17 of 29 property owners) purchased their property during these two waves of migration in 1989-1990 and 1994-1995, and the community was largely settled and built out by 1996. This year was the latest that anyone surveyed reported having purchased a vacant lot without construction. Several residents reported having purchased property within the past few years (as recently as 2009); however, all who have purchased property since 2003 had already lived in Los Platanitos previously. It seems that although few residents are currently arriving from other communities to settle in Los Platanitos, there is still movement and turn-over of residences within the community.

Figure 3.3 shows the years in which surveyed residents purchased their houses. Although there does not seem to be a large difference in purchase date between those living in the upper and lower areas as originally expected, certain areas, such as the southwestern, most low-lying section of Los Platanitos along Puerto Rico, were developed later. Figure 3.4 shows whether residents purchased the land with an existing house, or just the land without an existing structure. Again, there does not seem to be a large difference between lower and upper areas in terms of existing structure on the land purchased.

Figure 3.3: Year Owners Purchased Property
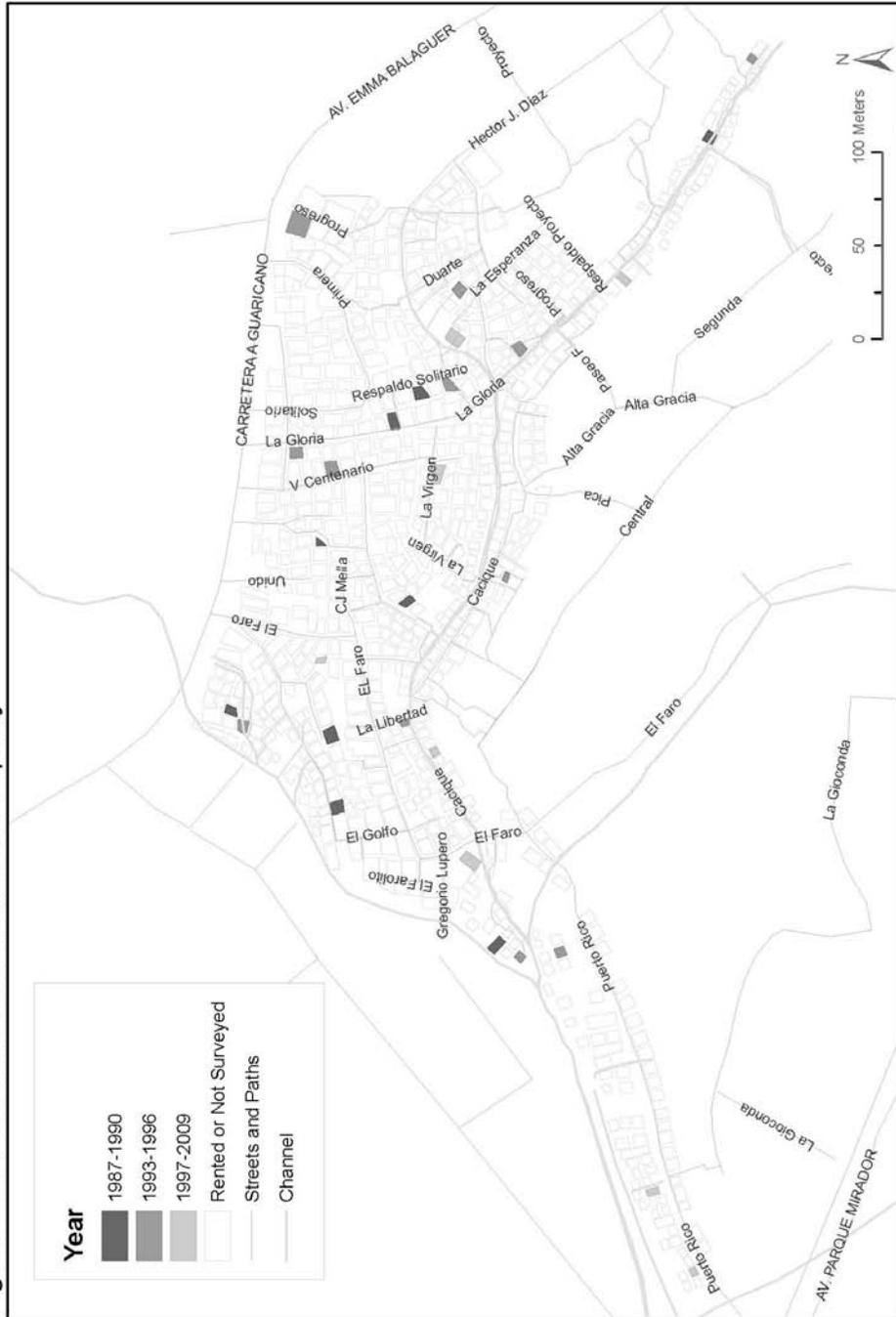
Figure 3.4: What Owners Purchased

What Purchased

- Land and House
- Land Only
- Rented or Not Surveyed
- Streets and Paths
- Channel
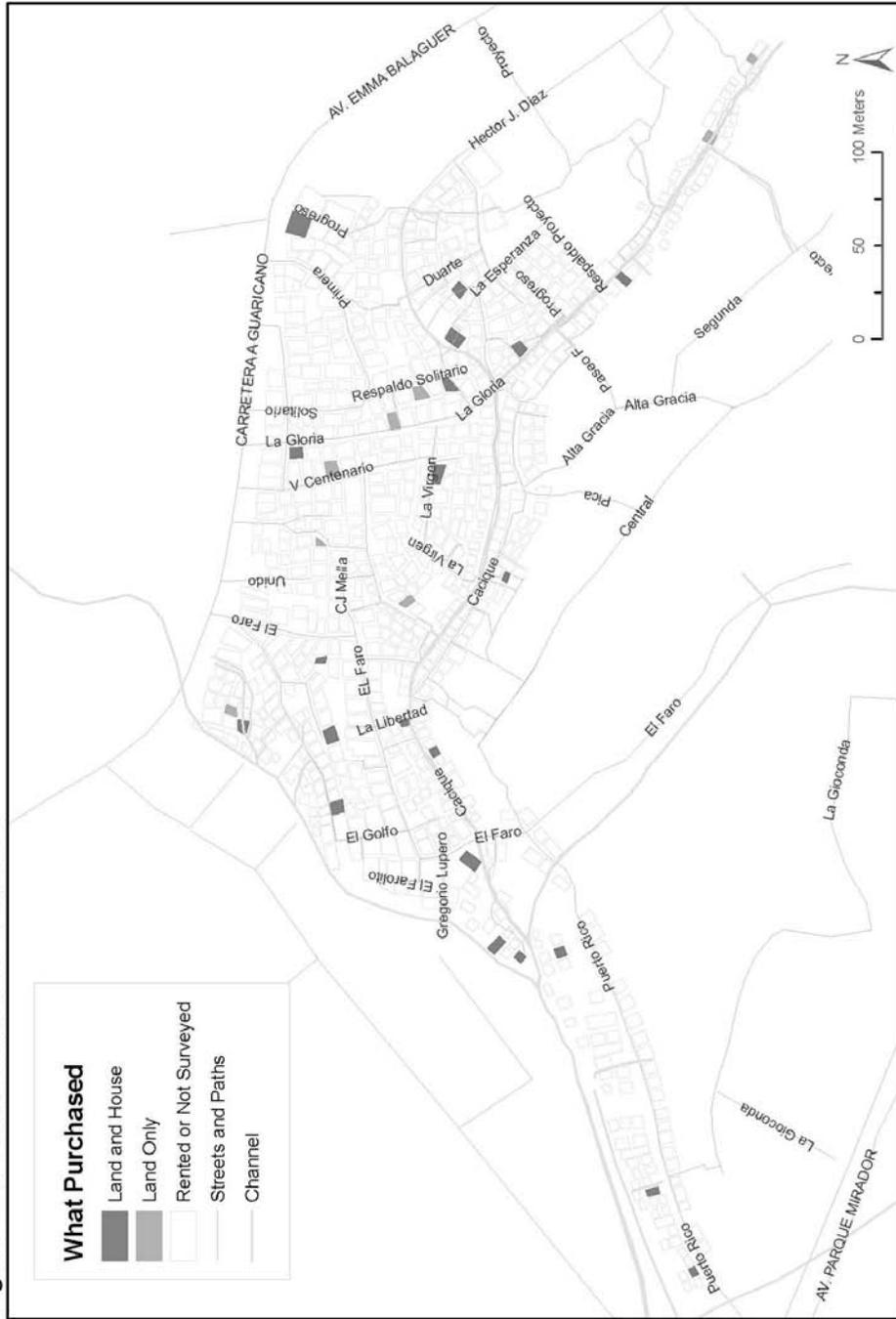
Purchase of Property and Construction of Housing

Despite not having official titles to their homes, when residents in Los Platanitos purchase houses they receive a written verification, so-called *actos de ventas,* from the previous owner. These *actos de venta,* which are drawn up with the help of lawyers or *testigos,* confirm that the buyer is now the rightful owner of the property. Although they are not formal titles recognized by *Bienes Nacionales* or *Congreso Nacional*, *actos de ventas* are recognized by other community members. For example, one informant said that she obtained papers for her house because she was living with a man she did not trust and she was afraid he would take her land. Hiring a lawyer to have the property put in her name did seem to serve her purpose in protecting herself from her boyfriend. These papers also help residents handle disputes with neighbors and give them some sense of security.

In acquiring property, the vast majority of residents in Los Platanitos paid for the property. Of 29 home owners surveyed, only 2 did not pay. Fifteen reported purchasing the property from the person who lived there before, three from one of the founders, and nine from another individual. As mentioned earlier, many of these other individuals may have been speculators. As is the case in most other informal settlements, the majority of residents (25 of 29) built their own houses (often with the help of *maestros de construcción).* The majority of surveyed home-owners (17 of 29) purchased the land with a house that they eventually tore down. It appears, however, that many of these houses that were torn down were the *tanques* or small metal structures constructed by the

founders or speculators. Eight of the 29 surveyed home-owners obtained a lot without construction and another 4 bought the property with a house in which they still live.

More specifically, construction of houses in Los Platanitos follows a subordinate 'petty commodity' production model in which houses are progressively built by residents rather than an 'industrialized' production model in which residents purchase houses built by outside entities or people (Gilbert & Ward 1985). Houses are built in 'manufactured' form or in other words, residents hire *maestros de construcción* from the community to build their houses rather than building them by themselves as in a 'self help form.' *Maestros de construcción*, who usually have years of experience in the building trade– some have even taken construction courses--are in charge of hiring workers, acquiring supplies, and determining costs and designs.

Of those residents who paid for their property, all paid in one payment (except one person who bought the property from his mother). All paid in cash. Residents report having paid from $RD 1,400- $RD 500,000 for the property. The one resident whose family reportedly paid $RD 500,000 resides in the only house along Avenida Balaguer that was surveyed. The majority of buildings along this major street are now commercial and much more expensive than the rest of the houses in the community. Other than this resident, the most that anyone else reportedly paid for their property is $RD 100,000. Most residents paid between $RD 4,500 and $RD 25,000. Although it may not be appropriate to compare costs due to inflation and devaluation of currency, the average amount paid for the property was $RD 40,300. With the exception of one resident who

reportedly paid $RD 10,000 for land alone, residents who obtained only land without any construction paid $RD 3,500 or less. Those who purchased the land with some form of construction paid $RD 4,500 and up.

Moving In

Although most residents seem to have moved in the same year that they purchased the property, it took some residents several years. Of the 27 residents who were asked what year they bought their property and what year they moved in, only 17 (66.96%) reported having moved in the same year that they obtained the property. The other ten (37.04%) moved in later. Whereas the average year in which people purchased property was 1995, the average year in which they moved in was 1999, an average difference of four years. In some cases, residents report having moved in a year or two after purchasing the property. It is likely that these residents used this time to begin construction on a house, make improvements, or save money to do so. Others, however, report moving in ten or more years after obtaining the land. These residents may have rented this property out or had some other use for the house before moving in.

Of those surveyed, no one reported having moved to Los Platanitos to live before 1989. It seems, therefore, that some of the founders may not have been living in the area during the first years while they were "beautifying" it. Of 38 respondents, eight (21.05%) moved to Los Platanitos before 1994, nine (23.68%) moved in either 1994 or 1995, seven (18.42%) moved to Los Platanitos from 1996-2005, and fourteen (36.84%)

have moved since 2006. The number of people who have moved in the past five years is relatively high. However, eight of these fourteen residents are renters. Therefore, the large number of residents who have moved seem at least partially to reflect the high mobility rates of renters (Fig. 3.5).

Although some residents construct their house immediately after purchasing the property, most take some time to do so. This construction is at times completed all at once or over the course of several years. Many residents are in fact still adding on or making improvements. Of twenty-five respondents, 15 mentioned having done the construction in one year. Ten mentioned having done it over the course of several years.

Figure 3.5: Comparison of Year Residents Obtained Property and Year They Moved In
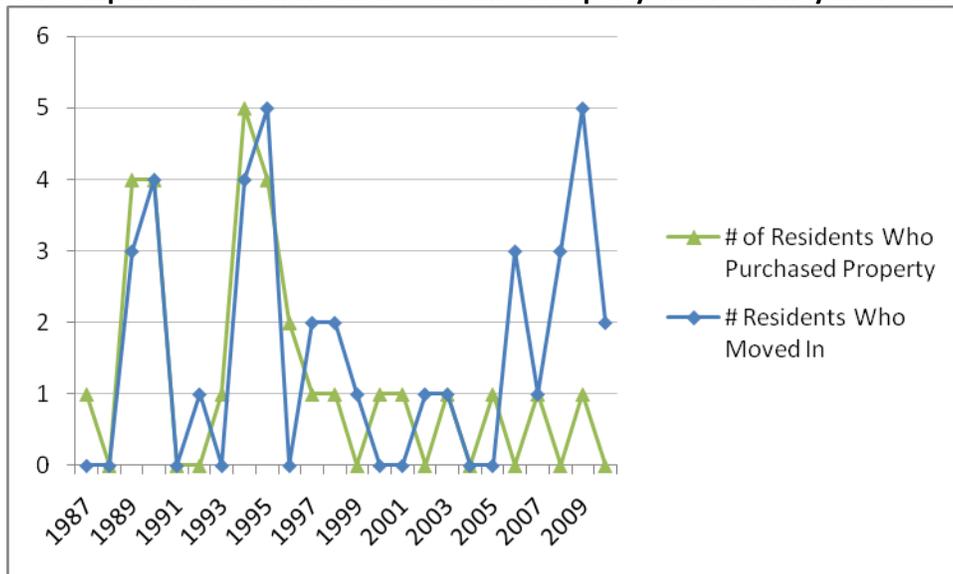
Materials and Construction Costs

Community members have a good understanding of which materials are ideal for home construction in Los Platanitos. Those that are more durable or attractive, but also usually more expensive, are considered superior. Cement floors are better than dirt floors. Tiles are better than cement, but also more expensive. Most people in Los Platanitos are able to afford cement floors, but they view tile floors as a luxury. In order to cheaply make cement floors more attractive, they mix the cement mixture with dyes to create colors and designs within the floor.

In terms of walls, cinder blocks are considered to be superior to both wood and zinc. Cinder block walls are more expensive, but also more durable. Many residents who do not have money first construct houses out of wood or zinc and then later, when they have enough money, they build another structure out of concrete. Even those who construct their houses out of cinder block later finish walls with a smooth coat of cement. When they have money, they paint these walls.

Ceilings made of cement are considered superior to those made of zinc. However, some community members said that they prefer *aluzinc* over all other materials. It seems that cement ceilings are also linked to the addition of a second floor to the house. The addition of a second floor is only possible with a cement roof on the first floor; therefore, the presence of a cement roof may indicate a desire or plan to add an additional floor. The use of these materials in houses in Los Platanitos and the differences in the community will be further discussed in chapter 4.

The costs of houses vary greatly depending on size and materials. A very basic, small house made of wood might cost as little as $RD 50,000, whereas very large houses in other parts of the city can cost millions of pesos. The amount of time that it takes residents to build the house can also vary, depending on whether or not the owner of the property currently has the money to pay for the house. As will later be explored, obtaining a loan can be extremely difficult. *Maestros de construcción* or other community members may lend some money, but community member usually do not qualify for formal loans from the bank. In addition, many community members are hesitant to apply for loans because they fear not being able to pay them back and losing their possessions.

Residents usually spend more money constructing their house than they do to purchase the property. However, determining how much residents have spent on their houses can be difficult because they themselves do not even know. In surveying homeowners, residents report having spent varying amounts. The 21 residents who made improvements to their property reported having spent anywhere from $RD 1,500 to $RD 1,500,000, with the median expense at $RD 70,000 and the average expense at $RD 191,571. Only two residents reported spending more than $RD 275,000. One of these residents reported having spent $RD 1,000,000 and the other reported having spent $RD 1,500,000.

As is the case with the other survey data, its accuracy depends on the memory of those who were surveyed. Because they purchased their property many years ago and

made improvements over several years, many may not remember these numbers correctly. Many residents in fact admitted that their responses were estimates. Inflation also needs to be taken into account when analyzing these figures. The value of Dominican peso has dramatically decreased in relation to the US dollar since Los Platanitos was first settled. It is therefore difficult to compare prices paid in the late 1980s or early 1990s with those of today.

Figure 3.8, compiled with community members in July 2010, shows the prices of various supplies needed to construct a modestly sized house of 7 m by 5 m. Although costs can vary greatly, this table is a much better indicator of what an average resident would spend on housing in terms of the current currency. This house would likely take one month to construct. The *maestro de construcción* would earn approximately $RD 80,000. He would have the help of five workers who would each earn $RD 500-1,000 per day. The cost estimates below may be somewhat conservative. One *maestro de construcción* estimated the house to cost $RD 400,000 to construct, almost twice of the estimate below.

Figure 3.8: Costs for Construction of 7m by 5m, one-story house (in Dominican pesos)

Material	Quantity	Price per Unit	Cost for House
Cinder blocks	2000	$1800-2000/ 100	$38,000
Cement*	40 bags	$270/ bag	$10,800
Rods	6 quintales (approx. 600 lbs)	$1,760/ quintal	$10,560
Wire	10 lbs	$35/ lb	$350
15 by 20 cm hoops	100	$12/ each	$1,200
Sand	4 m2	$700/ m2	$2,800
Gravel	6 m2	$800/ m2	$4,800
Toilet	1	$3,500	$3,500
Sink	1	$1,500	$1,500
Door	2	$4,000/ door	$8,000
Windows	6	$1,800/ each	$10,800
Color for floor	10 lbs		
Floor			
Sand	4 m2	$700/ m2	$2,800
Cement	15 bags	$800/ m2	$12,000
Roof			
Zinc sheets	40	$300/ each	$12,000
Drainpipe	16	$250/ each	$4,000
Beams	10	$200/ each	$2,000
Nails	20 lbs	$45/lb	$900
Other materials			
3 m empañeta	10 bags cement	$270/ bag	$2,700
Paint	8 cans paint, 8 cans primer	$450/ can	$7,200
Electric wiring	1 roll	$1,700/ roll	$1,700
Electric tubes	6 tubes	$70/ tube	$420
Current/ electricity	All pieces		$1,200
TOTAL MATERIALS			$139,230
Maestro de Construccion	1 month labor	$80,000	$80,000
Helpers	1 day	$500-$1,000	$100,000
TOTAL LABOR			$319,230

* Average of two different estimates

Costs are approximate and list may not be complete. This is to be used as an estimate only.

Support in Terms of Social Networks

As mentioned earlier, organizations are an important part of a community. However, few organizations exist, and even fewer existed in Los Platanitos before the arrival of the University of Texas students. Conversations with community members during this visit once again confirm the need for community organizations. In addition to the lack of organizations, there are many problems and weaknesses in the organizations that do exist. For example, the President of the Junta de Vecinos receives money for his work. According to community members interviewed, some people use this system in order to make money and take more for themselves than they should, leaving little for the community. One community member mentions the positive side effects of being in an organization. For one, it can help residents get to know each other better and resolve problems. Getting involved in an organization can also help to keep people out of trouble. People may use drugs and alcohol to cover or deal with deeper problems. Involvement in an organization can help them feel more important and cause them to lessen their use of these substances. They may also fear that they will be thrown out of these organizations if they continue with their old vices.

The lack of organizations and social capital negatively impact the community. In my surveys, I asked who residents felt they could go to for help in making improvements to the community. Of forty residents surveyed, 20 said that they could not seek help from anyone to improve the community, and that they had to make the improvements themselves. Thirteen mentioned being able to go to municipal authorities, including

65

seven who said that they could go to the *sindico* and four who said that they could go to the municipality. Two mentioned the *Junta de Vecinos* and five mentioned some other group or person. However, overall the survey data suggest that there is a clear lack of organizational support for community-scale projects in Los Platanitos.

As would be expected, residents also receive little support and outside help to make improvements to their houses. Of 30 residents asked about this type of support, only three felt that they could obtain outside help apart from that of families and hired workers. One family had received help to build her house from PROAYUDA, a local non-profit organization. She said that representatives of the organization approached her family and offered to build the bottom part of their house. One resident had obtained loans from a bank, and another mentioned receiving a loan from the company where her husband works. Of all surveyed, 17 said that they make home improvements by themselves and without anyone's help. Seven additional people mentioned the help of carpenters and other workers that they could hire to make improvements. Four mentioned a family member who could help them.

Financial Support

As previously discussed, few residents of Los Platanitos have been able to take out loans. Because residents do not own the land on which their houses are built, they are ineligible for loans from state institutions such as *Banco Popular*, *Banco de la Vivienda*, or the *Asociación Popular de Ahorro y Prestamos*. Their low incomes and reliance on

66

informal employment also make them ineligible for loans from most commercial banks.

There are, however, several microfinance banks such as *El Banco de Mujer* (the

Women's Bank) and ADEMI that lend to residents for businesses in Los Platanitos.

Approximately 10 years ago, a resident couple and two other women applied for a

loan for their business through *El Banco de Mujer*. They received a loan for $RD 8,000

to be paid off over six months, and all of them as a group were responsible for paying

back the loan. As they built up their credit over the years, they were able to obtain larger

loans with longer repayment periods. When they had paid off their first loan, their next

loan from *El Banco de Mujer* was for $RD 40,000; later they received a loan from the

microfinance bank *El Clon* for $RD 30,000. Eventually, they were able to apply for

loans individually instead of as a group. All of these loans had interest rates of 5-7%

with a monthly repayment schedule. Other associations and banks have similar rates.

Since the first loan was from *El Banco de Mujer,* which had to be in the name of a

woman, all subsequent loans were in the wife's name. They used most of these loans for

their business, but also admitted that some of the money went toward improving their

house. When they had proved they could pay back the loans and developed a relationship

with the creditors, the microfinance institutions began to care less about how the money

was used.

Community members also mentioned several other options for obtaining loans.

These options include financial institutions that lend money for short periods of a day or

week, as well as various pawn shops located in the community. However, both have

relatively high interest rates. The owner of one pawn shop explained that when someone

pawns something, the pawn shop usually gives them half of what it is worth. The person

then has four months to pay back the pawn shop and get back their item. If that person

cannot pay, they can choose to pay interest of 20% each month until they come up with

the money. When asked, the pawn shop owner said that people almost always pay back

the loan.

Conclusion

This study has provided further insight into the founding and settlement of Los

Platanitos; however, it has also raised several questions. It seems that some of the

original settlers, i.e. the "founders," arrived several years before other residents in order

to "beautify" the area and make it inhabitable. This suggests that Los Platanitos may be

among several informal settlements that were settled by speculators. It is not clear if

informal settlements are commonly settled by speculators in Santo Domingo, or if this is

a unique case, and should be the subject of further research.

The research also shows that the majority of people came to Los Platanitos in two

waves of migration in 1989-1990 and again in 1994-1995. Although a few theories about

these waves of migration are explored in this chapter, they have not been confirmed and

would need to be further explored through interviews and surveys of community

members.

The majority of residents surveyed mentioned moving to Los Platanitos from other parts of Santo Domingo. Although this seems to contradict assumptions that informal settlements are the result of rural to urban migration, it appears that at least some of these residents may originally be from rural areas. They first moved to other areas of Santo Domingo, and then they relocated to Los Platanitos. Specifically, it seems from conversations and survey data that many residents are originally from San Juan de la Manguana, just west of the border with Haiti. Questions about birthplace were not asked in this survey but would need to be explored to confirm this theory.

The research also suggests a lack of strong community organizations and social capital in Los Platanitos. One of the most active organizations is the *junta de vecinos,* but this has not been formed democratically. Community members report that the president is from another community. Some also feel that many of these presidents primarily use this position to earn money and are not very interested in the welfare of the community.

A few community members mentioned that involvement in organizations has increased somewhat since UT students came to the community. Community members have formed *Fundación Los Platanitos*, a community-based organization that has already taken steps to clean trash from the community, form a community-based trash collection system, and develop strategies to address other problems. In order to ensure that this organization is run democratically and is able to work effectively with government and external organizations to achieve its goals, UT students helped to raise funds for a three-month capacity-building course held in the community. More than 20 community

members completed this course and are now able to apply this knowledge in their community organizing. Although Los Platanitos seems to be increasing its social capital through these organizations, they are still fairly new and remain somewhat fragile.

In addition, residents in Los Platanitos report having little financial support and access to loans for housing and home improvement. Also, many community members are reluctant to take out loans because they fear that they will not be able to pay them back. In fact, loans for housing may not be an appropriate solution for most residents. However, one couple used part of a business loan for their house, and they were eventually able to obtain a loan specifically for their house. This example illustrates the potential of microfinance loans in helping people improve their houses and quality of life, and should be the focus of further research and project development in Los Platanitos and other informal settlements in Santo Domingo.

Chapter 4: The Current State of Housing in Los Platanitos

Introduction

      This chapter presents findings from housing surveys conducted in Los Platanitos and assesses differences across the community. Survey respondents were asked to assess the value, whether they rent or own, how many people are living in the house, what materials it is made of, which particular household items they own, and their personal perceptions of the house and the neighborhood. In addition, I conducted visual observations and systematically documented cross-sections of houses throughout the community.

      This portion of the study seeks to assess whether housing typologies and housing quality in terms of level of consolidation varies geographically across Los Platanitos, and whether these differences suggest the existence of different housing zones in Los Platanitos. In particular, I examine whether or to what extent housing quality and typologies vary between lower and upper areas of Los Platanitos. In addition, the chapter explores the possible links between housing quality and perceptions of home and neighborhood, and the well-being of residents. In broader terms, the goal is to use housing quality as a point of departure to assess articulations of socio-economic, housing, and geographic factors within slum communities. The hypothesis is that even relatively small communities like Los Platanitos are characterized by great spatial and socio-demographic difference, which in turn means that planning and policy interventions in

71

slum settlements need to be based in a fuller understanding of the causes and implications of such internal diversity.

Values of Houses in Los Platanitos

The value of houses is an important indicator of the overall state of an informal settlement. Furthermore, comparing house value with the level of investment in a house indicates to what extent residents build capital through their investments. However, determining the value of houses in informal settlements is extremely difficult. No formal assessments are conducted by certified appraisers, so it is necessary to rely on information provided by residents, or use sale prices of similar houses in the same community as a proxy for house values.

Due to this lack of information about housing values in Los Platanitos, residents were asked to estimate the value of their own house. The following map shows the self-assessed values of the properties of surveyed residents (Fig. 4.1). Although many residents were unsure of the value of their houses and these numbers are not precise, these maps still convey important information about housing in the community. With a few exceptions, residents in the upper area near the principal roads, assess their own houses at higher values than those living in the lower area close to the channel. This finding is consistent with initial interviews with community members, where residents indicated that people in upper parts of the community can obtain more money for their housing.

Figure 4.1: Estimated Value of House

The average of all self-assessed property values in Los Platanitos was $ RD 444,111. This is coincidently approximately what it costs to construct an average-sized house. Although no data was systematically gathered about the amount of money that people have received for their properties, sale prices seem much lower than the costs of construction or the self-assessed value of houses.

It is noteworthy that when residents were asked how much they thought their house was worth, the vast majority said they did not want to sell their house. One interviewee said he did not want to sell his house because it was a place for his daughter to live. He also did not think that he would get much money for it. It seems that most residents are not able to sell their property for nearly what they have invested in it, and they are aware of this. The average sale price of $ RD 100,000 is far below the $ RD 400,000 – 500,000 it would cost to construct a new one. These findings seem consistent with the theories that although informal housing in developing countries may successfully help residents build social capital, it fails to perform economic functions.

Figure 4.2: State of Housing

State

- Owned
- Rented
- Loaned
- Not Surveyed
- Streets and Paths
- Channel

75

State of Housing

Of the forty residents surveyed, 28 reported being owners, 11 reported renting, and one person reported being lent the house from her sister. Based on these findings, it seems that although the majority of residents own their houses, a large percentage also rent. As can be seen in the following map, renters are not concentrated in any particular portion of the community (Fig. 4.2). Houses of various states are available for rent. Of those who rent their house, residents reported paying from $ RD 1,000 to $ RD 2,000 in rent, i.e. the average monthly rent is $ RD 1,690. As would be expected, the lowest rent paid was in the lower portion of the community in areas that were close to the channel and prone to flooding.

Density and Inhabitants of Houses

Informal, low-income settlements in developing countries often have problems with overcrowding, which can drastically and negatively affect the quality of life. Due to the lack of affordable housing, properties are often split up and several houses are constructed on the property for various family members. Several residents complained about the high population density in the community, and this research suggests there are areas and houses which are extremely overcrowded. Based on the survey findings, an average of 5 residents live in each house. This finding is similar to the 5.11 average found in the 2008 study conducted by University of Texas students. Houses have an average of 3.425 rooms but properties (on which there is sometimes more than one

house) have an average of 3.825 rooms on each. This means there is an average of 1.45

inhabitants per room. Although this does not initially seem high—and some houses are

even considered spacious by residents—there are also some houses with up to 5 residents

per room. The average number of residents per bedroom may be 2.74, but some houses

in Los Platanitos have up to 7 residents per bedroom.

Houses in Los Platanitos are typically shared by the same family. In thirty-three

of forty surveyed homes in Los Platanitos, there was only one family living in the house.

Two families lived in seven of the houses surveyed. Of those surveyed, one parcel of

land was a rental property and home to seven different families. Eight of the parcels of

land had two families living on them, and thirty-one of the parcels of land had only one

family living on them. There were also no significant differences in density of residents

per house in the upper and lower areas, which suggests that there is not necessarily a

relationship between geographic conditions and propensity to live in crowded households

in Los Platanitos.

In most cases, home owners expand and improve their houses once they move in

and take possession. According to the surveys, houses had an average of 1.075 rooms

when they were first purchased. This number is fairly low because many people merely

purchased a one-room *tanque*. However, it also shows that most people have expanded

their houses since moving in. There are currently on average 2.05 bedrooms per house in

Los Platanitos and 2.18 bedrooms per property. Of those surveyed, 12 reported having

one bedroom, 16 reported having two, eight reported having three, and three reported

having four. Although most houses have their own bathroom, three surveyed houses do not. Two surveyed residents reported having two bathrooms in their house, but the remainder has one bathroom in their house. All of those surveyed have at least one bathroom on the property, while three residents reported having two and one reported having three.

Housing Materials

As previously discussed, certain materials are seen as superior to others and are also more expensive. Therefore, the type of materials used is an important indicator of the quality of housing, and, in turn, a good indicator of the socio-economic status of the resident. The following table (Fig. 4.3) summarizes materials of housing in Los Platanitos in comparison to the municipality of Santo Domingo Norte and the central municipality of Distrito Nacional. While the data about Los Platanitos was gathered in my survey in 2010, the housing statistics about Santo Domingo Norte and the Distrito Nacional are from the 2002 national census. However, although these two surveys were conducted in two different years and the survey for this thesis sampled a much smaller population, the comparison with the 2002 census findings helps put my findings into perspective. Also, the results from the survey conducted for this thesis correspond closely with findings from the research conducted by two groups of University of Texas students and faculty (Sletto, ed., 2008).

Figure 4.3: Material and Condition of Houses

	No. in Los Platanitos (2010 Survey)	Percentage in Los Platanitos (2010 Survey)	Percentage in SD Norte (2002 Census)	Percentage in Distrito Nacional (2002 Census)
Wall Materials				
Cinder Block or Concrete	99	67.35%	72.57%	88.83%
Wood	23	15.65%	24.15%	10.28%
(Zinc)	34	23.13%		
Other	0	0%	3.27%	0.88%
Roof Material				
Concrete	36	24.49%	45.34%	61.89%
Zinc	113	76.87%	53.31%	36.68%
Other	4	2.72%	1.35%	1.43%
Floor Material				
Granite, Marble, or Ceramic	1	2.5%	12.02%	27.97%
"mosaic"	0	0%	12.43%	22.89%
Cement	37	92.5%	71.85%	48.07%
Dirt	2	5%	3.36%	0.63%
Other	0	0%	0.33%	0.43%

In analyzing this table, it is important to note that some houses in Los Platanitos had walls and roofs made of more than one type of material. The numbers in this table convey the total number of houses made of a particular material. Because some were made up of more than one material, the percentages add up to more than 100%. This was not the case for the survey data from the 2002 census.

The majority of houses in all areas have walls made of cinder block or cement, the preferred building materials in the Dominican Republic. In comparing the survey data

with data from the 2002 census, it appears that slightly fewer houses in Los Platanitos are made of cinder block or cement than in the remainder of Santo Domingo Norte (67.35% vs. 72.57%). However, these rates are still fairly comparable. The difference is greater between these two areas and the Distrito Nacional, where 88.83% of houses are made of cinder block. The following map shows the wall materials of housing throughout Los Platanitos (Fig. 4.5): there appears to only be slight differences between different areas of the community in terms of the wall materials.

However, in terms of roof materials, there seems to be greater spatial differences within Los Platanitos, as well as between Los Platanitos and the rest of Santo Domingo (Fig. 4.6). Whereas 24.49% of surveyed houses in Los Platanitos have concrete roofs, 45.34% houses in Santo Domingo Norte and 61.89% in the Distrito Nacional have concrete roofs. As is evident in the map presented in Figure 4.5, a larger proportion of roofs in the lower section close to the channel are made of zinc or another precarious material. More houses in the higher portions of the community have concrete roofs. Roof material is, in part, related to the construction of a second floor. In order to construct this second floor, the roof must first be made of concrete. Therefore, a concrete roof may indicate a plan to construct a second floor. Those residents who live in the floodplain or in areas prone to landslides likely realize the limitations of their location and are less likely to be planning to construct a second floor.

There seems to be a significant difference between types of floor materials in Los Platanitos and the other areas, but little difference between different areas within Los

Platanitos (see Fig. 4.3). Overall, residents in other areas of Santo Domingo have floors

made of better materials than those in Los Platanitos. In Los Platanitos, the vast majority

of residents have floors made of stained concrete, although many have only dirt floors.

Only 1 person (equivalent to 2.5% of surveyed residents) reported having a floor made of

tile. None had floors made of granite or marble. In Santo Domingo Norte, 24.45%

reported having a floor made of granite, marble, ceramic, or tiles. In the Distrito

Nacional, this was true for 50.86% of residents. Furthermore, a higher percentage of

residents in Los Platanitos reported having dirt floors than those surveyed in the 2002

census in Santo Domingo Norte or the Distrito Nacional.

Figure 4.4: Two houses in the lower part of Los Platanitos Depict the Use of Various Materials

Figure 4.5: Wall Material of Houses

Material
- Cinder Block
- Mixed Materials
- Wood
- Zinc
- Not Surveyed
- Streets and Paths
- Channel

Figure 4.6: Roof Material of Houses
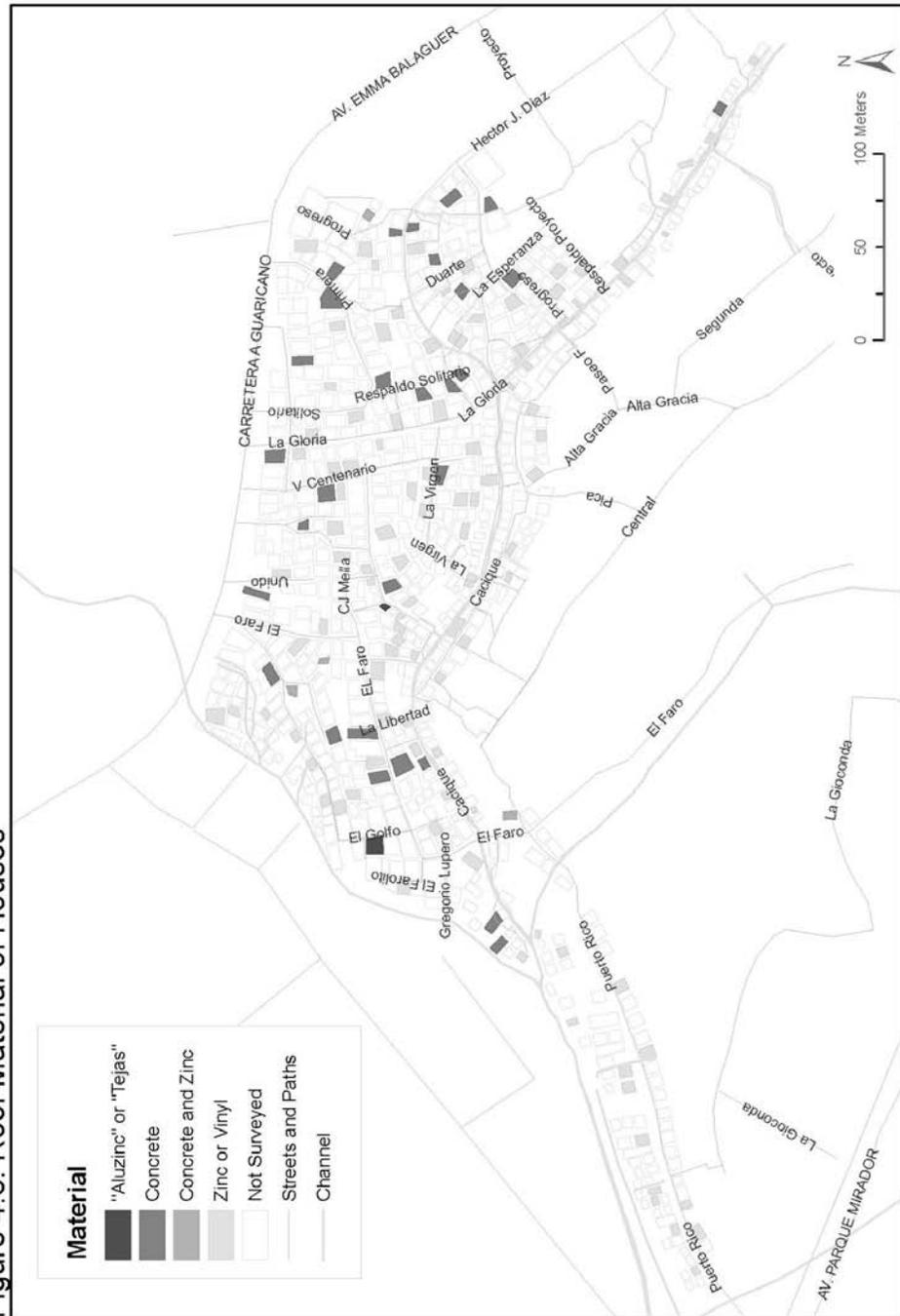
Number of Floors

As mentioned earlier, the number of floors seems to be related to the roof type as well as the location. Those living in the floodplain or in areas prone to landslides are less likely to add a second story to their house. The map of the number of floors depicts this significant difference between the low-lying areas of Los Platanitos, and the higher elevations within the community (Fig. 4.7).

Possession of Particular Household Items

To measure relative well-being, the 2002 Dominican census asked residents which of a list of household items they owned. I used the same approach in my survey, and the following table shows the results of both the 2002 census as well as this survey (Fig. 4.8). Overall, it appears that residents in Los Platanitos are not as well off as other residents of Santo Domingo Norte. Residents of Distrito Nacional are on average even better off than residents in Santo Domingo Norte. A smaller percentage of people surveyed in Los Platanitos own these items than residents surveyed in the remainder of Santo Domingo Norte or in the Distrito Nacional. The items that people most prevalently reported having in Los Platanitos in this 2010 survey were fairly consistent with those reported by other Santo Domingo Norte residents in the 2002 survey.

Figure 4.7: Number of Floors of Surveyed Houses

85
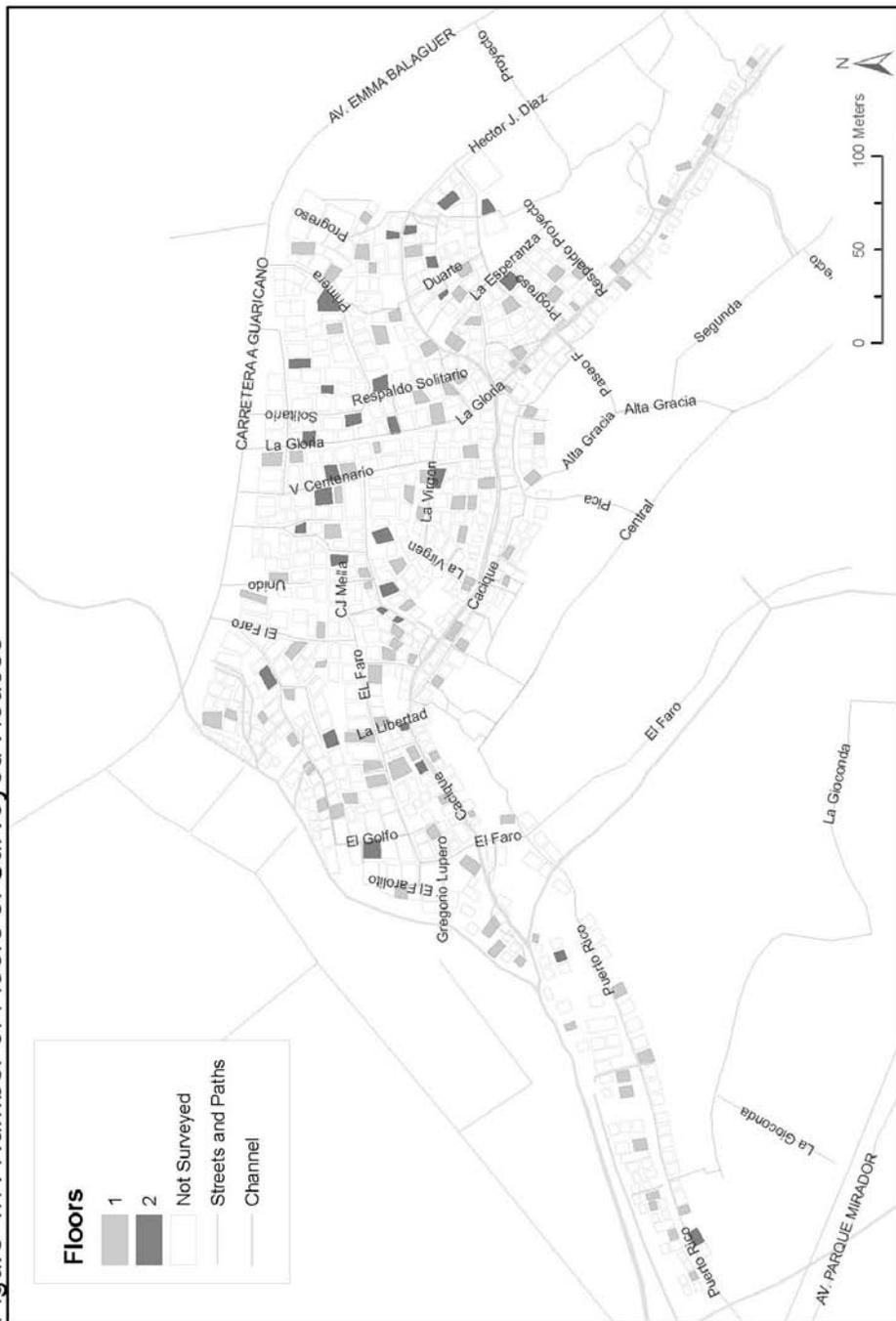
Figure 4.8: Number of Residents with Particular Household Items

Item	No. Residents with Item (2010 survey)	Percentage with Item in Los Platanitos (2010 survey)	Percentage with Item in SDN (2002 census)	Percentage with Item in DN (2002 census)
Electricity	38	95%		
Cell phone	38	95%		
Stove	37	92.5%	85.87%	90.76%
Television	29	72.5%	70.94%	82.54%
Washing machine	28	70%	61.68%	69.71%
Refrigerator	25	62.5%	67.80%	82.45%
Radio	15	37.5%	48.96%	61.83%
Land phone	6	15%	40.65%	60.22%
Cable or satellite dish	4	10%		
Private car	3	7.5%	17.39%	30.64%
Cisterna, tinaco	2	5%	24.32%	34.38%
Computer	2	5%	5.04%	18.66%
Electric plant	1	2.5%	2.02%	6.49%
Generator	0	0%	5.56%	12.45%
Air conditioning	0	0%	4.48%	18.51%
Internet	0	0%	2.11%	11.90%

In comparing survey findings, it appears that more people have a stove and washing machine in Los Platanitos than in Santo Domingo Norte or the Distrito Nacional. These findings seem contrary to what may be expected for a relatively low-income settlement, but may in part be explained by the difference of 8 years between the time the two surveys were conducted. These items are also fairly important and relatively low-cost and therefore among the first items obtained by low-income families. A relatively high percentage of people in Los Platanitos also appear to own televisions (more than in Santo Domingo Norte but less than in the Distrito Nacional).

The ownership rates of several items such as refrigerators and radios were slightly lower in Los Platanitos than in the remainder of Santo Domingo Norte. For other items such as private cars and *tinacos* or *cisternas*, two items for storing water, ownership was much lower. The low ownership rate may in part be explained by their high costs. A large portion of Los Platanitos is also not accessible by car and makes owning a car somewhat problematic. The percentage of people with land-line phones appears to be much lower in Los Platanitos than in the remainder of the municipality. However, this can at least partially be explained by the emerging cell phone technology and their decreasing prices between 2002 and 2010.

Residents reported having between 0 and 11 of the 16 items about which they were asked. Many residents report owning 5 or 6 of these items. Although the number of items that residents own sometimes seems correlated with the quality or location of the house, this does not always seem to be the case. The residents living in the poorest areas or in the worst quality housing do not necessarily have the least number of these items.

Housing conditions

I also quickly assessed the condition of housing as I walked through Los Platanitos. Although the rating system is subjective and the rating was quickly done, I was assisted by two adult community members with thorough, local knowledge and understanding of differences in housing quality. Figure 4.11 shows the results of this visual survey evaluating the relative condition of houses. In looking at these results, it

does not appear to be a large difference between various parts of the community. There are more houses in good condition in the upper areas, but the difference between the upper and lower areas seems to be minimal. Figures 4.9 and 4.10 arguably depict the nicest and poorest houses surveyed, illustrating that houses in various states exist throughout the community. These two houses are located in the upper area, which is generally more consolidated and has nicer houses than the lower-lying areas. Despite its location in the upper area, the house in figure 4.10 is still in extremely precarious conditions, presumably due to personal circumstances of its residents.

Figure 4.9: A Well-Maintained House in the Upper Section of Los Platanitos

Figure 4.10: A Nearby Zinc House on the Verge of Falling Over

Figure 4.11: Condition of Housing
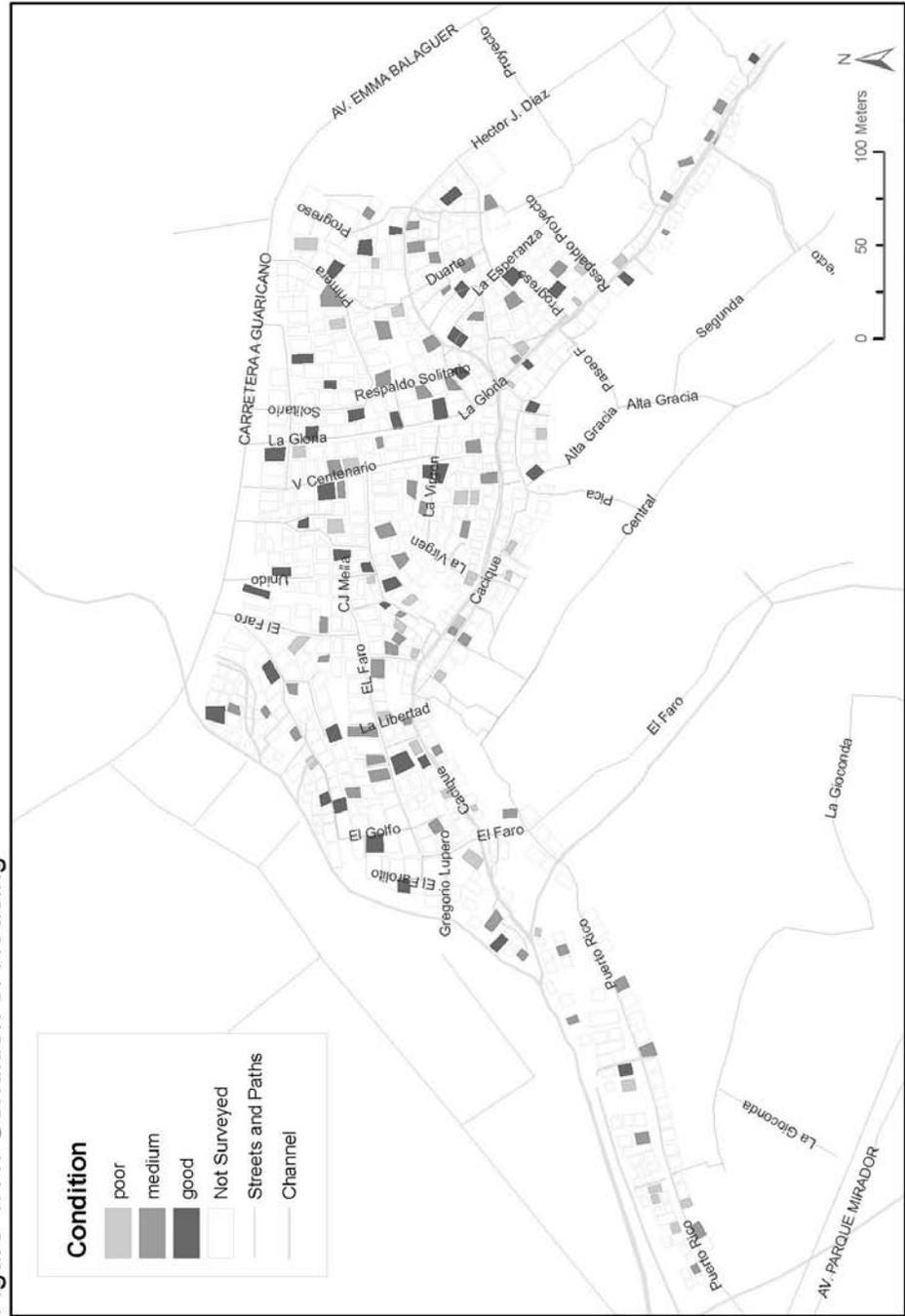
In addition to this quick visual survey, residents were asked about physical problems with their house. They were asked only one specific question (whether they had leaks in their roof) and one general question (whether they had any other problems with their house). Of the 40 residents surveyed, 26 replied that they did have leaks in the roof. Sixteen of the residents reported they had at least one physical problem with their house. Of those who reported problems, several residents mentioned having drainage problems. A few mentioned that pipes in the bathroom get clogged up. One resident mentioned that the pipes for the bathroom and kitchen are the same, which worsens the drainage problem. Several mentioned not having completed their house. They mentioned needing to finish their roof, add in a missing window, or replace a door with a higher quality one. Others mentioned problems with cracks in the foundation or with holes in the floor. One mentioned that rats were able to enter through holes in the door. Some mentioned problems outside their house such as the channel or the poor condition of the street. Because common problems were not known before conducting the survey, future research should inquire further about specific problems or ask residents to rate certain aspects of their houses.

Community Perceptions

In order to assess residents' perceptions of their immediate neighborhood and whether this varied throughout Los Platanitos, community members were asked about their favorite and least favorite aspects of the neighborhood, as well as their favorite and

least favorite aspects of their house. These were open-ended questions and residents had

many different responses. However, responses to a large degree fall into a few, distinct

categories. The following table shows the results of the question asking about residents'

favorite aspect of the neighborhood (Fig. 4.12).

Figure 4.12: Favorite Aspect of Neighborhood

	Number	Percentage
"Tranquilo"/ "Tranquilidad"/ "Tranquilita"	15	37.5%
Nothing	10	25%
People	4	10%
Own House/ Not Paying	3	7.5%
Electricity	2	5%
Along the street	2	5%
Everything	2	5%
Close to city	2	5%
Lifestyle	1	2.5%
Have their belongings here	1	2.5%
The "colmados"	1	2.5%
Close to work	1	2.5%
Inexpensive	1	2.5%

When asked what their favorite part of the neighborhood was, the most common

response was that it was *tranquilo,* or words expressing a similar sentiment. When

translated into English, it loosely means tranquil or relaxed; however, it can mean much

more and be interpreted in many ways. Therefore I asked respondents who used this

phrase to clarify their answer. Of those who did explain their answer, some mentioned

that they got along with their neighbors. Others mentioned that if they did not start

trouble with anyone, no one would mess with them. Several people mentioned that the

tigres, the delinquents or criminals, mainly get into fights or bother other *tigres*.

Therefore, it seems that although there is crime in the community, residents perceive it as *tranquilo* because they are left alone. Although some people mentioned that it was *tranquilo* because there was no crime, these answers seem to contradict the responses to other questions and other insights obtained.

The second most common answer to this question was that residents did not like anything about the neighborhood. This speaks to the idea that people are forced to live in this community due to the lack of affordable options. In addition, further insight could be provided by dividing up these responses in order to see if there were any differences in various zones or areas in the community.

Figure 4.13: Least Favorite Aspect of Neighborhood

	Number	Percentage
Crime/ Delinquency/ Drugs	13	32.5%
Nothing	6	15%
Flooding/ Channel	5	12.5%
People (gossip, neighbors)	5	12.5%
Electricity	3	7.5%
Water	3	7.5%
Entrance for Vehicles	3	7.5%
Organization of Neighborhood (Planning-unorganized, houses too close to another)	2	5%
Not enough money	2	5%
Trash, mosquitoes	1	2.5%
Staircase	1	2.5%

When asked what their least favorite part of the neighborhood was, more people mentioned crime, delinquency, or drugs than any other problem (Fig. 4.13). Many mentioned the *tigeraje* or crime. One man mentioned that he had had a job where he had to get up in the middle of the night. He had to quit the job because the *tigres* roam the

streets at night and cause problems. Another woman said that she does not want to bring her daughter to the area due to the *tigeraje*. Although most just mentioned delinquency and drugs, one woman mentioned that people have been murdered.

As just mentioned, this notion somewhat contradicts the results of the question about what people liked the most about the neighborhood. Many people had mentioned that the area was *tranquilo* and that no one bothers anyone unless they bother them. This contradiction may in part be explained by a comment made by residents in an initial interview. They explained that the *tigres* are less likely to steal from people from their own neighborhood, in part because residents would know who the culprits were. It also seems that people in the lower portion of the community are not as likely to be a victim of robbery because they are seen as having less to steal.

Five respondents mentioned flooding as the worst aspect of the neighborhood. This number is relatively low because only a portion of the community is located in the floodplain and frequently has to deal with flooding problems. However, this is a major problem for anyone who experiences it. Five residents also mentioned that certain neighbor was their least favorite part of living in the area. Several mentioned problems with neighbors or gossiping.

Residents who complained about both water and electricity said that these services were not provided frequently enough. Residents, in fact, only have potable running water on Tuesday and Saturday mornings. They supposedly have electricity at all times, but this frequently goes out. One resident mentioned that when she had running

93

water, very little came out of the tap. Another resident who complained about electricity said that she paid $RD 200 each month and still rarely had service. This is partially due to the inconsistency of water service: because of the informal design of the piping, water reaches certain residents before others and those toward the end of the pipes have less than others. As mentioned earlier, although most residents do not pay for electricity, several who live closer to Avenida Emma Balaguer do pay. Those who paid were more likely to complain about the irregularity and infrequency of electricity service.

Although most residents do not own private vehicles, several did mention lack of vehicular access as their least favorite part of living in the community. This seems like it will be of greater concern as people improve their social status. It may even cause people with social upward mobility to move elsewhere if possible. However, despite the many problems listed by residents, six of the 40 community members surveyed responded that there was nothing that they disliked about the neighborhood, showing that some residents are fairly content with their living conditions.

After being asked about their perceptions of the neighborhood, residents were asked what they liked most and least about their houses. The most common response was that they own their house and therefore do not have to pay monthly payments. This corresponds with the findings from another survey question: when residents were asked why they moved to their current residence, most answered that they moved in order to purchase a house. Both responses show the importance that people place on owning their

own houses. As mentioned earlier, owning a house is a means of building social capital,

and provide a place for their children and future generations to live.

Figure 4.14: Favorite Aspect of House

	Number	Percentage
They own it/ do not pay	13	32.5%
Nothing	9	22.5%
"Tranquilidad"	6	15%
Comfortable	3	7.5%
Spacious	2	5%
Water	2	5%
Other	9	22.5%

As in the case of the question about the neighborhood, many residents indicated

that *tranquilidad* was the most positive aspect of their house. In some cases this

tranquilidad seemed to refer to not having to worry about having to pay for rent each

month. In other cases it may have been being left alone by *tigres* or other members of the

community. The meaning of this response, as discussed earlier, is somewhat difficult to

discern, and seems to have had varying meanings for different members of the

community. Also, it is difficult to interpret the response given by 9 of the 40 surveyed

residents, who said that they did not like anything about their house. This appears to

show a great level of dissatisfaction with living conditions, but the response might have

been influenced by my presence as a foreigner.

Only a few residents listed specific characteristics or details about their house that

they particularly liked. Some mentioned that it was comfortable or spacious or that they

liked getting water twice a week. Several mentioned specific rooms or belongings in

their house. Other responses included the sense of community, the material of the house

(made of cinder blocks), and that fresh air enters. One man mentioned that he had made

his life in his house and raised his kids there, again speaking to the idea of building social

capital. Another mentioned that he liked everything about his house.

When asked about the *least* favorite aspect of their house, many mentioned

"construction," and especially problems with their bathroom or kitchen. Those who

mentioned the bathroom said either that the toilet did not work or that it had many

problems. Two mentioned that they disliked the zinc roof. Another two mentioned

wanting a patio, and one of those also said he wanted "more space." However, of all the

problems related to construction, leaking roofs was most frequently mentioned. In

addition to these problems with construction, three people mentioned the density of the

community and two mentioned that their house was not finished yet.

Figure 4.15: Least Favorite Aspect of House

	Number	Percentage
Construction	11	27.5%
Nothing	7	17.5%
Leaks in Roof	4	10%
Crime	4	10%
Houses too close	3	7.5%
Do not own it	2	5%
Incomplete	2	5%
Services	2	5%
Noise	2	5%
People	2	5%
Flooding/ Channel	2	5%

When asked whether or not they wanted to continue living in the community, 22 responded yes, 2 were mixed, and 15 responded no (Fig. 4.16). Fifteen of 40 or 37.5% said they were unable to leave. Of those who said that they wanted to stay in Los Platanitos, the most common reasons given were the *tranquilidad*, that they felt comfortable or enjoyed living there, or that they liked the people. Of those who said that they did not want to continue living in Los Platanitos, most simply said they preferred to live somewhere else. Several renters mentioned wanting to own a house.

Figure 4.16: Residents Who Want to Stay in the Community and Reason

	Number	Percentage
Yes	**24**	**60%**
Inability to leave	10	25%
Tranquilo	3	7.5%
Comfortable/ Enjoy Living there	3	7.5%
People	3	7.5%
Own house	2	5%
Belongings are here	1	2.5%
Mixed	**2**	**10%**
Inability to leave	1	5%
Want to live somewhere else	1	5%
No	**17**	**42.5%**
Inability to leave	4	10%
Want to live somewhere else	2	5%
Want to own a house	3	7.5%
Channel	2	5%
Complaint about current house	2	5%
Crime/ Delinquency	1	2.5%
Do not like sector	1	2.5%

Figure 4.17: Overly Crowded House Located in the Floodplain Depicts Common Problems

Conclusion

In this chapter, information about housing in the community has been used to make inferences about the well-being of its residents. Various criteria were used to assess the typologies and quality of housing in Los Platanitos, to compare housing in various parts of the community, and to compare housing in Los Platanitos with that in other areas. Interpreting this information in part illustrated the difference in well-being between community residents and residents in other, more affluent areas of Santo Domingo, as well as highlighting the geographic and socio-economic differences within the community, especially between lower and upper areas. It also helped to illustrate the impact of housing on residents' sense of well-being.

When comparing housing materials, it appears that the roof materials vary more than wall or floor materials from one part of Los Platanitos to another, especially between

upper and lower areas. This may in part be because roof material is tied to the addition of a second floor. In addition to having similar wall and floor types throughout the community, there did not seem to be a great variation in the number of select household items that residents in various parts of Los Platanitos reported having.

When asked about their favorite and least favorite aspects of the neighborhood and their house, many residents gave ambiguous responses such as *tranquilidad,* or "nothing." As had been found in the 2008 study conducted by University of Texas researchers (Sletto ed., 2008), crime and flooding are major concerns and were mentioned by several people as their least favorite aspect of the neighborhood. However, it is clear that people highly value the fact that they own their houses and do not have to pay monthly rent, illustrating the significant social capital associated with homeownership.

When asked whether or not residents in Los Platanitos wanted to remain living in the community, most said they wanted to stay, but many also said they wanted to leave but were unable to. This was partly because they didn't have the means to buy a house or build anywhere else, and partly because they would not recoup their investment if they sold their house. This corresponds closely to findings from the housing survey: residents overall estimate the value of their house to be about the same as, or slightly higher than, the price it would cost to build a similar house. However, residents who have sold their houses report getting significantly less than their investment. Furthermore, houses located in upper areas are valued higher and sell higher prices, than houses in the lower area.

Again, this indicates that housing is not a means of building financial capital in Los Platanitos, and that there is a significant difference in housing quality and well-being associated with difference in environmental risk.

Conclusion

This thesis has examined housing in the community of Los Platanitos, documented its history and consolidation, analyzed the spatial distribution of housing typologies and qualities, and explored residents' perception of their homes and neighborhood. However, as Frank Moya Pons states in his discussion about the housing situation in the Dominican Republic,

> All the sectors are related: the problems with housing are, in large part, problems with income or power of acquisition of the population, and these, in turn, are problems with productive employment of the workforce… the same could be said in relation to nutrition, education, and other aspects (Pons 13)

In other words, the quality of housing both affects and is affected by education, employment, community health, nutrition, and states of well-being. In focusing on housing, this study, therefore, has become a study of the overall well-being of the community. The implications of the findings of this study are discussed in this chapter.

The Value of Housing

This study confirms findings in other Latin American countries that informal housing has tremendous social value, but that it does not necessarily serve economic functions. In the survey in Los Platanitos, respondents repeatedly discussed the importance of owning a house, which gives people a sense of security. Owners do not have to worry about making monthly payments, they have a place to live and raise families, and possibly even a place to leave to their children.

In contrast, renting in communities like Los Platanitos seems to be filled with a great deal of uncertainty. Owners can evict tenants at any time and without notice. Tenants also have to worry about making monthly payments, which can sometimes be difficult for people whose income greatly fluctuates. Other research suggests that there is a lack of rental housing in informal settlements; however, this does not seem to be the case in Los Platanitos, where there is an abundance of rental housing.

Despite the great social benefits and advantages of owning over renting, there are certain financial functions that housing in informal settlements such as Los Platanitos does not fill. In Los Platanitos, unlike other informal settlements in Santo Domingo, people are able to sell their houses. In fact, there seems to be a surprisingly high turnover in the local housing market. However, the prices that people receive for their housing are not near the investment they have put into it. As mentioned before, the cost of constructing a modestly sized house is estimated to be between $RD 300,000 and $RD 400,000; however, people on average seem to receive $RD 100,000 or less when they sell their houses. In Los Platanitos and other informal settlements, the combination of high social capital and low financial capital typically makes people reluctant to sell their houses. This lack of return on investment contrasts those in formal settlements or in developed countries, where real estate investments can be quite profitable.

Settlement and Construction

The development and history of Los Platanitos parallels that of other informal settlements throughout Latin America. Like in other settlements, many residents were

born in rural areas, although before settling permanently in Los Platanitos, many lived in other parts of Santo Domingo and even in other parts of Los Platanitos. Like in other informal settlements, houses are built progressively, which is ideal for low-income residents employed in unstable informal jobs since they can improve their house over time when they have money. If they do not have money available for home improvements, they can hold off on improvements and make them at another time.

The houses are usually built by other residents who have experience with construction, rather than the home owner. The quality of these houses may be somewhat inferior to formally built houses, but this seems to be more of a result of using inferior materials or not having completed the construction of the house due to a lack of money, rather than a general inferiority of building skills of those who build the houses. Also greatly impacting the state of housing is its construction within vulnerable areas such as floodplains and along hillsides prone to landslides. The houses located in these areas often suffer damage and must be rebuilt, and are assessed at a lower value than houses located in safer areas. Informal housing located in vulnerable areas puts residents in danger and poses serious health risks and seems to have even lower returns on investment than other informal housing.

Services

In addition to being situated in environmentally risky areas and being characterized by inferior housing quality, Los Platanitos is also faced by inadequacies in basic services and infrastructure. When Los Platanitos was first settled, the community

lacked all basic infrastructure but in subsequent years, residents added infrastructure in a piecemeal fashion, usually after houses had already been built. For example, community members complain of problems with drainage, pipes, and an inadequate sewer system. Many pipes have not been laid correctly or are already deteriorating. A proper sewer system was never put in place and most sewage flows directly from people's houses into an uncovered channel. This lack of a sewage system causes many problems in the community, but the development of a proper sewage infrastructure will likely be prohibitively expensive.

Inadequacies in infrastructure impact service quality, but communities like Los Platanitos also receive inferior services for other reasons related to their informal nature. Many residents of informal settlements like Los Platanitos do not pay for services, thus the government provides these services at no cost. Santo Domingo Norte and the Dominican Republic already have a high debt burden, which is further increased by the lack of revenue produced from the provision of these services (from both poor and wealthy residents). In order to save money, the government often turns off services such as electricity. They do so more often in informal settlements like Los Platanitos than in formal settlements where people pay.

Informality and Land Titling

The ways by which housing and property are obtained and secured in Los Platanitos are similar to those in other informal communities, and are based on a blend of informal social relationships and more formal contracts. For one, many residents in Los

Platanitos have *actas de venta*, formal sales agreements drafted by lawyers or *testigos*

that are considered binding by other members of the community. Although these

agreements are not recognized by public institutions such as the *Bienes Nacionales,* they

serve many important functions in the community, including delineating the extent of

people's properties and thus limiting disputes between community members. As Shawn

Strange suggests in his analysis of the largely informal businesses in the community, Los

Platanitos has developed its own systems to become a relatively self-reliant and

functioning society, despite lack of outside support and integration in the formal

economy (Strange 2009).

Support

       This study once again highlights the lack of assistance from external

organizations and the modest, inadequate support from the municipal government.

Community members mentioned that certain *sindicos* (mayors) had completed road

paving projects and occasionally assisted with clean-ups of garbage from the channel that

bisects Los Platanitos. The NGO Ciudad Alternativa, a partner in the 2008 University of

Texas class project, has contributed minor funds for home improvements. However,

there is a lack of strong, representative community organizations, and those that do exist

seem to lack democratic functions. As mentioned earlier, presidents of *juntas de vecinos*

get paid and several see the position as a way to make money instead of as an opportunity

to make improvements to the community. Residents report that few organizations existed

before UT classes came to the community, but that the involvement of UT has helped to

increase the number and visibility of these organizations, including a group formed during the 2010 UT project to improve sanitation and trash collection in the community.

In Santo Domingo, micro-credit lending institutions provide loans for small businesses; however, obtaining a loan for a small informally-built house is much more difficult. *Banco Caribe* has recently announced a program to provide loans to homeowners of land that was informally settled. However, this program is one of the first of its kind in Santo Domingo and is aimed at areas with higher housing prices than those in Los Platanitos. Residents also hesitate to take out loans for fear of not being able to repay the loan. However, one couple I interviewed in the community had in fact taken out several loans for their house and paid them back. The first loans were initially intended for their business, but after taking out several loans, the banks began to lend them money specifically to use for their house. Although some rules may have been bent in this example, it also illustrates the ability of residents to be able to pay back and benefit from loans for housing. These loans should be given with care and not all residents may qualify; however, it seems that providing modestly sized loans in order for residents to build or improve their houses may be beneficial to the community.

Cost of Housing

In order to develop appropriate programs and policies to remedy the housing situation in communities such as Los Platanitos, it is important to compare costs of informal housing with those of formal and government-built housing. Although this was beyond the scope of this study, the research suggests that the cost of informally

constructing housing is just a little less than the cost of government-built housing. In turn, this suggests that residents of informal settlements can afford government-built housing. However, there are additional costs and responsibilities associated with formal and government-built housing that must be explored more fully.

For one, residents must make monthly payments and face the added expense of closing costs, interest, and utility services. The specifics of these additional costs were not explored in detail in this paper, but could likely deter very low-income residents from entering the formal housing market. Many residents of informal communities like Los Platanitos also report having extremely unstable incomes. Even those who would usually be able to afford these payments might have trouble making them some months due to this fluctuating income. As reported earlier, residents themselves seem extremely hesitant to take out any type of loan for fear of not being able to pay it back. They would likely feel this same hesitance in taking out a mortgage. The flexibility associated with informal housing and the ability to make improvements when they have money is a major advantage for low-income residents with irregular jobs and income.

This information points to the importance of reassessing the housing policies and programs in their current form, including the level of public investment in these programs. For example, are the government-built houses subsidized and by how much? Could this money be better used by making investments in informal housing or in helping low-income residents build their own houses, perhaps to help residents cover some of their own hidden costs?

The cost of housing in Los Platanitos was calculated by using estimates of building materials and construction, in part because residents themselves did not know how much they had spent on their own houses. However, residents may have spent more than this estimate, especially if they live in vulnerable areas and have had to fix portions of their house that have been damaged. Future research, therefore, should document the exact amount that residents in Los Platanitos spend on housing, but also explore and compare the costs of informal, formal, and government-built housing in greater debt, and document how much the government, NGOs, and other entities invest in low-income housing. In particular, it would be important to consider rates of return (and ability to sell housing) and the cost of services, interest rates, insurance, and other closing fees for formal and government-built housing. A more thorough understanding of the housing market in informal communities, and the real costs associated with formal and informal housing, would allow for the development of more progressive and cost-effective housing policies and associated housing programs for extremely low-income residents.

Recommendations

Certain types of well-structured loan programs may be part of a comprehensive solution to low-income housing construction and improved. It is not advisable to provide large long-term loans to residents of communities like Los Platanitos, since residents have both low and unstable incomes. However, several community members have already proven that they are able to pay back short-term smaller loans, which suggests

that micro-credit financing could be a viable alternative for residents to make modest improvements to their houses.

Informal settlements like Los Platanitos suffer due to the inadequate provision of services, partly because these areas were settled before services were developed. To provide services such as a comprehensive sewage infrastructure is much more expensive once a community has been settled. Also, residents construct houses in at-risk areas such as steep hillsides and floodplains, largely out of necessity and lack of available affordable housing. Although construction is already banned in such vulnerable areas, residents will settle in such areas as long as affordable land or housing is not available to them, and as long as proper education and support is not provided for those seeking a place to live. Because residents in vulnerable areas are often aware of the risks associated with living there but remain there out of necessity, the availability of affordable land or housing in non-vulnerable areas is extremely important in improving the housing situation for these low-income people.

Specifically, public financing should be directed towards developing empty lots with services on non-vulnerable lands. People who might otherwise live in informal settlements could purchase these lots and then progressively build their own houses, much as they do in informal settlements. The cost of purchasing this empty lot would be much more affordable than those of formal housing. By developing the infrastructure before the construction of housing, the cost of service provision would be much lower than trying to develop infrastructure at a later time, and residents' quality of life would improve. However, such programs must consider the added costs of living in a more

formalized settlement and include measures to ensure that low-income residents are able to cope with these costs on a regular basis. For example, although residents would be able to make improvements to their houses as they obtained the money (ideally either from income or through small short-term loans), the cost of living in these communities would still be higher than living in an informal settlement. Residents would also have the added expense of paying for services each month.

Ultimately, housing policies must be based on a realistic assessment of costs and benefits associated with formal and informal housing, and a better understanding of the processes of consolidation and tenure arrangements in informal settlements. As this research has suggested, residents in informal settlements in fact derive great social capital from their investment in housing, and the progressive nature of such housing puts owning a home within the reach of the extremely poor. Low-income housing policies and planning strategies must therefore draw on the strengths and social significance of such progressive housing, and state funding must be used strategically, including through innovative, small-scale microcredit financing programs and assistance for home improvements, and through new, innovative forms of infrastructure development that relies on residents' own ingenuity and initiative. By including residents as partners in low-income housing development, such strategic approaches can ultimately lead to significant improvements in the quality of life in Los Platanitos and other informal settlements like it.

APPENDIX A: In-Depth Survey (Spanish)

DISPONIBILIDAD PERSONA:		Definitivamente volver		Posiblemente sí		Definitivamente no
CASO:		Definitivamente regresar		Escoger entre otros		Definitivamente no

Fecha…………………………………….. Número de Casa………………………………………..

1. Esta vivienda es…

1.	Alquilada
2.	Propia, pagándola
3.	Propia, pagada totalmente
4.	Cedida, prestada
8.	Otro

2. ¿Cuál es su primer nombre?...

A. ¿Su Edad?…………………………. B. ¿Genero?…………………………. C. ¿Estado civil?...

3. ¿Cuál es el nombre del dueño?...

A. ¿Su Edad?…………………………. B. ¿Genero?............................. C. ¿Estado Civil?..…

A. ORÍGINES

A.1 ¿En qué año COMPRARON esta propiedad? ………………………………………………………..

A.2 ¿Compraron el solar solo o había alguna construcción?

1.	Solar sin construcción
2.	Casa/ casita pero la tumbamos
3.	Casa en que todavía estamos viviendo
4.	Una casa/ casita pero construimos más???
5.	No sabe

A.3 ¿A quién le compraron la propiedad?

VENDEDOR	NOMBRE/ EXPLICAR
1. No la pagamos. Solamente nos mudamos aquí.	
2. A las personas que vivían aquí anteriormente.	
3. Uno de los fundadores	
4. A otro individuo	
8. Otro; especificar	

A.4 ¿Cuánto costó la propiedad?

a. Solo el solar baldío $............................. b. ¿Solar y casa? $......................... c. Fue una permuta…………………….

A.5 ¿Cómo pagaron por la propiedad, al contado o en plazos?......................................

a. Si pagaron en plazos, ¿Cuántos? ……………. b. ¿Y cada cuánto? …………………………

A.6 ¿Forma de pago (efectivo, préstamo, permuta)?...

A.7 ¿Cuánto mide el solar?

1. ORIGINAL			2. HOY EN DÍA		
a. Total (m2)	b. Frente (m)	c. Fondo (m)	a. Total (m2)	b. Frente (m)	c. Fondo (m)

A.8 ¿En qué año fue construida la casa que actualmente está en el lote?...............................

A.9 ¿En qué año MUDARON a esta propiedad? ……………………………………………………..

A.10 ¿Me puede decir el número de personas que se mudaron aquí inicialmente? …………………………

A.11 ¿Dónde vivía el dueño antes de mudarse?

El Sr/ La Sra/ Ambos …….
(Barrio, Sector, Municipio, Provincia, País)

B.   INFORMACIÓN BÁSICA DE LOS RESIDENTES

B.1 ¿Actualmente, cuántas personas en total viven normalmente en esta vivienda?……………………

	Genero	Edad	Relación con persona 1
Persona 1			
Persona 2			
Persona 3			
Persona 4			
Persona 5			
Persona 6			
Persona 7			

B.2 En total, ¿cuántas **FAMILIAS** viven en este lote en este momento? ……………………………

C.   SITUACIÓN FÍSICA DE LA VIVIENDA

C.1 ¿Cuántos cuartos tiene en total esta vivienda contando la cocina (sin contar pasillos ni baños)?..........

C.2 Número de recámaras……………………

C.3 Número de baños…………………………..

C.4 ¿Cuántos cuartos tenía la casa cuando se mudaron aquí?

C.5 ¿De qué material es la mayor parte *del piso* de esta vivienda?

1.	Granito, mármol o cerámica
2.	Mosaico
3.	Cemento
4.	Tierra

5.	Madera
8.	Otro

C.6 ¿Cuáles de las siguientes cosas tiene en su casa?

1.	Inodoro
2.	Letrina
3.	Hoyo Negro
9.	Ninguno

C.7 ¿Cuáles fuentes de agua tiene en su casa?

1.	Del acueducto, dentro de la vivienda (acueducto = llave, tubería)
2.	Del acueducto, fuera de vivienda
3.	Del acueducto, llave publica
4.	Manantial, rio, arroyo
5.	Pozo
6.	Lluvia
7.	Camión tanque
8.	Otro
9.	No hay

C.8 ¿Cuáles de las siguientes cosas tiene su vivienda?

1.	Nevera
2.	Estufa
3.	Luz eléctrica
4.	Lavadora de ropa
5.	Televisor
6.	Televisión por cable, satélite
7.	Aire acondicionado
8.	Radio, equipo de música
9.	Automóvil de uso privado
10.	Cisterna o tinaco
11.	Computadora
12.	Internet
13.	Inversor
14.	Planta eléctrica
15.	Línea Telefónica Fija
16.	Teléfono móvil o celular

INUNDACIÓN

C.9 ¿Cuando llueve, con qué frecuencia se inunda su casa?

1.	Siempre
2.	A veces
3.	Nunca
4.	No sabe

C.9a ¿Cuándo fue la última vez que se inundó esta vivienda?..

C.9b ¿Qué tan alto ha llegado el agua negra en esta vivienda?..

C.9c Por lo general, ¿por cuánto tiempo tiene que estar fuera de su casa cuando hay inundación?...........................

C.10 ¿Tiene esta casa problemas con goteras?..

C.10a ¿Con cuál frecuencia entra agua?...

C.11 ¿Presenta problemas físicos alguna otra parte de su casa (vivienda)? ¿Cuáles? …………………………………………

…….

C.12 Habitualmente, ¿qué hacen con su basura?

1.	El ayuntamiento la recoge
2.	Una empresa privada la recoge
3.	La queman
4.	La tiran en el patio o el solar
5.	La tiran en un vertedero
6.	La tiran en un rio o cañada
8.	Otro

C.13 ¿Se usa alguna parte de esta casa, o del lote, como negocio u otra labor económica?……………………

PARTE DE LA CASA	ACTIVIDAD

C.14 ¿Tiene usted título de la propiedad?

1.	Sí
2.	No
3.	No, pero está en trámite

C.15 ¿Tiene un acto de venta para la propiedad?

1.	Sí
2.	No
3.	No, pero está en trámite

D. PERCEPCIONES: BARRIO Y ESTIMACIÓN

D.1 ¿Qué es lo que MÁS le gusta de vivir en este BARRIO?

	MÁS LE GUSTA	EXPLICAR
1.	Buen ubicación	
2.	Buen transporte/ acceso	
3.	Buen nivel de infraestructura y buen mantenimiento	
4.	Buen ambiente social	
5.	Otro, especificar	

D.2 ¿Qué es lo que MENOS le gusta de vivir en este BARRIO?

	MÁS LE GUSTA	EXPLICAR
	1. Mala ubicación	
	2. Falta de transporte/ acceso	
	3. Baja nivel de infraestructura y mal mantenimiento	
	4. Mal ambiente social	
	5. Otro, especificar	

D.3 ¿Qué es lo que MÁS le gusta de vivir en esta CASA/ PROPIEDAD Y SOLAR?

	MÁS LE GUSTA	EXPLICAR
	1. Mucho espacio	
	2. El diseño	
	3. Ubicación	
	8. Otro, especificar	

D.4 ¿Qué es lo que MENOS le gusta de vivir en esta CASA/PROPIEDAD Y SOLAR?

	MENOS LE GUSTA	EXPLICAR
	1. Poco espacio	
	2. La casa está mal construida	
	3. Falta de privacidad	
	4. Desventajas de compartir con otras familias	
	5. Tenemos problemas de inundación, grietas, etc.	
	8. Otro, especificar	

E. APOYOS PARA MEJORAS Y RENOVACIONES

E.1 ¿Ha hecho mejoras o construida una nueva estructura en este lote desde comprarlo? ¿Cuáles? ¿Cuándo?

MEJORA	AÑO

E.2 ¿A quién acuden para pedir apoyo para lograr mejoras en el BARRIO?

1.	Autoridades municipales	
2.	Autoridades estatales o federales	
3.	Policía	
4.	Iglesia	
5.	Organizaciones (ONGs)	
6.	Un miembro de la comunidad	
7.	Nadie- nosotros mismos	
8.	Otro, especificar	
9.	No sabe	
10.	Junta de Vecinos	
11.	Otra organización de la comunidad	

E.3 ¿Y para hacer una renovación de la CASA/ PROPIEDAD Y SOLAR?

1.	Autoridades municipales	
2.	Autoridades estatales o federales	
3.	A un banco/ hipotecaria para pedir un préstamo	
4.	Familiares/ parientes que viven fuera	
5.	Organizaciones (ONGs)	
6.	Un miembros de la comunidad	
7.	Nadie- nosotros mismos	
8.	Otro, especificar	
9.	No sabe	
10.	Casa de empeño	
11.	Junta de Vecinos	
12.	Otra organización de la comunidad	

E.4 ¿Piensa que va a seguir viviendo en esta casa en el futuro cercano?...............................

E.5 ¿Quiere seguir viviendo en la casa?...................... ¿Por qué o por qué no?...

....

E.6 ¿Tiene algunos planes para mejoras?................... ¿Cuáles?...

 ....

E.7 ¿Si quisiera vender su casa, piensa que la podría vender? ¿Por cuánto?………………………………………………………

F. OTRA INFORMACIÓN DE LOS RESIDENTES

F.1 ¿Cuántas personas en su casa tienen empleo? …………………………………………

F.2 ¿Cuántas personas en su casa trabajan de las siguientes maneras?

TIPO	NUMERO	VOCACION
1. Trabajo formal, permanente (sueldo o salario fijo)		
2. Trabajo formal, por temporada		
3. Trabajo informal de chiripero		
4. Otro tipo de trabajo informal		
5. Quieren trabajar pero no tienen trabajo		

F.3 ¿Cuánta gana mensualmente?

	Individuo	Casa
1. Menos de 1,000		
2. 1,000 – 1,999		
3. 2,000-3,299		
4. 3,300- 4,699		
5. 4,700-6,599		
6. 6,600-11,399		
7. 11,400-16,999		
8. 17,000+		
9. No declarada		

F.4.a ¿Cuántas personas en esta casa han terminado la primaria?..

F.4.b ¿Cuántas personas en esta casa han terminado la secundaria?..

F.4.c ¿Cuántas personas en esta casa han terminado una escuela técnica?..

F.4.d ¿Cuántas personas en esta casa han terminado la universidad?...

F.5 ¿Hay alguien en esta casa que sufre de los siguientes tipos de problemas médicos?

1.	Enfermedades en las vías respiratorias (asma, etc.)
2.	Enfermedad del sistema digestivo (del estómago) (gastroenteritis, parásitos, etc.)
3.	Tumores o canceres
4.	Infecciones en la piel (raquiña, salpullido, etc.) Enfermedades que se puede prevenir con vacunación (varicela, tifoidea, difteria, tosferina, polio, tétano, etc.)
5.	Enfermedades transmitidas por mosquitos (dengue, malaria, etc.)
6.	Gripe, Resfriado
7.	Discapacidades físicas
8.	Otros

BIBLIOGRAPHY

Arku, Godwin and Richard Harris. "Housing as a Tool of Economic Development since 1929." *International Journal of Urban and Regional Research.* Vol. 29.4. December 2005, 895-915.

Baez, Gabriel. Personal interview, Santo Domingo Norte: Office of Planning and Projects, July 12, 2010.

Baharoglu, Deniz, and Josef Leitmann. "Coping Strategies for Infrastructure: How Turkey's Spontaneous Settlements Operate in the Absence of Formal Rules." Habitat International, Vol. 22, No. 2. 1998, 115-135.

Balaguer, Joaquin. "A Good House: An Economic Basis." Speech delivered before the Inter-American Savings & Loan Conference in the Dominican Republic at Santo Domingo, January 27, 1969.

Batista, Roman. Personal interview, Santo Domingo: Ciudad Alternativa, 2010.

Bossin, Meredith. "Women, Employment, and Empowerment in the Dominican Republic: The Case of Los Platanitos, Santo Domingo." Master's thesis. Austin: The University of Texas at Austin School of Architecture, 2009.

Chantada, Amparo. *Del proceso de urbanización a la planificación urbana de Santo Domingo.* Santo Domingo: Editora San Juan, 1998.

CIA. The World Factbook: Central American and Caribbean: Domincan Republic. January 1, 2010. https://www.cia.gov/library/publications/the-worldfactbook/geos/dr.html (accessed October 15, 2010).

Cobb, J. Michael, Boris Oxman, Milagros Nanita-Kennett, and George E Peterson. *Dominican Republic Urban Environmental Strategy.* The Urban Institute, (Prepared for USAID (Santo Domingo) and the Regional Housing and Urban Development Office for the Caribbean in Jamaica). Washington, DC, 1991.

Culbertson, Robert, Earl Jones, Roberto Corpeno. *Private Sector Evaluation: The Dominican Republic.* U.S. Agency for International Development. A.I.D. Evaluation Publications, 1983.

Durán, Ricardo Adrián Vergara. "El mejoramiento de vivienda y entorno en Bogotá 1994-1998: Programas, conceptos y estrategias." Investigación y Desarrollo. Vol. 16, No 1, 2008.

Echeverry, Diego, Elías Majana, and Fernando Acevedo. "Affordable Housing in Latin America: Improved Role of the Academic Sector in the Case of Colombia." *Journal of Construction Engineering and Management.* September 2007.

Ferguson, Bruce and Jesus Navarrete. "New approaches to progressive housing in Latin America: A key to habitat programs and policy." Inter-American Development Bank, & Habitat International, 2003.

Frías, Ángel Sosa. "Perfil Sobre Política de Vivienda en República Dominicana." *Urbanismo y algo más.* July 28, 2008. http://urbanismoyalgomas.blogspot.com/2008/07/perfil-sobre-politica-de-vivienda-en.html. (accessed April 2, 2010)

Gilbert, Alllan and Peter Ward. *Housing, the state and the poor: Policy and practices in three Latin American cities.* Cambridge University Press, Cambridge, 1985.

Gomez, Patricia. Personal interview, Santo Domingo: COPADEBA Office, July 20, 2010.

Haggerty, Richard A. Dominican Republic: A Country Study. Washington: Library of Congress, 1989.

Imparato, Ivo and Jeff Ruster. *Slum Upgrading and Participation: Lessons from Latin America*.
　　　　The World Bank, Washington, DC, 2003.

INVI. *Ejecutorias Periodo Agosto 2004- Agosto 2008*. Santo Domingo: Instituto Nacional de la
　　　　Vivienda, July 2008.

INVI. *Plan Estrategia Para El Sector de Vivienda: Periodo 2008-2012*. April 2009.

INVI. "Un enfoque integrado para solucionar los problemas habitacionales de las capas de
　　　　bajosingresos de la población/ An integrated approach to the housing problems of low-
　　　　income groups." Santo Domingo, Dominican Republic: Deutsche Gesellschaft für
　　　　Technische Zusammenarbeit (GTZ), Instituto Nacional de la Vivienda (INVI), 1984.

Muraya, Petronella W.K. "CBO Performance in the Shelter Sector: A Study of La Piña and
　　　　Lebron, Santo Domingo, Dominican Republic." *Urban Geography*, Vol. 27. Feb-March
　　　　2006,152-173.

Muraya, Petronella W.K. "Failed top-down policies in housing: The cases of Nairobi and Santo
　　　　Domingo." Cities. Vol. 23, No. 2, 2006, 121–128.

Nijman, Jan. "A Study of Space in Mumbai's Slums." Tijdschrift voor Economische en Sociale
　　　　Geografie. 2010, 4-17.

Pelling, Mark. "Assessing urban vulnerability and social adaptation to risk." IDPR, 2002: 59-76.

Pons, Frank Moya. *Situación de la Vivienda en la República Dominicana.* Santo Domingo,
　　　　Dominican Republic: FORUM, Amigos de Hogar, 1985.

Purdy, Sean and Nancy H. Kwak. "Introduction: New Perspectives on Public Housing Histories
　　　　in the Americas." *Journal of Urban History*. 2007.

Rauber, Isabel and Christina L'Homme. "Protests go with proposals." *UNESCO Sources*,
　　　　 Issue 112, May 1999.

Sjaastad, Espen, and Ben Cousins. "Formalisation of land rights in the South: An
　　　　overview." Land Use Policy. 2008, 1-9.

Sletto, Bjørn, ed. "El Rincón de los Olvidados: Métodos para el estudio de riesgo y
　　　　vulnerabilidad en asentamientos precarios." Austin: The University of Texas at Austin
　　　　School of Architecture, 2008.

Sletto, Bjørn, ed. "Hacia un Camino Limpio: Gestión comunitaria de desechos sólidos en
　　　　asentamientos precarios." Austin: The University of Texas at Austin School of
　　　　Architecture, 2010.

Soto, Hernando de. The Mystery of Capital: Why Capitalism Triumphs in the West and Fails
　　　　Everywhere Else. New York: Basic Books, 2000.

Steingart, Martha. *Urban Problems and Policies in Latin America: Truths and
　　　　Fallacies*. Nairobi: El Colegio de Mexico. United Nations Human Settlements Program
　　　　(UN-HABITAT), 2007.

Strange, Shawn. "The Integration of Emergency Economies in Developing Countries: The Case
　　　　of Los Platanitos, Santo Domingo Norte, Dominican Republic." Master's thesis. Austin:
　　　　The University of Texas at Austin School of Architecture, 2010.

Torres, Juan. Personal interview. Santo Domingo: Ayuntamiento Distrito Nacional, June 30,
　　　　2010.

Torres, Juan. "Historia del Barrio San José: Geografía, Ubicación, y Localización Geográfica."
　　　　Bachelor's Thesis. Santo Domingo: La Universidad Autonoma de Santo Domingo, 1992.

Oficina Nacional de Estadística. VII censo de población y vivienda. Santo Domingo, Dominican
　　　　Republic, 2002.

VITA

Christeen Alexandra Pusch was born in Dallas, Texas. She received a B.S. in Planning and Development from the University of Southern California in 2004. After graduating, she served in the Peace Corps in Honduras. Her two years living in the small town of Colomoncagua, Honduras sparked an interest in Latin America, which she has further explored in graduate school. During her time in graduate school, she conducted class studies in both Monterrey, Mexico and Santo Domingo, Dominican Republic. She also conducted housing-related surveys in Austin and in informal settlements outside San Marcos, Texas. She has served as a Research Assistant and a Teaching Assistant.