

**Projeto Costa Oeste Impact Assessment:
Analysis and Recommendations for
Associação dos Moradores do Litoral Oeste**

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Abstract

This paper examines an infrastructure road project in the city of Fortaleza, Brazil, within the local context of a small favela, Colonia. This road project, called Projeto Costa Oeste, has a dual purpose of development and increased transportation. This project is done for my client, a local NGO called Associacao dos Moradores do Litoral Oeste (AMLO) and seeks to provide recommendations so that the NGO can work to maximize the benefits and minimize the costs. This paper draws on fieldwork and a wide body of literature in developmental economics, political participation, transportation, road impacts and environmental impact. After outlining these possible and perceived impacts, it assesses Costa Oeste's viability, desirability and effectiveness. The primary finding is that neighborhood residents are unable to realize the attendant rise in property values associated with Costa Oeste due to their insecure property rights regime. Therefore, the two primary recommendations to my client are, first, a house registration drive in which residents take advantage of a Brazilian legal mechanism for registering a house that has been built in a favela such as Colônia. The second recommendation is for AMLO to consolidate the numerous associations working for social change in the neighborhood, thereby focusing their efforts and amplifying their resources.

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Chapter I: Introduction

This study examines Projeto Costa Oeste, a major road project in the city of Fortaleza, Brazil, to make an assessment of the project's current and future impacts within one of the communities through which it passes. It applies an interdisciplinary lens to make an assessment of this road project's viability, environmental impacts and effectiveness. This paper will conclude by making recommendations to the project's client, a local NGO called Associacao dos Moradores do Litoral Oeste (AMLO)¹, for future action regarding this infrastructure project and how to maximize its benefits for the locality and minimize its costs.

The Setting

The Northeast of Brazil has chronically lagged far behind other, more successful regions of the country. (Scheper-Hughes, Gondim, Gomes) One of the principal cities of the Northeast is Fortaleza, in the state of Ceara. (See map, Figure 1). This metropolis has grown explosively. For example, from 1975 to 2015, the UN estimates that Fortaleza will triple its population from 1.27 million inhabitants to 3.78 million.² The rise in population has been both a product of urban migration by impoverished people in search of opportunities and an increased connection to the outside world and its tourist and trade dollars. One aspect of dealing with rising populations is upgrading transportation networks. An example of this policy in Fortaleza is a road project, called Projeto Costa Oeste, that has been proposed by the state government and initiated in fits and starts, with some support from the city government, as well. This road will theoretically open up northern beaches for tourism and development, which is significant because tourism is a

¹ Roughly translates as Association of the Residents of the West Coast

² United Nations Human Settlements Programme, <http://www.unhabitat.org/unchs/english/stats/table10.htm>

large and growing segment of the local economy. The road, Projeto Costa Oeste, is slated to run along the beach for about 5 kilometers, and then cuts back to an existing bridge. This places the road directly through the lower class community of Colônia (See map, Figure 2) Colônia is one of the *barrios*³ within the *favela*⁴ of Pirambu, which some residents claim is the second largest favela in the country. (Ceissa, 7/19)

For the road's entire project cycle, Colônia has been effectively removed from the planning process. Many residents of Colônia have misgivings about the positive benefits that will be gained from the road and are apprehensive about negative impacts. The residents fear the loss of an estimated 500 houses and the environmental changes which may be brought about by the project. (Marcia, 7/18 and Junior, 7/19) After presenting an analysis of the policy process, this study will present possible impacts as documented in cross-disciplinary literature, followed by the perceived impacts as related to me by residents and community leaders. The study will conclude with recommendations and an analysis of those recommendations for AMLO. The primary concerns of the assessment - equity, representation, and environmental degradation- will inform my recommendations for AMLO as it reacts to the existing and future situation within both Colônia and Fortaleza.

³ The colloquial word used for a neighborhood within a city (wikipedia.com)

⁴ This is the Portuguese word used for slum/squatter communities in Brazilian cities (wikipedia.com)

Figure 1: Map of Brazil and Ceara



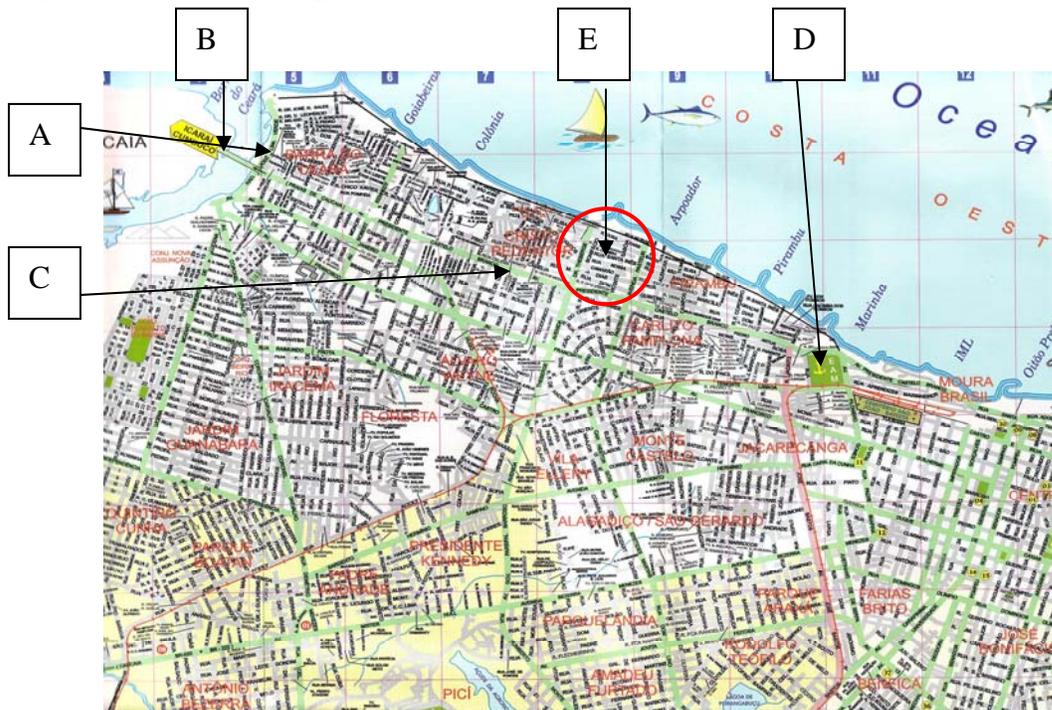
www.universes-in-universe.de

Figure 1- Map of Brazil,
Fortaleza (highlighted) located in the northeast.



Figure 2- Map of Ceara,
Fortaleza located along coast.

Figure 2: Fortaleza Map⁵



Geodeais Mapas

⁵ A) Start of Costa Oeste in North, B) Bridge, C) Leste Oeste Avenue, D) Proposed terminus of Costa Oeste, E) Colônia

Projeto Costa Oeste

Projeto Costa Oeste, partially completed, is slated to run directly through the neighborhood of Colônia within the larger community of Pirambu (see map in appendix I as well as Pictures 1 and 2 below). The road runs directly next to the beach, starting with two divided lanes for both northern and southern traffic at the north end of the 5.36 km project.

Picture 1: Projeto Costa Oeste: the divided boulevard, with the Colonia community on the right and the Fortaleza skyline in the left background; a dramatic contrast in development outcomes.



Picture 2: A billboard explaining the project, 2000 homes built, 5.36 kilometers long, and a tool of urbanization. Of note is the term *paisagistica*, which refers to the scenic nature of the road



At this northern end of the road, close to the Barra do Ceara bridge, the road is a wide four lane divided boulevard, with expansive sidewalks and sweeping vistas of the city skyline to the south. The size of the road is comparable to the largest road in the neighborhood, called Avendia Leste Oeste. Costa Oeste is meant to improve the congestion of Av. Leste Oeste, but it is less direct to the center of town and the beaches to the north than the existing road, since it follows the topography of the land. The road at this stage is similar to a major boulevard in the United States, a street that serves as an artery in its community. This road is much closer in dimensions and traffic to old U.S. route 1 along the eastern seaboard than the existing superhighway Route 95.

The road sweeps toward the city to the south, and through Colônia, it shrinks, with the divider between the two directions of travel disappearing. At this stage it becomes a more standard four-lane road with a significantly decreased footprint on the ground. It still runs directly next to the beach. Then, the road just stops, with an estimated 40 %, of the road still remaining to be completed. Before the road stops, in the middle of the completed section of the road, a house remains, see Picture 3 below. Residents offered a number of possibilities as to why the road has failed to be completed, including a loss or lack of funding, political squabbles between the city and state governments, or a direction of resources elsewhere. These are all plausible, but I was never able to get a precise answer.

Picture 3: This is the house of the social activist that the road currently avoids; the engineers have built the road around her house. It is the most obvious example of local resistance to Costa Oeste



There is currently extremely limited traffic on the road due to its failure to be completed and connected to the existing transportation grid. It is the only open space in the adjacent neighborhoods, and since there is little traffic at this stage the road is used exclusively for recreation, primarily by teenagers. Environmentally, as Costa Oeste runs towards the city in the south, it passes over a few small rivers, and then narrows to a two lane, non-divided road. It then terminates in the middle of the proposed footprint, so bulldozing and road construction must be undertaken to finish the project. This termination point is south of Colônia, at the start of the Pirambu favela. There are not viable or operational entry points, thus far, from the existing transportation network to Costa Oeste; these will be added near the conclusion of the project at some undetermined point in the future.

From a financing perspective, the majority of the funding for the project comes from Caixa Economica Federal, owned by the federal bank. This bank is the third biggest in the country, with a market cap of approximately \$ 38 billion dollars in 2003. (Wetzel) Caixa states on its website that it “is the main agent for the Federal government’s public policies and is present in the life of millions of Brazilians. This is because this 100% public institution serves not only its bank clients, but the whole Brazilian population. Through all these functions, CAIXA has (transferred) over R\$ 115 billion to the economy in 2005, an amount that represents around 6% of the GDP. By acting in the sectors of housing, basic sanitation, infrastructure and services, CAIXA plays a primordial role in the promotion of urban development and social justice in the

country, contributing to improve the population's quality of life, particularly the lower income ones."⁶

Projeto Costa Oeste has been met with decidedly mixed reactions in the community of Colônia. The most extreme example of protest and defiance is the house in the middle of a completed section of the road, where a social activist continues to live with her family. On the other end of the spectrum, business leaders and other residents are hoping for future benefits they may gain from the project, such as increased property values and the traffic flows which bring more potential customers. This community has had very little involvement in the planning process, which is a reflection of the general inability of the community to become active in state actions. Colônia's community leaders suspect that the project will result in negative economic, environmental, and social outcomes for the area. (Edson, 7/17, Jairo 7/18, and Roundtable, 7/19). Within the neighborhood, the local NGO called Associacao dos Moradores do Litoral Oeste (AMLO) has formed to bring together members of the community to make sound and logical decisions regarding the community's future. AMLO was my hosting agency for the fieldwork, which forms the backbone of this project. The Whitney Chamberlin Internship Fund generously supported this fieldwork. AMLO serves as my client for this project, such that the analysis of recommendations are crafted and considered within this group's context within the community.

The Colônia Community

Colônia, the location of the research presented in this work, has several thousand residents and began as an occupation of unused land and has slowly gained partial legitimatization in an arduous process in which nothing has been given to the

⁶ <http://www1.caixa.gov.br/idiomas/ingles/index.asp>

neighborhood and is far from finished. As Gondim writes of the larger Pirambu neighborhood, “in 1962 the inhabitants of Pirambu shantytown got together, with the help of a Catholic priest, to obtain legal ownership of the occupied area.”(Gondim, 65) 1962 was the beginning of a fight that is ongoing, with Costa Oeste representing an excellent example of that struggle. Still, people in the neighborhood, often, do not legally own their homes, since there is a complicated process to gain title and legal requirements that prohibit transfer of ownership.

Traditionally, the Colônia community has had very little involvement in the planning process for the proposed road, and its leaders suspect that the project will result in negative economic, environmental, and social outcomes for the area. (Edson, 7/17, Jairo 7/18, and Roundtable, 7/19) This noninvolvement is the norm for the vast majority of disadvantaged and poor communities throughout the world. As Mitlin notes in his article, *Civil Society and Urban Poverty*, in low-income areas there is low participation in organizations that are instrumental in asserting power. (Mitlin, 2001, 156) The community feels that the project will erode their strong internal integrity and identity, and have a detrimental impact on the local quality of life. A few residents work in the center of the city doing low-wage service jobs and many of the residents work in the informal economy. The community directly abuts a beach that is also called Colônia. This beach is approximately ten meters wide and is widely used by residents on the weekend for recreation, with soccer games and swimmers dominating, see Picture 4 below. In the past, residents fished in the waters off the beach, however the fish catch has decreased dramatically in the most recent years and this economic activity has reduced substantially.(Edson, 7,17) While the money gained through fishing was minimal in

absolute terms, this activity was often the only economic production many of the fisherman were able to generate.

Picture 4: Community members using the beach resources.



Chapter II: Objectives and Methods

Objectives

The objectives of this project are as follows:

- 1) Apply an interdisciplinary lens of analysis to Projeto Costa Oeste, utilizing concepts from economics, environmental assessment, political science, sociology, geography, law, and public policy.
- 2) Analyze costs and benefits of Projeto Costa Oeste and their distribution within Colônia, with emphasis on environmental and economic calculations.
- 3) Educate the policy community at Duke and beyond about the specific situation in Colônia and Fortaleza regarding Costa Oeste, as well as favelas and development within Brazil, more generally.
- 4) Refine and develop the economic, communication and policy analysis tools learned during my graduate study at Duke, putting those skills to the test in a complicated and difficult situation.
- 5) Provide sound analysis and feasible recommendations to AMLO, to assist that organization in addressing the Costa Oeste project and ultimately aid the development of the community.
- 6) Enjoy the experience of turning primary, ethnographic research into an outstanding report.

Methods

The primary research phase of the project required extensive ethnographic interviews. The formal interviews were recorded via an iPod, while the extensive informal interviews with community members contributed to my understanding of the situation within Colônia. For conducting the interviews, I worked collaboratively with

Jeff Garmany, a PhD student in cultural geography at the University of Arizona, but our interpretation and use of our output is independent. Working closely with AMLO, we developed an effective survey and interview approach focusing on stakeholders: including community residents, community leaders, officials, and academics that have worked in the area. These interviews were not conducted randomly, due to our desire to talk to the most influential leaders of the area as defined by the leaders of AMLO, sources deemed reliable within the community and interview subjects during my research. These interviews have been transcribed, and are also digitized for further use. The direction and focus of questioning was one of the following:

1. Determining the economic impact, cost and benefits, of Projeto Costa Oeste within the Colonia neighborhood. This topic focused on the proposal to compensate some of the residents, those that qualify, for their houses at below market value. The complicated property rights exasperate the economic situation of the neighborhood. Since all of the residents are part of an illegal occupation, and do not in fact own the land underneath their houses, their ability to recoup the increases in property value is highly in doubt. During the interviews, I heard several conflicting representations of the property rights of residents and this information will be discussed in detail in the body of the paper. However, some residents of Colônia were excited about the potential gains from the road. Specifically, local business owners hope to take advantage of increased flow of customers through the area.

2. Estimating the road's environmental impact: during construction and upon completion. These questions focused on erosion, human waste, changes in the beach composition, and fish catch.
3. Assessing the expected cultural impact of the project. There have been dramatic changes in the neighborhood composition, with dislocated residents from the Project entering into previously established communities and causing significant destabilization. There are also large questions of leadership and the fragmentation of efforts for development generally and reactions to Costa Oeste more specifically.

In addition to the above mentioned primary work done over the summer, I consulted several institutions' libraries in Fortaleza to examine research projects conducted in the larger favela of Pirambu, newspaper articles about the project extending back in to the 90's and historical monographs of the neighborhood's history.

The preceding section outlines the primary work done over summer 2006. I have also be widely incorporating, considering, and utilizing secondary research. This secondary research has assisted in finding common threads from the results of the interviews; and has place the interviews within larger regional and worldwide trends and/or experiences. Disciplines that I have consulted in this research effort include: development economics, state theory, transportation, environmental impact assessments, and urbanization. I also looked at the body of literature regarding impact evaluations of projects, to ensure that I followed accepted practices for such an endeavor. The document that has functioned as my model for my own impact evaluation is the World Bank Technical Paper No. 376, *Roads and the Environment, A Handbook*. The last major

area of inquiry has been looking for best practices in wholesale community development, political participation, and legal mechanisms for gaining property rights within Brazil.

Chapter III: Development History Northeast Brazil

Within the larger national context, the northeast of Brazil has been underdeveloped and impoverished for virtually the entire history of the country. It is a well-known and accepted fact that Brazil's south is rich and the north poor. (Scheper-Hughes, 31) Scheper-Hughes writes, "The social, political, agrarian and health problems of the Northeast extend back to the early days of colonization." (Scheper-Hughes, 32) Over the last forty years the per capita GDP of the northeast has been about forty-six percent of the national average. (Gomes, 9) In addition to poor performance on financial metrics, the region has suffered from low social performance as well, with the lowest percentages of the country on metrics such as: literacy, formal employment, school, and inequality of income distribution. (Gomes, 9) In many ways this situation is a reflection of past inequities and a disjointed national development strategy. The South has long enjoyed a privileged position within national politics, a cycle of reality that gets perpetuated over time. Through this cycle, the higher degree of wealth and education attracts more industry and commerce to the cities in the south, such as Porto Alegre, Rio de Janeiro, and Sao Paulo, with bigger markets. There has been little in the way of incentives to locate business in the Northeast. The Northeast has a less educated workforce and lower purchasing power.

Within the Northeast, the state of Ceara has been consistent with the larger regional historical trends. This state of about 6 million people has lagged far behind the national averages on basically all monetary and social performance metrics. (Gomes) Within the state there is a stark dichotomy between the capital, Fortaleza, and the rural countryside. Over half of the state's population resides in the city, with another forty

percent working in low revenue agriculture in the country. (Finan, 98) This dichotomy leads to a concentration of power in the capital, with two rival political factions dominating the life of the entire state. These two factions control the state and city government apparatuses respectively, and have held sway within the state for over twenty years. (Gondim, 69) The overall trend of these factions, in the last 10-20 years has been a reduction of the patronage system and an adoption of the modern administrative system, pushing balanced budgets and efficiency, with both administrations pushing similar policies even though they are in opposition. (Gondim, 70) With respect to Costa Oeste, both administrations are in support of the road, most likely for reasons associated with both the infrastructure improvement and economic growth.

Fortaleza

The city of Fortaleza has increased in size dramatically over the last several decades. As a point of reference around the turn of the century, the city had only 79,000 residents, while Rio de Janeiro boasted a population of over a million. (Gondim, 63) The first major growth spurt in the city's history occurred as a result of a massive drought in the 1870's that debilitated the surrounding countryside and brought over a hundred thousand refugees into the city. (Gondim, 63) Significant growth occurred in the city from the 30's onward; over the next three decades, the population would reach half a million people. (Gondim, 64) Much of the population boom occurred as a result of migration away from the countryside. People left the subsistence agriculture that had dominated rural life for the allure, often false, of formal jobs in the city. This movement mirrored the initial, drought fueled, impetus for the first population spike in the city. (Gondim, 65) Also, the movement reflected a prevailing national trend of movement away from rural

locations and into cities as Brazil morphed into one of the countries with the highest urban population ratio. This change put extreme pressure on the government to provide social services to the burgeoning urban population, as it struggled to come up solutions to social and economic problems. (Olivera) Often, the government of Fortaleza struggled to meet the needs of citizens, for both social services and infrastructure. For example, as late as 1960, only twelve percent of the city's buildings were connected to the public sewer system. (Gondim, 65)

As the city continued to swell from the 1960's through today there has been a variety of issues and pressures driving and defining that growth. Migration from the rural regions of the state and region continues to spur growth, with many residents living in vast, dense and poor favelas. These favelas are by definition squatter settlements, with residents lacking legal holding of their 'property'. The state and city have embarked on a number of projects aimed at building the city into a modern metropolis, with the theme of modernity always paramount in any project. (Gondim) The city's ad hoc and uncontrolled growth made much of the city into poor shantytowns beyond the scope of traditional public investment or infrastructure. In many cases the negative consequences of such growth have exasperated exacerbated the city's inequalities. As in virtually every city in the region, and Latin America as a whole, there is a wide gulf between rich and poor. In Fortaleza, this dichotomy generally divides the prosperous western section and that of the poor east. The rich are concentrated in the western part of the city, enjoy control over practically all significant avenues of the policy process. This concentration of power has led to decisions consistent with the elites' desire to maintain and consolidate power. State and city investment has been focused on those areas that are best connected

to the ruling elite, but there has been national government projects aimed at transforming the over all urban landscape. Examples of such projects include: the rezoning of the rich areas for high-rise apartment buildings and the creation of Avendia Beira Mar, which is a major road that runs along the beach in the southeastern section of the city. See Picture 5 below. These efforts date back over 40 years, and include the financing of projects by the Banco Nacional de Habitacao in the 1960's of low and medium rent housing and infrastructure projects such as expressways and other roads that have transformed shantytowns into planned communities on the outskirts of the city. (Gondim, 66) So, Colônia and Pirambu are the poorest of the poor, living right on the beach to the north of the city center, and the richest neighborhoods are also on the beach, but in the center and to the south.

Picture 5: This picture shows the part of Fortaleza called Beria Mar, which underwent a similar situation to Colônia in the 60's and is now one of the most fashionable and expensive areas of the city.



Colônia

People began moving into the area now called Colônia and Pirambu around the turn of the century, however the initial phase of occupation and residence was of extremely small scale. (Costa, 14) Throughout its entire existence, the area has been an informal occupation, in which people do not own the land but build their houses on others' land and live without titles. These urban environments are quite common in the country, with millions of Brazilians living in favelas. (Leeds) Around 1958-60 the migration to the area increased dramatically, partly as the result of the involvement of a prominent local priest of the Catholic Church, Padre Helio. (Costa, 20) This included the first association that worked towards official State recognition of the area. The primary technique of social resistance used in this phase of the neighborhood's history was to organize a march. A large, public march took place in 1962 and was aimed towards getting official recognition of the barrio. The march had between 20,000 and 40,000 people and resulted in Declaration 1.058 on May 25, 1962, which recognized the area as part of the city. (Costa, 23) This was critical for the residents to begin to become part of the social service fabric of the city.

The best example of this social integration was the construction of Avenida Presidente Castelo Branco, which is now called Leste Oeste (East-West) by all residents. This street was completed on October 21st, 1973 and connected the neighborhood to the city. (Costa, 29) Once the road was completed, the population in absolute terms and growth rates increased dramatically. As it has grown in size, different areas have come to be recognized, with Colônia an example of this 'barrio within a barrio'. The

classification is usually made with areas that are occupied being grouped together. Colônia was settled during the 1980's and came to be in an area that was an abandoned factory. (Ceissa, 7/19) Now, it is one of an estimated 313 favelas in Fortaleza. (Costa, 48) Pirambu is believed to house as many as half a million people, but no one is sure. (Angela, 8/2) Many of the challenges faced with getting legitimacy for the original settlers/occupiers are still faced today. The area is represented in the local city government by a vereador, the equivalent of a city councilman, , however most of the residents I interviewed were unable to identify what this representative had accomplished with respect to Costa Oeste. (Ceissa 7/19, Marica, 7/18) I was unable to secure an interview with the vereador who represents Colonia.

Chapter IV: Road Projects as a Vehicle for Development

In areas such as the Northeast of Brazil, which has been struggling to development for an extended period of time, road projects often are proposed as an important tool for improving lives. As Violich writes in his book *Urban Planning for Latin America*, roads are “probably the nearest and dearest strategy in the hearts of traditional Latino American planners.” (Violich, 392) These projects offer many incentives to the decisions makers. Since roads are costly to build there are ample patronage opportunities available to officials, and in many cases this graft occurs legally or quasi-legally through the planning process. The project increases expenditures, likely augmenting the overall revenue controlled by government officials charged with public works. Furthermore, the long time horizon required to complete projects make it difficult to keep transparent records of the investment into projects. The uncertain outcome, over a long time horizon, allows officials to display their power and ability to help without having to deliver quantifiable results.

There is a long history of large development projects in the state of Ceara, especially dams and roads. (Finan, 101) This is in line with the Brazilian history, in which large scale ventures have been pushed in the interest of appearing modern and advanced, both to the world at large and local populations. One excellent example of this ethos driving a project forward, is the relocation of the capital to the completely planned city of Brasilia. One popular method of development has been the construction of road corridors that connect major areas of population concentration. (Pereia, 2) In effect, roads have often spearheaded growth and movement in the country.

Within the municipality of Fortaleza, there is a case study of a road project, Avenida Beira Mar, bringing about wholesale change in its surrounding community and ecosystem. (Gondim, 67) This road, which is similar in size to Costa Oeste and is part of the city transportation network, was constructed in the 1960's and runs along the beachfront slightly to the south and east of the city center. This road led to dramatic changes in the surrounding area, evolving it from a depressed, nondescript neighborhood to one of the centers of commerce and wealth of the city. There has been substantial growth along the road. As a resident of the city in 2000, I observed that this is one of the most fashionable and wealthy areas of the city. The road is an excellent example of how cities envision development, build a road and the commerce and wealth will come.

However, this picture leaves out the churning of ownership within the area. For the most part, residents that lived and worked near Beira Mar prior to the construction of the road have not been able to fully take advantage of the project, having been forced out due to increased rents and taxes. (Gondim, 67) Also, behind the glossy façade of wealthy, there are large problems, including prostitution and exclusion.

Roads and other large infrastructure projects have long been one of the favorite development tools of institutions such as the World Bank. Roads are necessary to create vibrant and active markets throughout a country. They provide a benefit by opening up markets to lower priced goods produced through high volume manufacturing or importation. In addition to creating larger markets of consumers, they also increase access to outside markets for local producers, thereby increasing the market to which they can sell their wares. This double bonus increase the size of the globalized market, theoretically making all global citizens better off with a wider array of choices and lower

prices. In addition to the market economic gains from larger road projects, there also exists a significant socio-political advantage for the state. Roads increase the reach of state power to outlying areas. This extension of the state can in fact be seen in Costa Oeste project. With roads in place, it is much easier for the government to control areas.

Overall, roads have been extremely instrumental in the growth of the global market for the reasons outlined above. They are attractive to policy makers because they offer tangible proof of the government's impact on peoples' lives and an opportunity to spend money in a very public manner. Development requires increasing the purchasing power of citizens, with one of the surest method for moving towards globalization coming in the form of roads. Brazil has aggressively used infrastructure projects to build its country, with mixed success. The question remains whether these projects are the best use of the public funds.

Projeto Costa Oeste

Within Fortaleza the government has proposed a number of road projects as part of its development agenda. These projects have originated from both the city government and the state of Ceara, which reflects the rivalry that exists between the two government authorities. One project that hopes to replicate the success of the Beria Mar project from the 1960s is called Projeto Costa Oeste, which was originally championed by the state development agency. Costa Oeste has a number of objectives, including: alleviating traffic, facilitating tourism by increasing access to beaches north of the city, increasing the desirability—and market value—of coastal property, and provision of jobs. As part of this project, over 2000 families face the possibility of forced relocation. (Noticia: Fortalnet)

This project comes as Fortaleza is confronting the same development quandary of all major cities and municipalities in Brazil: how to manage a fast growing population with extremely limited resources. (Hewitt, 233) In a city that is faced with explosive growth, there is increased congestion, as people try to adapt their lives to the new massive city. However, with previous development occurring piece-meal, it becomes extremely difficult to plan and execute citywide initiatives. One city that has been successful in this type of planning is Curitiba, which is famous within the country for its cohesive planning. An analysis of the urban transportation system in Curitiba found that before this city wide transportation project, areas of the city with low economic potential, and consequently the areas with the highest need, were poorly served (Rabinovitch and Hoehn, 9) Over time, this inequality has been reversed, by creating high volume arteries that allow for convenient and fast transport, with low density roads provide safe living environments. As Rabinovitch and Hoehn note, “it is possible to significantly improve (transportation) systems by increments that are relatively low cost.” (10) Fortaleza would be well advised to follow the Curitiba model, but this is certainly not easy.

What environmental impacts may be brought by the project? In his 1995 article, Mueller writes about the environmental problems that accompany development. In many instances, there are equity concerns regarding location and approaches to development. In the article, the author examines the Sao Paulo experience, in which the city has exploded into one of the largest cities in the world. There have been some encouraging environmental signs in the city’s development, such as regulation and market incentives. (Mueller, 69) However, there tends to be a stark dichotomy between two types of environmental degradation that has occurred in Brazilian cities. The first type results

from consumption of resources by high-income populations, with this consumption leading to increased pressures on waste disposal systems. The second type of degradation occurs from pollution due to an inadequacy of social services to low-income groups. (Mueller, 71) The poor residents of places like Colônia live in concentrated housing, which is substandard and sited on marginal and/or undesirable lands. For example, Colônia is built on sand dunes and the houses are in a continual state of erosion and shifting ground movement. (Texiera, 7/18) Residents often live on the periphery of social services, and since they contribute very little to the public coffers it is hard for politicians to justify providing the services needed to enhance the quality of life and decrease harmful releases of waste and pollution.

Chapter V: Policy Process and Capacity Building

The policy process within Latin America has generally been biased away from providing social services to the poor. They have received less money over the long term and, as a result, have had trouble developing their full developmental potential. (Fiori, Riley and Ramirez, 48) This restriction on freedom and choice is a fundamental contradiction to democracy, since it limits options and choices of large sections of society. In particular, the urban poor are sicker and have less access to all basic services. (Mitlin, 204) There are numerous reasons for institutions to increase access and allow a redistribution of responsibilities and representation, but until there is equal access to the levers of power, it is difficult to be optimistic for the opportunities of many poor within Latin America. (Violich, 395) There is some anecdotal evidence and models for which community activists can look, for methods of getting access to those levers. These stories are generally marginalized communities rising up to take an active and appropriate voice in the choices of their future. The policy process can be a very mysterious beast, as Tandler writes in her innovative book on public projects within Ceara, *Good Government in the Tropics*, sometimes “even when parts of a program worked quite well, managers or workers did not necessarily understand what they had done right.” (Tandler, 164) Clearly the process can be made to include broader participation, but this action will not come by chance or fate. The incentives driving action of the elites create a desire to consolidate power and keep as much control over the affairs of the state, so as to remain within the elite and enjoy the rewards of that privileged position.

Within Fortaleza, there is a complicated policy process and political climate. As mentioned earlier, there is a sharp divide between the state and city governments,

creating a policy arena that is extremely contested. Both factions came to power under the cloud of public dissatisfaction with their predecessors. (Gondim, 69) Between the two wings of power, there have been varying levels of engagement with the general public. However, this does not imply that there has been anything approximating a true and functional democracy. When I was living in the city in the fall of 2000, I heard stories of the purchasing of votes for paltry amounts, bribery on both the petty and grand scale, rent seeking on the part of officials, and an inability of poor people to have their concerns heard on both the state and municipal level. Despite these problems, the city government has made a better-faith effort with regards to participation. (Gondim, 70) The ruling party, has in fact, made balanced budgets, accountability and efficiency important budgetary priorities, all of which are key capacity building measures, as outlined by Geddes. All of these efforts have been part of the city government's drive towards modernity. When framing the issue as progression into the global world, leaving behind the patronage and corrupt policy process, became slightly easier. These efforts were thought to be integral to attract both industry and tourists to the city, which is interesting because these two sets of stakeholders traditionally have dramatically different desires and preferences. (Gondim, 70) It is also interesting to note that an expert and professor at the federal university in Fortaleza wrote on the history of the Fortaleza, "interventions in urban space by the state government can be interpreted as an attempt to achieve political hegemony in the city." (Gondim, 72)

Organization is a strategy often implemented for inserting communities such as Colônia into the public process. As Mitlin notes in 2000 "in general low income residents are neither consulted about nor included in the plans to improve the city, and the

areas they live in are often ignored.” (Mitlin, 2000, 210) In a second article in 2001 the same author cites a compelling reason for conflict. Conflict is caused by a fundamental lack of trust among and within communities. (Mitlin, 2001, 156) In Colônia, this lack of trust is a reality. There are so many community groups, all of which are investing energy contesting each other that it has been difficult to achieve any success. (Angela, 8/2) However, it is difficult to draw definitive casual direction between poor participation rates and results. Which comes first is a question for theory, but in practice it means that poor communities face even more hurdles in policy choices. For most of the people within Colônia, the community association groups offer important resources, since they allow individuals to combine their minimal resources. These resources are important for the several thousand residents of the neighborhood because of the economic barriers faced in securing regular and sufficient income. Many residents live entirely in the informal economy, with a minority of residents holding formalized jobs in the center of the city doing low-wage service jobs. If there were incentives that encouraged cooperation, they would be much more valuable.

There are classic collective action problems in Colônia. The marginal cost of time and energy for virtually all of the residents is too great, with returns too distant and uncertain; to make collective action worthwhile. Even when groups organize, they must find a way to inject their agenda into the policy process. It is also important to note that grassroots participation may not always be a net benefit for people; the nature of the relationship between members and leaders may create a power dynamic that exasperates the unequal distribution of resources. (Mitlin, 2001, 157) Overall, Colônia and AMLO face a dramatic uphill battle for voicing their concerns of the Costa Oeste project. There

has been some limited participation in the process, with the government and local newspapers publishing a few press releases and reports regarding the project that makes one somewhat skeptical of transparency efforts. However, there has not been any real and meaningful dialogue between the community and the planners and officials that are championing this road. There is a pervasive sense of discrimination, that any community concern is too insignificant to change the outcome and, in fact, community members feel personalized and generalized discrimination as well. (Ceissa, 7/19) There are possible public protest strategies, which have been successful in some cases in Latin America. However, the strategy does not guarantee any success and the community's, and AMLO, time may be better-spent utilizing legal or policy avenues.

Chapter VI: Possible Impacts of Costa Oeste

This section explores some possible impacts of Costa Oeste, as proposed by the relevant literature. The impacts are broken into transportation, economic, environmental, and social impacts. These impacts are both positive and negative, and trying to discern the projected net benefits to an area often proves quite difficult. When making these calculations, it is important to distinguish and articulate impacts that are first order, that is direct changes that will result from the project, and those that are secondary, which will occur but may not be tied entirely to the development project. Colônia, as the home for a population that has been marginalized by its government and which very little is known, these complexities are staggering. For example, there is not even a hard and fast number of residents in the area and most people operate in the informal economy and/or do not pay taxes. (Ceissa, 7/19) Decentralization has been sporadically successful in many areas of the regional development, but there may be a vacuum of leadership at the local level. There has not been any substantive effort to feel out the likely outcome or success of decentralization.

Transportation

Litman writes in his transportation policy position paper regarding transportation impacts, that “planning decisions often involve trade-offs between *mobility* (physical movement of people and goods) and *accessibility* (the ability to reach desired goods and activities).” (Litman, 9) There are obviously going to be some dramatic impacts on the transportation network in the area due to a large road such as Costa Oeste. It should be noted that virtually no one in the entire neighborhood owns a car. By far, the most common form of personal transportation is motorcycles. People walk most places and

leaving the larger Pirambu community is not something that was very common among the people I observed on a daily basis. Also, the city bus system services Av. Leste Oeste, with up to ten different bus lines and a vast number of informal smaller bus/vans operating in the area. It generally takes about 20 minutes to get into the center of Fortaleza, and the more prosperous and developed areas can take up to an hour to reach on the transit system. Leste Oeste is more than fifteen minutes of walking from the beachfront and Costa Oeste.

The literature has several relevant points regarding the possible impacts of new or widened roads on transportation. One possible benefit is “improved access and transport services provided by an improved road.” (Tsunokawa, and Hoban, 116) This intuitive point probably applies to a completed Costa Oeste, since public bus lines will certainly service the area upon completion of the road. In fact, public officials made this very point in a meeting on July 26 2006. This increased access could have positive benefits for residents wishing to do more business in other parts of the city, and those that seek jobs or educational opportunities elsewhere. Also, roads are able to improve access to resources desirable to tourism, such as the pretty beaches. Litman (9) writes, “Planning decisions often involve trade-offs between *mobility* (physical movement of people and goods) and *accessibility* (the ability to reach desired goods and activities).”

On the possible cost side of the equation, roads may restrict informal transport networks that have reacted to the previous deficiencies in the network. (Tsunokawa, and Hoban, 116) These informal networks may be more responsive to the needs of a disenfranchised community such as Colonia. However, it may be difficult to count on unreliable networks, especially in a location that has such high violence. Also, residents

may not use motorized transportation. One study done by two Brazil researchers found that “in Brazil, lower-income segments of the population make 60% of their commutes on foot, curtailing their range of access and mobility, which in itself is another type of exclusion.” (Da Silva-Portugal and Flórez, 4) Furthermore, the reordering of the local transportation network can result in “local movements (that) are substantially longer, directly affecting businesses, pedestrians, and users of non-motorized transport. The burden of accommodating the changes is generally greater for the poor.” (Tsunokawa, and Hoban, 114) Da Silva-Portugal and Flórez found that favelas generally have “limited connections to transportation system.” (2) This inequity could very well describe the reality of Colônia and Costa Oeste.

Economic

Benefits of infrastructure development can include increased economic prospects for local residents. There will likely be decreased transportation times between the local neighborhoods and the rest of the city, increasing the job prospects for residents. Roads are all about access and this one will increase access to the center of the Fortaleza, where the vast majority of the productive economic activity takes place. (Fabina, 7/20) However, because not many residents currently work in the center of the city, this benefit will not be substantial.

There is a precedent, within the city of a road opening up an area, for dramatic economic expansion. This precedent, Beira Mar Avenue, opened up previously industrial beaches to the public. (Gondim, 67) The Costa Oeste project will open up beaches to the north of the city to a much greater volume of people, and it is likely that some will stop in the Colônia area for supplies and its own beaches, certainly a much great traffic volume

of perspective clients than currently traveling through the area. (Texiera, 7/18) The Colônia area is very close to the center of the city, as the crow flies, but the congested city streets make it much farther away in transportation time and cost. For example, a taxi from the center of Fortaleza to Colônia may take as little as 5-7 minutes during low volume traffic times, but may take 3 times that during peak flows.

Another possibility is that land prices may increase as a result of the project. Part of this possible increase will likely be attributed to improved access, and a substantial portion of the increase will be due to the amenity values of a beachside drive. With increased access, this land becomes more valuable for further expansion of the city center. If the road does realize the market benefits outlined above to residents, their location and land would become more valuable. However, realizing the gains of such appreciation in value requires property rights that are consistent, enforceable and transferable.

There are both significant economic benefits and potential costs that may be realized from projects such as Costa Oeste. Possible costs, imposed on Colônia, include the loss of land to the public project. In the case of Costa Oeste, the road is being built over primarily privately owned land, with the title being held by residents if they have been granted title through the occupation mechanisms, or the original, absentee title holders, who have long ceased utilizing the land in any economic manner. The Brazilian government has the right to use eminent domain to appropriate that land for projects that are deemed necessary for development and urban planning. For the most part residents who have been relocated have been moved to projects within the area, with 8 total settlements. (Jairo, 7/18) However, these projects are owned by the government and

residents do not enjoy living in these settlements, there is no possibility of transferring ownership in the market, and seek to leave as soon as possible. (Jairo, 7/18) In early 2006, it was reported that 500 families would be forced to move. (Noticia: Fortalnet) By the summer, the figure was 2000 families. Thus far, families have either received one time windfall payments of 6,000 reals or have been relocated to government owned resettlement projects. (Jario, 7/18) That payment is equal to about \$2,960 United States dollars at current conversion rates, with one dollar equal to 2.025 reals. Also, for people living close to the margin, with every real important, the cost of moving and transitions can be disproportionately high relative to income.

Also, buying land can become much more expensive than initially budgeted. One example of this within the United States is the “Big Dig” project in downtown Boston, which cost over \$14 billion dollars. According to a study done by researchers at MIT and Tufts the purchasing of land for the project greatly contributed to its cost overruns. (Tajima, 643) The purchasing and relocation of residents is clearly a component of this project, and if that cost was to increase dramatically due to increased land cost, this overrun would become even more likely. The dense nature of residents and the uncertainty regarding the exact number of residents make this type of mis-assessment quite likely. With Caixa, an extension of the federal government, funding the project, the State has significant incentives to avoid this pitfall.

There is also a risk that the government is mismanaging public funds in building a road where there is little need or demand. Officials in Latin America are notorious for wrongly assessing the needs of their constituents, especially when there is a perception that advancement and expenditures need to occur in a very public manner to build

political legitimacy. Political legitimacy is often sought through road projects. (Gondim, 72) If the benefits of the road are not there, the government will have wasted a substantial amount of revenue, either costing taxpayers some of their hard earned tax revenue or further burdening future taxpayers with greater debt loads, not to mention the erosion of social capital that will be discussed below. If the project fails, or has to be abandoned for cost overruns or other issues, then this investment is basically thrown away. All of these problems are more probable in situations where there is little government oversight and no sense of accountability. There is also a danger that the existing state-municipality conflict may perpetuate the uncertainty and exasperate mismanagement. A final major cost is the environmental damage and degradation that may occur as a result of the land project. These impacts are outlined extensively below.

One interesting and insightful work about maximizing gains and minimizing losses of projects such as Costa Oeste is *Windfalls for Wipeouts: Land Value Capture and Compensation* by Hagman and Mischynski. They define windfalls as an event or project that increases property values, such as a public works project, which fits the Costa Oeste situation very well. (Hagman and Mischynski, 15) The road does increase the value of the land around it, especially because, at present, that value is extremely low. Wipeouts are defined as decreases in property values that are beyond the power of the property owner. (Hagman and Mischynski, 5) A wipeout may be occurring in Costa Oeste for some if the payments residents received for reallocation are not sufficient compensation for the improvements and appreciation of their property they are responsible for or the additional cost of equivalent housing elsewhere. One interesting aspect of the authors' work is their definition of the status quo with respect to equity as "one where it is very

difficult to convince a court that a parcel has been inversely condemned as a result of a land use regulation.” (Hagman and Mischynski, 168)

The authors advocate a market pricing system for government regulation and a mechanism for measuring and internalizing externality payments. (Hagman and Mischynski, 27) They advocate policies that simultaneously mitigate the wipeouts associated with the project and enhance the windfall created. In the case of Costa Oeste, this would probably imply that a reasonable and fair market price was paid to the relocated residents for both their existing property values, which are very low, and a windfall tax imposed on the attendant increases in the value that will likely result from the road and development. A technical difficulty would be making predictions for the increases in property values, over the long term, and also determining the time horizon that is appropriate for making such calculations. Currently, the city is only compensating residents for the former valuation. (Jario, 7/18)

Environment

In addition to the economic impacts of an infrastructure project, there are serious environmental impacts as well. A project the size of Costa Oeste will significantly alter the topography of Colônia, which may impact flooding patterns, coastal erosion, and dune migration, all of which have been issues within Fortaleza as outlined by Zuquette, Colares, and Pejon in their exhaustive look at the city’s environmental degradation. These authors conducted a scientific analysis of the area, using sophisticated geo-spatial mapping technology and fieldwork conducted within the area over a three-year period. They found that the sedimentation levels and bedrock in the area make it susceptible to a variety of problems, including flooding and erosion. In particular, in the past, civil works

projects have led to deforestation and introduced foreign minerals to water bodies. (Zuquette, Colares, and Pejon, 248) The Colônia area is at risk for costal erosion, clay exploitation, and flooding, see figure 3 below. (Ibid) The road project may cause these existing risk factors to increase.

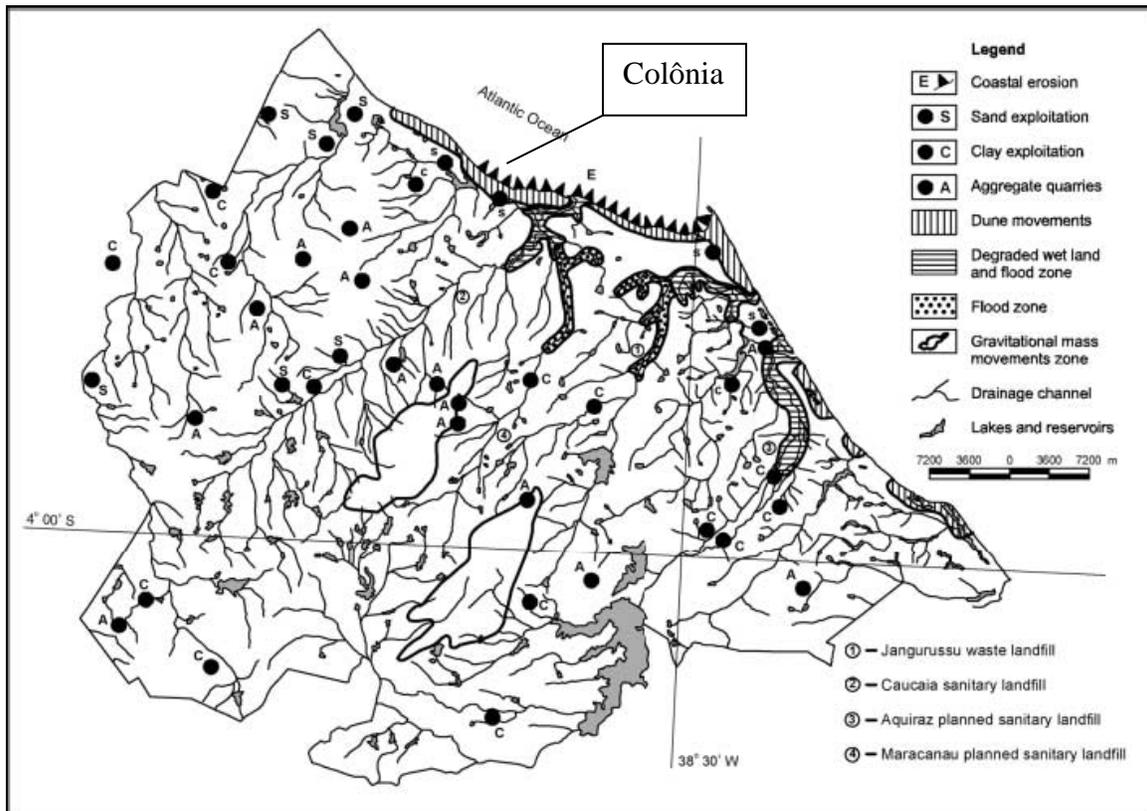


Figure 3: Environmental Problems in Fortaleza
 Distribution of the geological and environmental problems in the Fortaleza metropolitan region. (Zuquette, Colares and Pejon, 248)

From an environmental impact perspective, Projeto Costa Oeste can be divided into two distinct phases: (1) the (ongoing) building phase, which will require the demolition and removal of buildings in Colônia and constructing the road, and (2) the operational phase. It should be noted that Brazilian law requires a project of this magnitude to complete an environmental impact statement. According to one interview,

this impact assessment was done over ten years ago. (Junior, 7/17) Unfortunately, I was unable to locate this report.

During the normal operation of the road, a variable number of users per day will be driving through the neighborhood between the city center and coast. The building phase will create a large volume of waste, in a municipality already stressed for waste disposal. The city's primary landfill is located in Jangurssu, which is 20 kilometers from the Colônia. The volume of waste created by the massive city population is tremendous, over 1,500 tons a day, and the facility is already over one square kilometer in size. (Zuquette, Colares, and Pejon, 249) Demolishing 2000 houses and disposing of them, plus all the evacuation and solidifying of the sand dunes, will create a disposal problem. That is tons and tons of material that needs to be placed somewhere in the environment.

Building a road also alters the runoff patterns of an area, since water flows differently during construction and upon completion. The area already endures annual flooding, due to a concentrated, powerful rainy season and sedimentation of water bodies. (Zuquette, Colares, and Pejon, 248) There is a large river running along the border of Colônia that may pose a danger of exacerbating the flooding problem with new construction. The ongoing pollution from the road will also include the emissions from cars and the increased noise that accompanies high-volume roads. If the road building goes as planned and causes no additional, unforeseen degradation these are the only persistent environmental problems. However, there is a multitude of infrastructure projects throughout the world that do not work exactly the way that engineers drew them up.

Ultimately, environmental degradation represents shortsighted planning decisions made with little consideration for future costs. This is ill advised because in the long run degradation costs communities a great deal of money, both in their direct negative consequences and in the remediation. In virtually all cases, remediation efforts exceed the benefits of activities in the first place. In this instance remediation due to Costa Oeste will be difficult to complete from a political-economy perspective due to the socio-economic position of the neighborhood. There must be explicit environmental considerations within Costa Oeste, or Colônia and Fortaleza may end up paying a much higher cost for the road than currently projected.

Picture 6: This picture is taken from a bridge that is part of Costa Oeste; it shows a stream that passes underneath project and into the sea a few meters from this spot. The garbage and visibly sewage outflows into the stream highlight one of environmental impacts of Colônia's existence.



Social

There a number of possible social impacts of Costa Oeste on Colônia, with two of the most prominent being its ability to either create or prevent open space utilization and any changes that may occur in community safety as a result of the project.

Open space is area that has no development on it, which provides a number of benefits to its community, including “associated recreation opportunities, visual amenities, and other environmental and ecosystem benefits.” (Wu, Adams and Plantinga, 19) According to Wu, Adams and Plantinga, open space has two positive and inflationary impacts on property value, one through the restriction of housing supply and the two through the addition of desirable amenities to the neighborhood. (Wu, Adams and Plantinga, 19) There is a wide body of literature, mostly based in the United States context, applying the hedonic price model to estimate the value of open spaces or nearby desirable environmental goods and parks. (Weicher and Zerbst, Lansdord and Jones) In the case of Costa Oeste there are two dimensions of open space, the road itself, in its current state of under-utilization, and the beach it borders. It must first be noted that there are zero open spaces within Colônia, and the larger favela of Pirambu is severely lacking in these as well. (Texiera, 7/18) With the road currently being under-utilized as a road, the open space created by the construction has greatly increased foot traffic in that area, however many residents do not feel safe. (Ceissa, 7/19) For example, I was warned numerous times to be very careful when walking in the area because it is populated primarily by young male teenagers and my host family and others did not feel comfortable having me walk in the area alone. With respect to the beach, this is a

valuable open space for Colônia. The beach is approximately 10 meters wide and runs the majority of the larger favela, Pirambu. A beach is certainly one of the open spaces that increase property values and quality of life, on weekends there can be hundreds of people playing sports, walking, recreational fishing and swimming on the beach. There are a few crude beachside bars that are open on the weekend. The current situation makes access to the beach easy, and even once Costa Oeste is fully operational access will only require the crossing of a major avenue, a significant improvement over the hour long commute required to get to the other popular city beaches. So, in sum, if Costa Oeste adds useable and safe open space to the area, this would be a net benefit for the community, especially in light of the current absence of such resources.

Favelas are not safe places. One study, focused, on Rio de Janeiro (“Rio”), found “that there was a marked increase in violence within and around Rio’s favelas” in the last decade or so, primarily because of drug trafficking. (Fiori, Riley and Ramirez) Favelas, as squatter populations, have a complex interaction with the outside world, which has “largely resulted from the selective presences and absence of the state” and leads “to continuous violence and repression against the lower class.” (Leeds, 48) It is entirely possible that the instability in and within the favela caused by Costa Oeste will make the public safety diminish even farther. When people are relocated into new communities, ones in which they have no history or authority to respect, people feel uprooted and angry and this may lead to increases in instability in Colônia. Often, in these marginalized communities, the best check on illegal and unsafe behavior is from within, because the public apparatuses, such as the police, under-serve the area. If this social impact of increase instability occurs; people will likely feel less safe as a result of the road. This

would be a very difficult impact to monetize but one that could cause profound dissatisfaction. There is a parallel, and opposite possibility, that the increased access to the community would get a higher presence of police and other social sectors, thereby increasing public safety.

Finally, Costa Oeste may have impacts on the politics of the area. Lee and Gilbert wrote in 1999 World Bank publication, regarding development projects in the Philippines and Brazil, that they believe strongly that community involvement is a necessary component of any successful project, but they also acknowledge that this ideal is not always achieved in the field. Thus far, it appears that Costa Oeste has fallen short of this potential benefit. However, because the project is ongoing, there remains a possibility of improvement.

Chapter VII: Residents Perceived Impacts

This section details the result of the interviews conducted during July and August of 2006. These interviews attempted to encompass a wide cross section of the stakeholders in Costa Oeste within Colônia. The interviews focused on residents of Colônia, as well as, a cross section of professionals considered knowledgeable in the project. For the most part, these efforts were successful. The interviews include: several current or past leaders of local community groups, a number of residents, a lawyer, a professor at the Fortaleza federal university who has conducted research in the area, an employee of the city environmental agency, a minister of a large local church, city government officials, and the director of the state funded community center. The interviewees' impressions and thoughts of the Costa Oeste project, a project that has changed and will continue to change their neighborhood along a series of interrelated issues, including transportation, economic, environmental, social, and legal dimensions, follow below. It is important to note that residents are certainly not in unanimity regarding any of these issues and that these wide range of experiences, interests and insights illustrate the complexity of the community and road project.

Transportation

The people that I talked with held mixed opinions of the transportation impacts of the Costa Oeste project. Some, from a business volume perspective, were excited about the potential increased transportation flow. Others were wary and suspicious of the benefits of the road due to perceived design problems or inequity of access and availability.

A local businessman expressed the hope that Costa Oeste was in fact a true transportation gain for the area. (Texiera, 7/18) He thought that the increased volume of

traffic would be good for local businesses, including his own. His hope was that a main artery connecting the existing principle principal avenue (Leste Oeste) with the new road would use his street, thereby significantly increasing his economic opportunities. He also thought that Costa Oeste was part of an artery system of roads for the city. This strategy would be similar to that employed by Curitiba, where good transportation planning has significantly eased congestion and made the city one of the most attractive in Brazil. (Rabinovitch and Hoehn, 9) A second stakeholder, Fabina who manages a public health NGO in the area, expressed hope for the increased transportation opportunities. Fabina believes that better transportation would increase her organization's client access, which originates from throughout the city. (Fabina, 7/20) The last group that expressed hope for the road, increasing traffic flow and access, came from city government officials in a meeting with residents on the 26th of July. At this meeting, one official talked about the inadequate health care available to residents and how the significant distance to transportation imposes costs on residents near the ocean, a long walk that some can't make. (Officials, 7/26) These diverse groups of stakeholders all believe that the project will in fact aid transportation, and by extensions other aspects of community life.

However, not everyone is convinced of the benefits. One long time resident believes that the plan of the road is faulty and proposes a different course of action. Marcia stated that Leste Oeste, the existing main avenue running inland of Colônia, is the more direct route to the north and currently allows faster transit. This road already gives faster access to beaches, which is purported to be a substantial reason for the project. She proposed to me that a "mega avenida" (massive road) replace Leste Oeste to really get even better access to the west/north. (Marcia, 7/18) This skepticism was echoed by other

residents. In a roundtable discussion, residents made the point that Costa Oeste will have to double back and use the existing bridge, so there does not seem to be a measurable gain in transport, see figure 2. (Roundtable, 7/19) This can be seen in figure 2 above, with the road swinging around the point to meet up with the bridge. Also, an employee of the environmental agency and resident of Colônia believes that, as presently constructed, the road does not have much access to the surrounding streets. (Junior, 7/19) Should this prove to be true, this deficiency will be a problem for residents because they might in fact not have full access to the new resource. So, overall there were wide ranges of opinions regarding transportation, both sides of which seem to have reasonable conceptions of the project.

Economic

A second profound and important dimension of stakeholders' perceptions of the project concerns its economic implications. In the local economy, there are several interesting issues that emerge. The first is the steadfast belief that one of, if not the, core objectives of the Costa Oeste project, is to develop the area in a manner similar to Beria Mar. One businessman spoke of the governments' desire to make the area "igual a Beira Mar (the same as Beria Mar)" for the rich. (Texiera, 7/18) This makes sense if the project's mandate were based on a model of economic growth, as development, which is shared by the city, state and national State apparatuses. (Angela, 8/2) A local pastor told me that both the state and the city efforts to bring Costa Oeste to fruition have been motivated by economic development and urbanization. (Edson, 7/17) As referenced previously, the Beria Mar area increased dramatically in wealth after development in the 1960's. (Gondim) This development view was held by many of the people I talked with.

(Roundtable, 7/19, Teixeira, 7/18, Ceissa, 7/19) While some see Beria Mar as an example of successful development due to its rise in prosperity, there are serious equity concerns. (Gondim, 67) My sense of these references was that stakeholders were not aspiring to this ideal; rather they were scared that there was no place for them in such development.

A second serious issue is that of the area and residents' ability to realize the economic gains that are likely to come from the project. This issue takes two dimensions, speculation and job discrimination. Speculation would occur when people begin buying land that is cheap in anticipation of the project increasing its value dramatically. This increase in property value would be a boon for many people, however the unclear property rights regime in Colônia makes its outcome much more uncertain. It is tough for current residents to realize substantial increase in property value without proper documentation. (Roundtable, 7/19) A professor who has worked in the area believes that the possibility of speculation is a real and there is the possibility of "grande especalacion" in the area. (Jeovah, 8/1) One example of this speculation is a concentration of houses near the northern starting point of Costa Oeste. Here, instead of dense favela houses, a few people have built compounds more befitting the prosperous areas of town. Presumably, more affluent people were able to secure the land necessary for these houses.

The discrimination in the area takes many forms, and is not a surprise all. The residents of favelas are often "off the grid", so to speak, and do not have many avenues for asserting their rights. One resident told me that if you go for a job and say you are from Colônia, then you don't get the job. (Ceissa, 7/19) Another resident observed that she knows of only 2 people that live in Colônia and have worked on Costa Oeste, a small

percentage of the total, so that the creation of jobs, via public works, has not been passed on to the area thus far. (Fabina, 7/20) Unfortunately, I was unable to confirm these employment figures with any official representatives of the project. Even if the tourism developmental aspect of the project is a success, residents are not optimistic in their ability to gain desirable jobs in the industry. In a roundtable discussion, one woman made the point that often the first requirement for such jobs is the ability to speak passable English, and virtually no one in the area does that, so no one here is going to get jobs from tourism. (Roundtable, 7/19)

The last substantial economic issue that emerged through my interviews was that of the informal versus formal economy. As Jeovah, the university professor told me, people have lived in the area without anything (ie, no services) yet near the ocean and near a big city. This land use is unnatural in terms of trying to use land at its highest economic value. (Jeovah, 8/1) For the most part, people do not pay taxes on their houses (Ceissa, 7/19) So, when talking with some people who were paid to resettle in other housing away from the footprint of the Costa Oeste project, they talked about how much more expensive it was to join the bill paying members of society. (Jairo, 7/18) They had been used to getting free water and power (via stealing it) and did not have a sustainable inflow of money to pay for these services. The transition from the informal economy to the formal is tough. (Jairo, 7/18) However, the process of eminent domain in a favela generally does not create good outcomes. (Jeovah, 8/1) When people are paid to leave, this action makes everything more dangerous, since they have two viable options, neither of which is very good: 1) buy another house in an area where they are removed from the

area, or, 2) occupy another spot. (Jeovah, 8/1) In sum, those that have been marginalized in society find it extremely difficult to enter the formal economy.

Environmental

The Costa Oeste project is having and will continue to have a profound affect on the natural world in Colônia. The road is being built extremely close to the shoreline, and requires massive excavation, leveling, and stabilization. There have been several small bridges constructed. All of these actions will undoubtedly have large impacts on the local ecosystem. Stakeholders have seen a variety of ecological results that they attribute to the project, including decreases in fish catches and sediment buildup/erosion.

Before outlining the environmental impacts, I want to highlight two excellent points made by a few of my interview subjects regarding the project. Angela, the person in charge of the state funded community center in the area, said that there are no impact-less projects, and that engineers have studied this project, as required by law and made recommendations. (Angela, 8/2) I was unable to negotiate the necessary bureaucratic institutions to secure a copy of this environmental impact statement. Engineers have designed the road and presumably met all of the legal requirements for environmental impact statements; all large projects are required to have such an assessment. (Junior 7/19) However, engineers are not able to predict all forces acting against their design and are not able to model all predicted and desired outcomes. Secondly, every weekend there are hundreds of people on the beach, swimming, playing soccer, walking, with vendors selling popsicles and water, it is the only truly open space in the area for any type of recreation. (Texeira, 7/18) So, while there may exist serious problems in the

environment, people continue to use the resources because it is the best to which they have access.

The first major perceived impact has been to the local fishing stock, which has eroded to such a degree as to make the traditional local livelihood approaching extinction. Fishermen have been driven away from coast due to decreased viability, but have usually returned. (Edson, 7/17) However, the priest said to me, “they did not go far.” (Edson, 7/17) In the past, it was possible to catch fish directly from the beach, but no longer. (Texeira, 7/18) One possible reason for the decreased fish catch might be that the temperature of water has changed in last ten years. (Edson, 7/17) A second, non-Costa Oeste possibility for the decreased fish catch is the sewage plant up water, which lets out its waste a few miles down the coast from Costa Oeste. (Junior, 7/19) A third possibility that no one mentioned in my interviews is over-fishing.

With respect to the sediment movements, an employee of the city’s environmental agency told me that the manmade changes in the city along the beach have changed the patterns of sediment movement, with increased flows from east to west that deposit the material along the Colônia coast. (Junior, 7/17) Other residents told me that areas near the beach are jagged and unstable due to its dune base layer, therefore the road project is being built on unstable ground. (Roundtable, 7/19) Over time, the power of the waves have flattened the coastline and the increased density of the human population has altered the movement of dunes. The stabilizing and solidifying of the topsoil layer has not halted the underlining movement of sediment and the trend for dunes to move. Now, the entire area is geologically even more unsecured. (Junior, 7/19) The geography professor, Jeovah, conducted some research on this issue and found that there was a

recommendation to build a retention wall and to build the road in a certain way to minimize its instability and impact on the environs. He found that the possibility of the road being destroyed by the sediment movement and instability was very real. (Jeovah, 8/1) However, the road does have a number of large drainage ditches and other engineering components that are going to likely to increase the stability of the area and facilitate improved water movement.

Social

There are a number of social concerns and issues that are connected to Costa Oeste in the minds of local stakeholders. These include the abandonment of Colônia by the political process, the increased rate of conflict in community due to the churning of ownership and fragmented community leadership.

Favela residents are the poorest of the urban poor, and do not contribute much in the way of revenues to the public coffers, so it is reasonable for politicians, often elites, to devote their attention to other matters. No one really knows how many people are in the area, and most of the residents are off the grid, and hence counting them is hard. (Angela, 8/2) In the case of Colônia and Costa Oeste, this situation has come to bear. Often, during the course of Costa Oeste, the first time that residents are recognized by the government is when they get resettled. (Angela, 8/2) Their emotional attachments to their homes and communities seem not to be recognized by government officials. (Angela, 8/2) When conducting a roundtable with local residents, I continually heard a variation of this theme, even when people have spoken with local politicians and shared their concerns and problems, these concerns were not really listened to and the officials “don’t come here (nao vem aqui)”. (Roundtable, 7/19) Also, the political process has

been confounded by the division of the larger favela, Pirambu, into a number of smaller neighborhoods, such as Colônia. These neighborhoods are micro areas that have been created by the State, which divide the people and make collective action difficult. Each area has a difficult history, such as when they were occupied, and the attending property rights are also different. (Marcia, 7/18) Despite the problems of local politics, one local businessman believes that the city's effort with respect to the Costa Oeste and, beyond, is better than in the past. (Texiera, 7/18)

With respect to the increased rate of conflict and decreased public safety, there has been a steep drop off in perceived safety. My research collaborator lived in the area while doing other research the year before this study (2005) and he felt the difference the year had made in terms of safety perception. Personally, I did not feel safe walking around the area at night. There seemed to be no real police presence in the area during my entire time in Colônia. The one time that I saw the police enter Colônia, they came with 8 highly armored and fortified motorcycle policemen, dehumanized presences which sped through the community. One resident said that Colônia is more dangerous, due to Costa Oeste, because it is easier to disappear into the open space which constitutes the road. (Marica, 7/18) Furthermore, when people are relocated, they continually come into conflict with existing residents, conflict that centers on the contestation of the new social space. (Jeovah, 8/1) Because of the instability outlined above, stabilization, of the greater favela of Pirambu, from a social perspective is a big issue. (Junior, 7/19) It is also possible that increased movement of middle class outsiders in the community, either as beach visitors or new residents, will likely accompany the completed Projeto Costa Oeste which could lead to increased police presence and possible increased security.

A local minister believes there is a strong ethic of social improvement and struggle in the area, with the church as a big part of this effort to ameliorate issues such as violence and health. (Edson, 7/17) This social ethic may have fostered a number of associations and organizations, which, sadly, rarely work together. During my research, I felt as if I was introduced or heard of new associations nearly every day. One interview subject agrees, stating that the plethora of associations is counterproductive; people are only in little groups and do nothing. (Angela, 8/2) Leadership and social work is directed in so many directions, and therefore, directed in so many directions. There seems to be no common thread that unifies the people giving and receiving services. (Angela, 8/2)

Legal

The legal dimension of the Costa Oeste project really emerged during the primary research phase of this study. The primary legal dimension involves the ownership of the land and houses in the area. This ownership is critical for residents to realize one of the primary economic benefits of the project, the increased value of the land. However, because the area is a favela and removed from the formal ownership property regime, it is extremely difficult for residents to realize this benefit. Due to the both the tangible and intangible importance of a house and home in people's lives, this issue is particularly important to residents, and as a result there were a number of perspectives about the issue.

For the vast majority of the time, when residents do have a title, it is for their house only and not the underlying property. Then, there are a large number of people that do not even have a title to their home. An example of how this occurs is that of one family who bought their house from the builder for 6,000 reais but the house title was

never transferred to their name. (Ceissa, 7/19) Where Costa Oeste is sited, the people living there in shacks, primarily the fisherman, don't have any documents, at all, to give them clear, tangible rights to the land. (Jeovah, 8/1) People have two choices for gaining some rights. One is to pay a lawyer money, they don't have, and the second is to do it collectively. Both methods have numerous special provisions that must be met to gain these rights, such as the petitioner must have built the floors, walls and bathroom to be eligible. (Marcia, 7/18) This viewpoint was confirmed by a lawyer who stated in an interview that you must have built and initiated the occupation and this only entitles you to the house, with the State (national) retaining the land below. This makes transfer of ownership virtually impossible. This means that people can have documents that they think gives them full property rights, but are in fact inadequate. (Jairo, 7/18) However, one problem with getting property rights is that the weight of the state is behind the project and that is where people must go to get that right. (Marica, 7/18) The best summary of the residents' situation came from Angela, "people do not have the official papers for their house, they just don't exist, and also many people have moved into occupied houses and hence can not have these papers." (Angela, 8/2)

Chapter VIII: Options for AMLO

Below are some options available for AMLO to address the potential and perceived impacts of Costa Oeste. It is important that any action taken by the organization attempts to address both of these types of impacts, so that it can affect tangible, positive change while maintaining and building on community support. It is also very important to contextualize these options for AMLO. This association has the advantage of credibility and authenticity within the community, however its limited size and budget make some possible avenues of action prohibitive. It is also important that classic dependency problems be avoided in any action. The following options are both near and long term possibilities, and it may be feasible/ideal to pursue several at once.

Legal: The first group of options available for AMLO are of a legal character. There are a few civil rights lawyers working in the area and those would be a great starting point for any of these measures.

- *Suing the city or state government:* This action could be for a number of legal defensible reasons, including environmental grounds, illegal land transfers or failure to comply with laws governing large public infrastructure projects. These three possibilities were mentioned to me during the course of my interviews, but I am not confident that any of them are surefire victories against the State. (Junior, Jairo, Jeovah) This action would require significant investments in time, money and energy by at least one capable lawyer. Even if a lawsuit were to proceed through the justice system, there is no guarantee of a successful outcome.
- *House registration drive:* Several residents talked about the legal mechanism available for registering a house that has been built through an occupation such as

Colônia. There were varying accounts of the details, but it is reasonable to assume that many residents would qualify for such status. The law requires residents to have lived in the house for a certain period of time and have built the house. (Ceissa, 7/19) A registration drive would likely increase the amount of money residents would be eligible for, since they would then have more concrete property rights to their homes. With this option, lawyers and others would legally register all possible houses, thereby eliminating the uncertainty in the current system. This would likely require a significant investment by several lawyers.

Social: The social options available for AMLO primarily consist of organizing the residents to voice their opinions on the project. The association must combat the classic collective action problems discussed by Mitlin. The goal of dialogue between the State and the residents over the project is certainly admirable, and the following options are possibilities for initiating and sustaining such a dialogue.

- *Public demonstrations:* There are a staggering amount of people in the larger favela of Pirambu, many of which stand to gain little or be materially harmed by Costa Oeste. While these people may be on the margin of society, if they were to publicly display their dissatisfaction with the project, the city elites may be forced to take notice. Under this action, AMLO and others associations would organize several large demonstrations, which could take place at strategic locations in the city. There is some history for this type of actions in Brazil, and beyond. It requires nearly heroic efforts on the part of the organizers, and has failed much more than it has been successful.

- *Consolidate associations:* One community leader expressed her opinion that there were too many associations in the area, and that due to the fracturing of leadership the community was struggling to achieve desirable results. (Angela, 8/2) So, instead of focusing its efforts on residents, AMLO could instead focus on organizing the organizations. It could seek to get the associations to band together under an umbrella NGO or association. There are a plethora of organizations in the area and this would enable all of them to focus efforts and thoughts on Costa Oeste and other issues with a unified purposes. They bring diverse resources and assets that would be powerful working together. This effort would likely bring huge benefits to the area. However, there are several significant obstacles, including diverse goals across the associations and the difficulty in getting people to cede hard-won power and control.
- *Elections:* According to one resident, the current vereador (city council member) for Colonia has not done much to address Costa Oeste from the resident perspective. (Marica, 7/18) I did observe some vereadores consulting members of the community, but was unable to arrange a formal interview. Since democratically elected officials must represent the interest of their voting base, AMLO could prioritize the political process. This would require the association to sponsor candidates that are dedicated to fighting the project and/or gaining the benefits that the local residents are entitled. This strategy will likely require significant capital expense and has a long time horizon for implementation. Also, assuming that the candidate is successful (far from certain) it will likely be extremely difficult to move Costa Oeste and Colônia to the top of the political

agenda. As Gondim writes, the political process is muddled in both Fortaleza and Ceara and does not show any signs of deossifying.

- *Public safety drive:* AMLO could attempt to spearhead a community watch type program in Colônia. This type of program would enable the community to attempt to police its own neighborhoods, and would address a chief concern of residents, public safety. This type of program has been successful in rough places before, and would serve a dual purpose of increasing safety and neighborhood pride. However, it is going to be hard to police local gangs and drug dealers safely and with the culture of violence in Brazil, this effort would have to be treated with caution.

Economic: The economic options available to AMLO are limited by the association's diminutive size and budget. This limiting factor does not appear to be changing in the near or medium term, and as a result these options are made with that reality in mind.

- *Investor pressure:* It may be possible to pressure investors in the project to alter and improve the footprint of the project, both economically and environmentally. If the investors could be made to use their considerable leverage on the project, they would very likely realize tangible and significant impacts. Caixa, the federal bank, is the primary funding bank of the project, and its emblem is prominently displayed throughout the area. (Angela, 8/2) As a result, the bank is tied in a very public manner to Costa Oeste. One interviewee believes that the funding bank stipulated in the loan agreements that the resettlement of people must occur away from the beach, which will clear up the area for further development. (Junior, 7/19) If AMLO could get a clause that guaranteed fair and balanced payment for

resettlement, the project's impact may significantly be improved for residents. However, this would seem to be against the bank's interests and contrary to the current model for the project.

- *Windfall Tax*: Hagman and Mischynski and others (Barresse, Barrows and Prenguber) believe there are a number of tools for getting better market behavior. One policy tool they advocate that may be applicable in this situation is a windfall tax. Under this system the property in Colona that is nearest the beach and Costa Oeste would be subject to an additional tax upon sale that would be intended to capture all or part of the windfall associated with the new road. Hagman and Mischynski discuss a 1970 Australian tax (New South Wales Act) in which only the rise in property value associated with the public improvements would be taxed. (Hagman and Mischynski, 454) In Colônia, Costa Oeste would be considered an improvement due to the attending rise in property values. The proceeds from this sale would then go into the relocation fund, with the payment increasing for every relocated family. While this windfall tax would be an excellent mechanism for capturing some of the increased value of the land, it is impossible for AMLO to implement the policy independently. The major obstacle to AMLO achieving this potentially successful policy is that it does not enjoy proximity to the government, which would have to implement such a tax.
- *Voluntary land transfer system*: In a World Bank project located in Ceara and a few neighboring states, the bank instituted a voluntary relocation system instead of forced relocation. "It found it was possible to replace forced displacement with *voluntary* land exchange by redesigning the approach and reallocating lands to the

people slated for relocation close to their present homes.” (World Bank, 106)

This type of program may be effective in Costa Oeste, however the project took place in a rural environment, instead of an urban. It was able to more happily relocate about 900 farmers, so the scale of Costa Oeste is not unprecedented. However, in the case of Costa Oeste, there are some residents that are likely to refuse to relocate, as witnessed by the resident, who has refused to vacate her house even though it is in the middle of Costa Oeste.

Chapter IX: Analysis of the options

The analysis of AMLO's options was primarily done utilizing a policy tool called a policy options matrix, which is discussed at length in Weimer and Vining's *Policy Analysis: Concepts and Cases*. A policy options matrix requires that each option be ranked between 0 and 4 for each of the criteria selected. Each of these criteria are assigned a weighting value for their relative importance. Then, each rank is multiplied by the weighting value to determine a score for every criteria and option. Finally, the aggregate of each policy option is found by summing its respective scores, with the higher values designating desirable policy options.

For this analysis four criteria were selected; cost effectiveness, sustainability, ease of implementation and equity. The first three are equally weighted, because they are deemed to be equally important for AMLO. The last criterion, equity, is given half of that weight because it is not as critical.

- Cost effectiveness: Policy alternatives must be cost effective. This effectiveness is of particular importance considering AMLO's extremely limited financial assets and resources and the general poverty within Colonia.
- Sustainability: Policy alternatives must be able to provide benefits now and in the future.
- Ease of implementation: Policy alternatives must be simple and easy to implement. This maximizes the probability of successes especially in light of AMLO's leaders' inexperience at this type of complicated grassroots organization.

- Equity: Policy alternatives should aim to provide benefits to all members of the community. This is important for credibility within the neighborhood.

CRITERIA POLICY ALTERNATIVE	EQUITY WEIGHT =2 VALUE 0-4	COST EFFECTIVENESS WEIGHT =4 VALUE 0-4	SUSTAINABILITY WEIGHT = 4 VALUE 0-4	EASE OF IMPLEMENTATION WEIGHT = 4 VALUE 0-4	TOTAL SCORE SUM OF WEIGHT X VALUE
<i>Lawsuit</i>	0*2	2*4	2*4	1*4	22
<i>Registration drive</i>	1*2	2*4	3*4	3*4	36
<i>Public demonstration</i>	2*2	3*4	1*4	1*4	24
<i>Consolidate associations</i>	1*2	2*4	2*4	2*4	26
<i>Elections</i>	2*2	1*4	1*4	0*4	12
<i>Public safety drive</i>	2*2	2*4	3*4	2*4	32
<i>Investor pressure</i>	0*2	1*4	1*4	1*4	12
<i>Windfall Tax</i>	2*2	2*4	2*4	1*4	24
<i>Voluntary land transfer system</i>	2*2	1*4	1*4	1*4	16

Chapter X: Recommendations

These recommendations are specifically targeted for my client, AMLO. They are intended to serve as policy options for the organization to implement as it moves forward within Colonia. As such they are necessarily bounded by the limitations that the organization's size and budget impose.

I recommend that AMLO attempt a blended policy approach to ameliorate the negative impacts from Projeto Costa. This recommendation follows from the analysis completed above, in which the three highest rated options in the policy options matrix are the house registration drive, a public safety campaign and a consolidation of associations.

- House registration drive (total score=36): Because the fundamental problem for the residents of Costa Oeste is their lack of land ownership and rights, the best policy tool for AMLO is a general registration drive. Brazilian legal code allows for people who have built their squatter dwelling and lived in that house for a specific period of time to petition the government for legal ownership. This process is arduous and has numerous bureaucratic pitfalls. Very few of Colonia's residents have been successful, but some have, which means the process is feasible. However, AMLO enjoys a working relationship with a number of interested civil rights lawyers, and their expertise could be leveraged extremely effectively with such an effort. With their specialized knowledge, the registration drive would proceed more rapidly and successfully. There are restrictions and limitations as to the number of residents that would be eligible for such legal status, which makes this option less than ideal from an equity standpoint. However, this kind of legal status is the only way for residents to begin to realize

the primary developmental benefit of Projeto Costa Oeste. There would likely be a secondary benefit as well. Once prices increase due to the partial legalization of the area, all housing prices might rise.

- Public safety campaign (total score= 34): The advantage in this policy is that it directly addresses a major concern held by the Colonia residents. Another benefit of the policy is that it is inexpensive to implement and sustain. Since this policy requires residents policing each other instead of costly official patrols, it draws on and leverages the existing neighborhood relationship. This is the primary reason that it scored well in the matrix analysis. However, this is really a second best solution to these problems. It does not address the underlying lack of services that the area suffers under and will do nothing to stop the likely negative impacts of Projeto Costa Oeste from further fragmenting the community. If such a safety drive was effective, it may increase AMLO's visibility and credibility in the neighborhood and allow it to push forward more proactive and engaging policies.
- Consolidation of associations (total score= 26): This policy option finished with the third highest weighted score, and for good reason. As noted by several interview subjects, the fragmentation of the associations leads to groups competing and directing their efforts on issues aside from community improvement. If AMLO were successful in getting other groups to join it in either of the above mentioned recommendations, the greater resources would certainly yield more favorable outcomes. These associations include the following, all of which were referenced by people that were interviewed, Associacao dos Moradores em Pirambu, Associacao Mae, Academia de Ciecia e

Arte and Associacao em Defesa da Vida. While this policy will not fix the issues that are confronting Colonia and AMLO, it has the capacity to get a number of hard working and earnest organizations working together. This effort is certainly not going to be easy, since all stakeholders may have vested interest in maintaining the status quo and their smaller fiefdoms. It may require AMLO to cede leadership on some issues to other associations. However, with real collaborative leadership and a communication of a shared vision, the consolidation of associations on the Costa Oeste platform and effort would likely serve immediate and dramatic dividends.

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