The Reurbanization of the Brasilia Metropolitan Region

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**From Designed Object to Metropolitan Agglomeration:
The Growth of Brasilia, a Growing Reurbanization Process**

Independent of the diverging opinions of Lucio Costa's design of Brasilia's spatial structure, or the disagreements on Oscar Niemeyer's buildings, it is clear that those responsible for developing Brasilia were determined to provide urban spaces with quality services accessible to the entire population. The super blocks provide residents recreational open spaces, while groups of super blocks supply primary and secondary schools, heath centers, and basic shopping needs within walking distance in a given area. More specialized urban services; shopping; employment centers; public spaces; and education, health, sports and recreational facilities are accessible via short car or bus rides. These facilities serve a well-structured urban space, planned according to the prescriptions of the CIAM (International Congress of Modern Architecture) known as the *Plano Piloto* (Pilot Plan). The urban plan for the *Plano Pilot,* with its notorious shape of a landed airplane, includes offices and monumental buildings in the axis and residences in the wings. Residential, commercial, corporate, and recreational areas are clearly segregated within different sections of the city, all with full infrastructure, green spaces, tree-lined pedestrian walkways, and streets designed for different vehicular speeds.

Despite the good intentions of the designers, from its foundation Brasilia became spatially segregated with two types of urbanized areas: the *Plano Piloto*, with the attributes previously mentioned, and informal settlements, located in the periphery and consisting mainly of low-income households, lacking infrastructure, urban services, and a formal urban structure. The egalitarian ideals of the Modern Architecture Movement, to provide housing and quality services to all households within integrated neighborhoods, have never been attained. Although the government exercised full control of urbanized land, land prices grew rapidly, due to the high demand from high and medium income groups and the restricted supply of urbanized land in the *Plano Piloto*, which forced lower income families into the periphery. As a result, both types of settlements, the formal city and the informal periphery, grew at a similar pace in the 50 years of Brasilia's existence (see Figure 1.)

Notwithstanding the relative scarcity of residential land that provoked higher prices, the city set aside ample land reserves for government and public activities, as prescribed by the Master Plan for the *Plano Piloto*. Given the preeminence of tertiary activities in Brasilia's economic structure, the downtown area concentrates over 70% of all formal employment opportunities, while periphery settlements offer mainly informal jobs linked to neighborhood services.

In the late 1970s and 80s, periphery settlements proliferated, as the residential areas of the *Plano Piloto* were almost completed. The declaration of Brasilia as a World Heritage Site froze development and prevented the recycling, densification, and diversification of land uses within the *Plano Piloto*, forcing new developments to the outskirts of the monumental city while a significant portion of the land designated for government and service activities remained vacant.

The economic urban area of Brasilia currently houses 2 million inhabitants in the Brasilia Federal District, and more than 350,000 people in cities within a 50 kilometer radius of the downtown area in the State of Goias. The areas outside the Federal District are growing

rapidly, experiencing population increase rates that grew from 2.7% per year in the 1970s, to 4% in the 1980s, and 5.4% in the 1990s and early 2000s. On the contrary, the population of the Federal District that grew 14% per annum in the 1960s and 1970s descended to 8% in the 1980s, and to 2.8% in the 1990s and early 2000s (see Tables 1 and 2 and Figure 2.)

The government's control of Federal District land and its conservative approach to land development provided scant opportunities for expansion of new settlements within the Brasilia DF, diverting development to cities in the neighboring State of Goias, such as Aguas Lindas, Santo Antonio, Nuovo Gama, Valparaiso, and Cidade Ocidental. Consequently, the population within Brasilia's labor market lives under the jurisdiction of two state entities and several municipalities, which generates a classical inter-jurisdiction coordination and management problem, impacting the quality of services for the members of the unified labor market.

Today, in functional terms, Brasilia is a spatially segregated monocentric metropolitan area, offering diverse living conditions to its inhabitants. On one hand, a diminishing amount of higher income households occupy the high cost residential areas in the super blocks of the *Plano Piloto*, which has a strong urban image, unity of building forms, and monumental civic public spaces and offers high standards of infrastructure and urban services in health, education, recreation, and open space. On the other hand, the majority of low-income households live in the poorly-served, expanding periphery, characterized by loose, informal urban structure, eclectic building forms and materials, and a lack of urban landmarks and civic spaces (see Figures 4, 5, 6 and 7.) Residents are far from the downtown area and have little social contact with its middle and upper class residents, while they also face a shortage of potable water; inefficient sanitary disposal of wastes; a lack of formal employment; inadequate health and education services; poor roads; and scarcity of recreational areas and open space. In order to encounter better services and employment opportunities, much of this population must travel a significant distance daily to downtown Brasilia, or settle for substandard services and informal job opportunities.

The negative social impacts of this spatial segregation are compounded by the absence of suitable public spaces for social interaction in downtown Brasilia, while those that exist are poorly maintained and are not easily accessible for lack of pedestrian friendly streets. Overall, there is a loss of urbanity in the agglomeration, as the majority of the distinctly dual territory in the metropolitan area is poorly served and offers meager living conditions to the population. The social, functional, and spatial segregation in Brasilia also impacts the population's sense of belonging as the majority of the population does not live in the city created by its designers, the one with internationally recognized monuments and public spaces, but lives in settlements lacking infrastructure, services, landmarks, and civic spaces. Aside from their long commute for employment and suitable services, the experience of these lower-income citizens is similar to most periphery dwellers in developing countries, rather than inhabitants of a monumental capital with worldwide recognition for its design.

The Reurbanization of Brasilia: an Urgent Task

The heritage protection induced a halt in the development within the area covered by the *Plano Piloto* and the rapid growth of settlements in the periphery cause, as well as unequal access to city benefits among the population, and inefficient operation of the metropolitan agglomeration. This leads to increased travel time and cost for the low-income population in accessing better employment opportunities and urban services.

These problems are multiplying as the urban land markets are forcing middle-income households to join low-income families in the periphery, without the existence of compensatory programs. Private sector developers follow the trends to maximize their short-

term gains in the prevailing market conditions rather than contributing to their solutions. Thus the Government must intervene through public programs designed in partnership with the private sector, which are based on the following priorities:

1. Creating equal living conditions in the whole territory of the Brasilia metropolitan agglomeration.
2. Promoting the development of employment and service centers in the periphery.
3. Improving mobility within the metropolitan agglomeration, particularly through public transportation.
4. Providing the periphery with public spaces and civic buildings of monumental character to promote the population's sense of belonging.

Equalizing living conditions in the agglomeration requires significant investments to expand the coverage of the potable water service, extend and improve the quality of the sewerage and rain water drainage systems, add trunk roads and better existing roads. Additionally, programs are needed that supply technical assistance, microcredit, and building materials for incremental self-building, the way most households in the periphery build their homes.

To reduce the frequency of costly trips from the periphery to downtown, the coverage and quality of health, education, and public urban services must be improved in the periphery. Providing adequate public urban services in the periphery if clustered in right locations also helps promote new centralities in the vast metropolitan area, luring new commerce and private services attracted by the flow of customers and the provision of infrastructure and transportation in these areas.

The development of an efficient and comprehensive public transportation system is a priority in the Brasilia metropolitan area since it will bring significant improvements to the quality of life for the entire population, particularly low and middle-income households, and expand the size of the labor markets, in turn improving the efficiency of the metropolitan economy. Following Brazilian good practices in multimodal public transportation, the interchange points among different modes of public transportation can be used to locate public services and community facilities.

The new public buildings and facilities offer the opportunity to build new landmarks and monumental public spaces, bringing to the periphery the formal elements that make Brasilia an icon of the Modern Movement of Architecture. With well-conceived, strategically located projects, the government can accomplish two objectives simultaneously: provide more homogeneous services to the entire agglomeration population and generate new functional and spatial centralities with high symbolic value to reinforce the population's sense of belonging. These new functional and symbolic central places will functionally and visually extend throughout the territory and to all inhabitants, the urban and formal benefits of Brasilia..

In synthesis, the *Plano Piloto* will have to extend its "wings" to embrace the entire metropolitan area, homogenizing the quality of life enjoyed by all inhabitants and providing spatial and functional landmarks that reinforce the population's sense of belonging. Extending the quality of urban life to the whole metropolitan area must be matched by greater flexibility in the management of the development process of the area included in the *Plano Piloto,* allowing the recycling and densification required by the economic and social dynamism of the city. The major challenge is to protect the city's heritage, without freezing the development process of this dynamic city.

There are other challenges. In fiscal terms, investments in infrastructure should be financed by tariffs, requiring an increase in existing tariffs, which are already high. A proportion of the low-income population will need subsidies to access the improved potable water and

sewerage services. Also, the Federal District Government will have to allocate additional budgetary resources to cover the cost of health and education services.

Strategically planned public transportation programs have a significant impact on the efficient functioning of cities and on the quality of life of the middle and low-income population as a whole. These systems usually require subsidies to become financially viable, creating another burden on the Federal District's budget; however, better transportation, new centralities, and improved urban services and open spaces will increase the value of real estate and bring new business to the periphery. Both developments will increase real estate and services tax yields, helping to offset the increasing expenditures required to implement the proposals.

Table 1: Federal District of Brasilia: Population by Administrative Region.

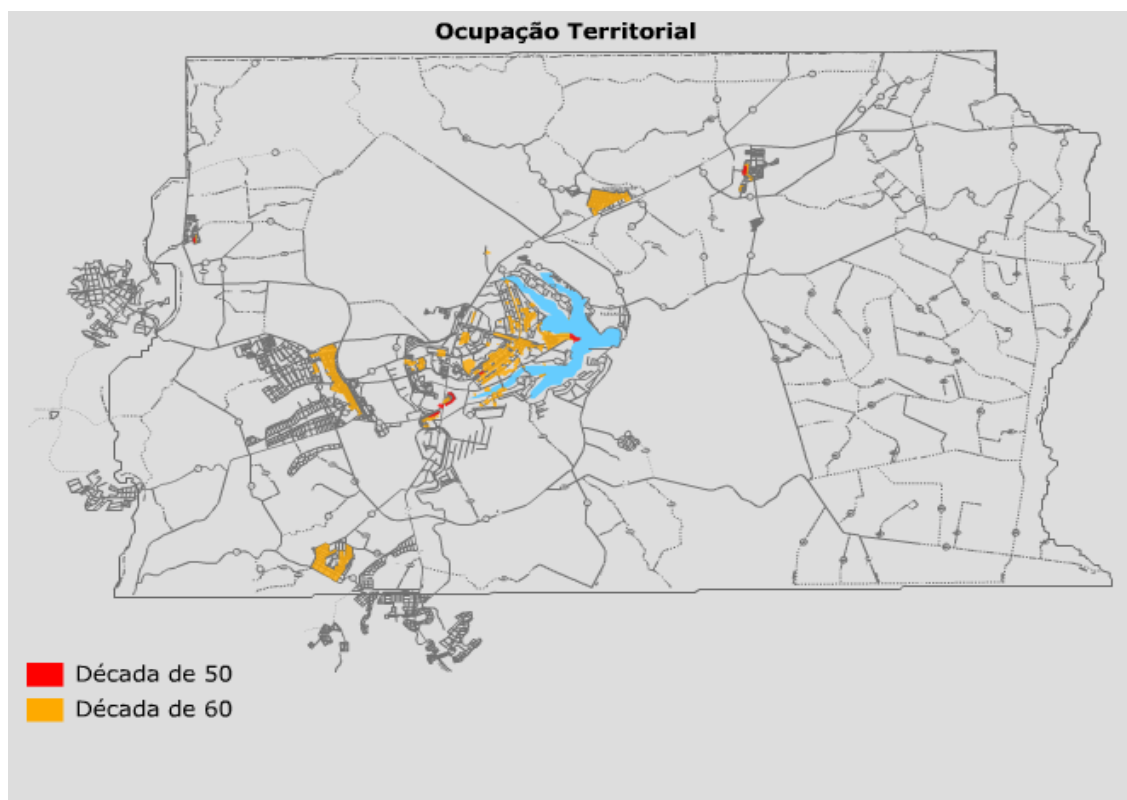| Administrative Region	Population		Average Annual Growth Rate
	1996	2000	
Brasilia	202,426	193,616	- 1.11
Cruzeiro	56,008	64,381	3.54
Guará	102,709	115,192	2.91
Taguatinga	223,276	243,159	2.16
Planaltina	116,452	147,061	6.01
Brazlandia	47,714	52,696	2.51
Sobradinho	101,136	129,059	6.28
Lago Sul	28,946	28,219	- 0.63
Lago Norte	26,211	29,603	3.09
Sao Sebastiao	44,235	64,192	9.76
Paranoà	47,126	54,928	3.9
Núcleo Bandeirante	31,327	36,441	3.85
Samambaia	155,319	163,000	1.21
Candagolandia	13,827	15,629	3.11
Santa María	87,706	98,615	2.97
Riacho Fundo	21,371	41,378	17.96
Recanto das Emas	57,671	93,000	15.83
Gama	121,601	130,000	1.68
Ceilandia	342,885	343,000	0.01
Total	1,821,946	2,043,169	2.91

Source: Conteos de Población 1996 y Censo Demográfico 2000. Instituto Brasileño de Geografía y Estadísticas.
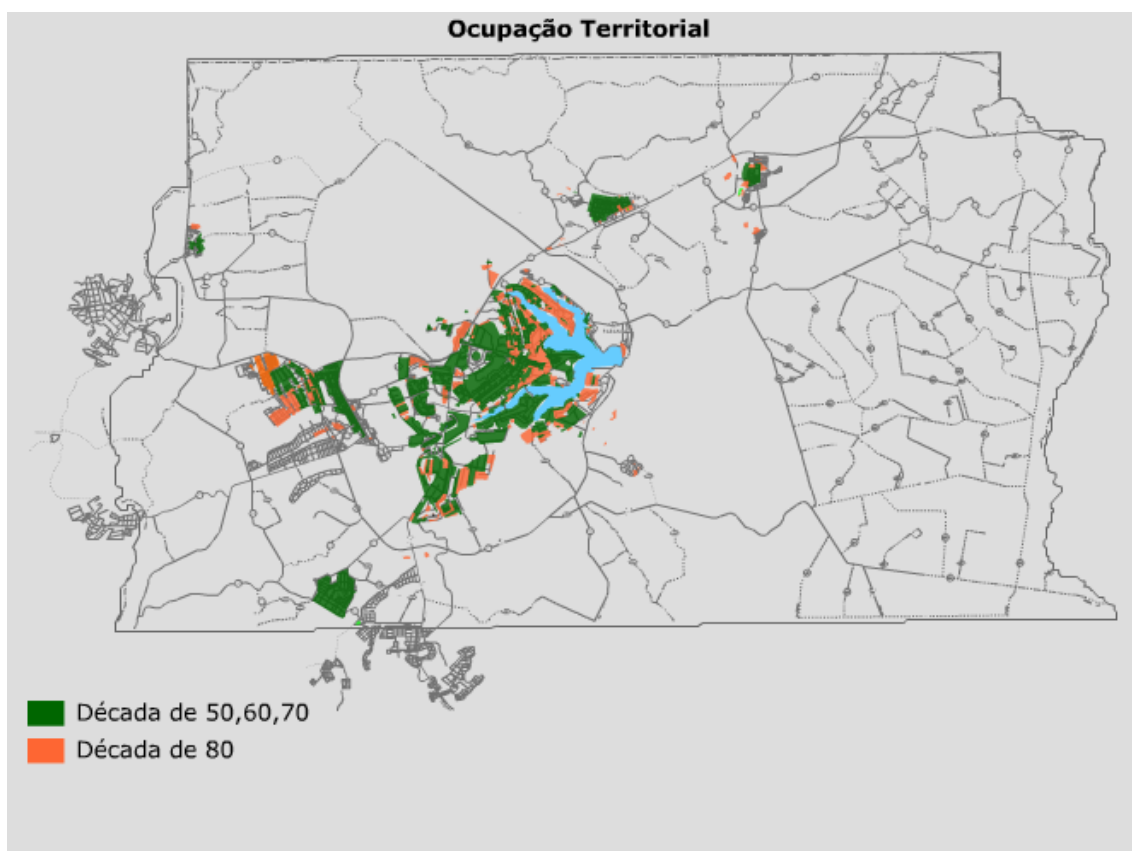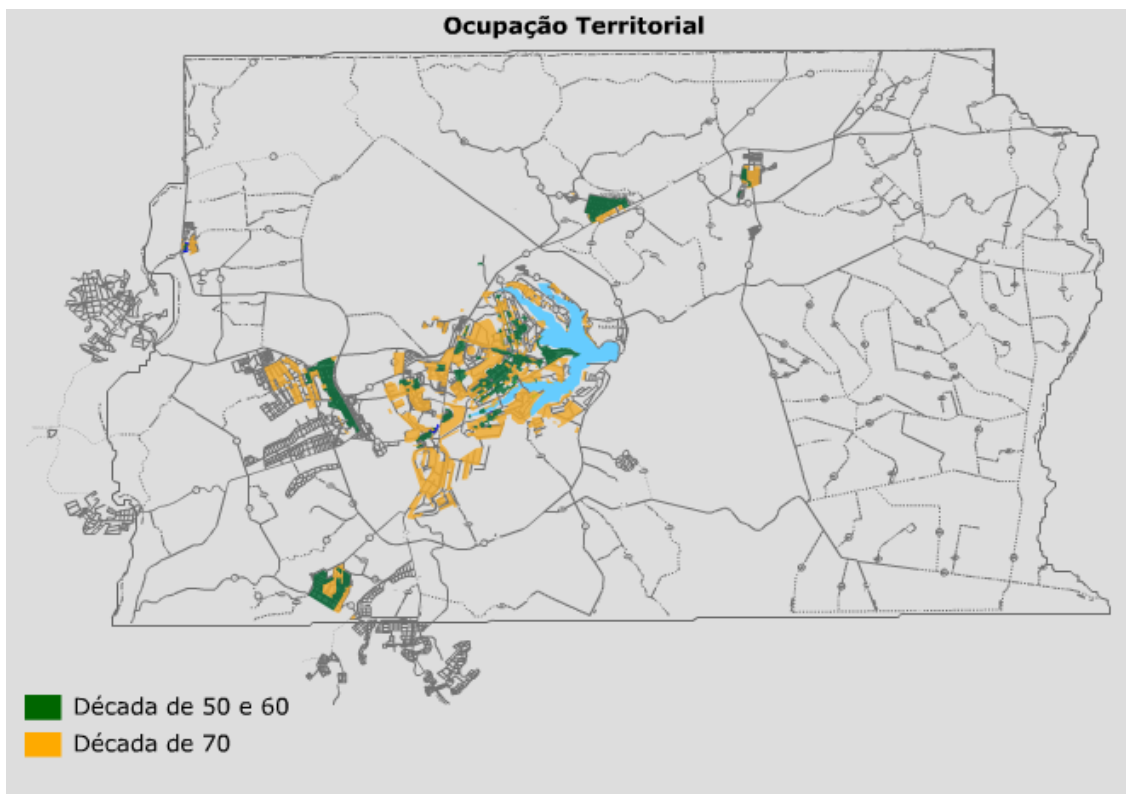
Table 2: Key Indicators for Cities in the State of Goias

Variable	Águas Lindas	Santo Antônio do Descoberto	Novo Gama	Valparaíso	Cidade Ocidental
Area (Km^2)	191	938	192	60.2	388
Population 2000 (hab.)	105,379	51,717	74,297	93,960	40,375
Gross density (hab/km^2)	551.72	55.13	386.96	1,560.8	104.05
Growth rate 1996/2000	14.52%	2.95 %	5.32 %	5.91 %	5.06 %
Approximate distance to downtown Brasilia (Km)	50	50	45	45	50
Origin of the population in %	DF	DF	DF	DF	DF
	67%	43 %	47%	46 %	48%
% or urban population (2000)	99.85 %	93.26 %	98.18 %	100.00 %	85.36 %

Source: Análisis del Merado de Suelo Urbano en el Distrito Federal y su Entorno Inmediato. Washington DC, Cities Alliance, Enero de 2004

Figure 1: Evolution of land use in the Federal District of Brasilia

Source: SDUH Brasilia. Programa de Transporte Urbano del Distrito Federal, Brasilia, 2004

Figure 2: Federal District of Brasilia. Administrative Regions
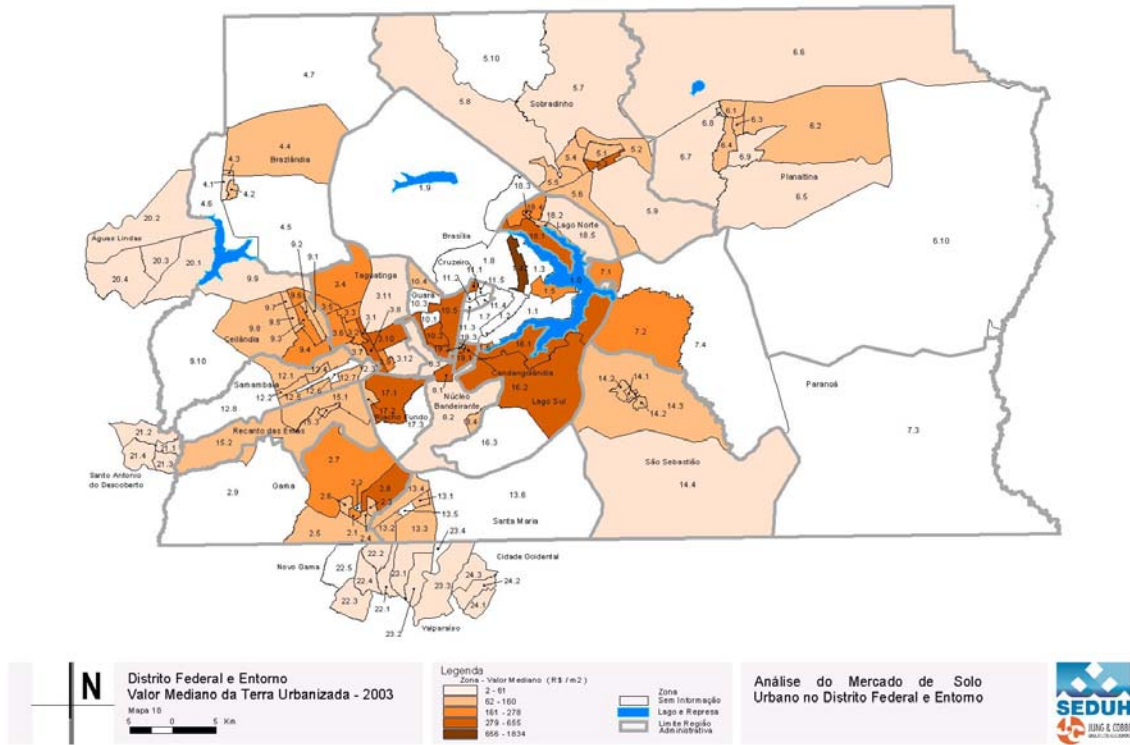

Source: Análisis del Merado de Suelo Urbano en el Distrito Federal y su Entorno Inmediato. Washington DC, Cities Alliance, Enero de 2004

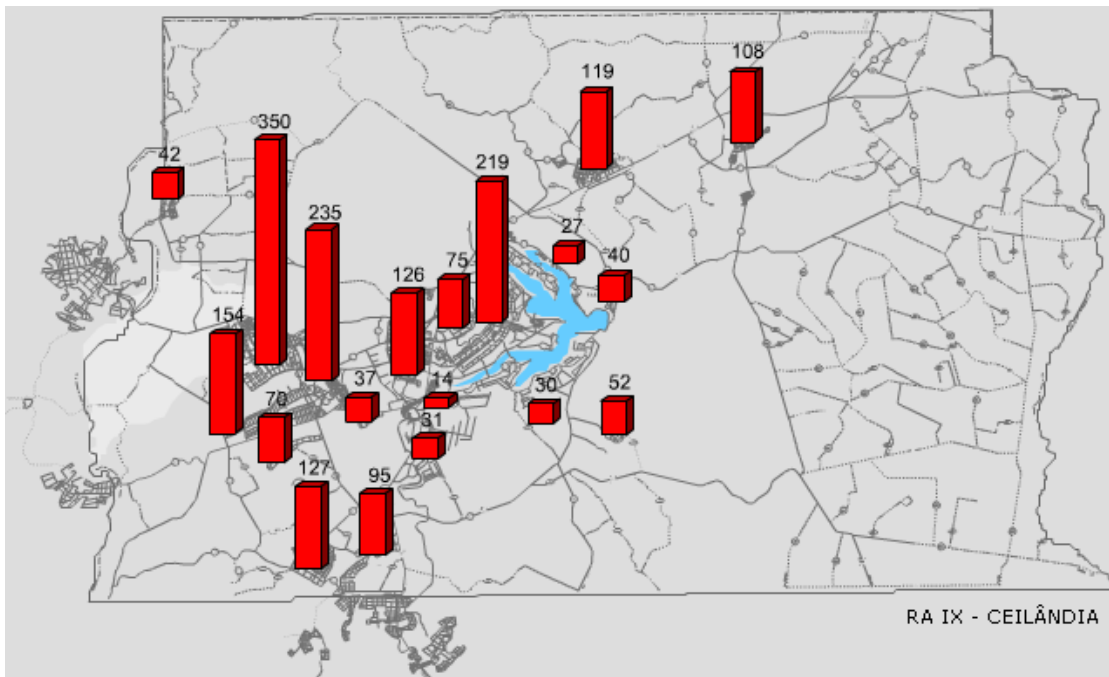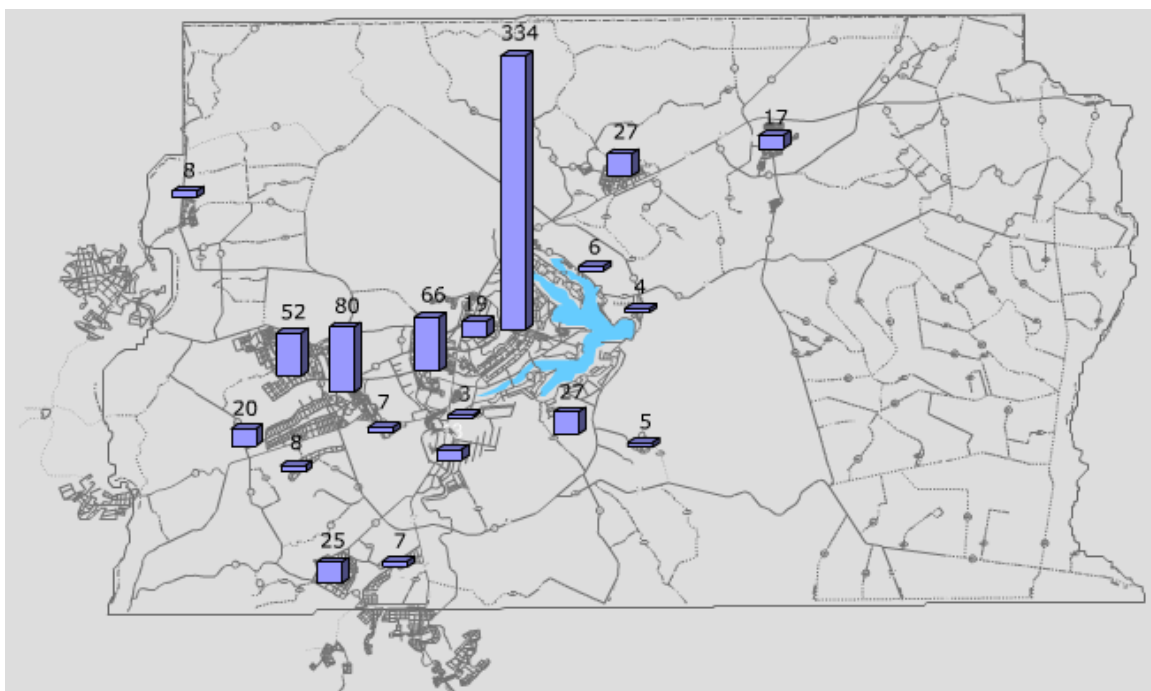Figure 3: Federal District of Brasilia Transportation axis

Source: SDUH Brasilia. Programa de Transporte Urbano del Distrito Federal, Brasilia, 2004

Figure 4: Federal District of Brasilia Land Prices 2003

Source: Análisis del Merado de Suelo Urbano en el Distrito Federal y su Entorno Inmediato. Washington DC, Cities Alliance, Enero de 2004

Figure 5: Federal District of Brasilia. Population distribution 2000
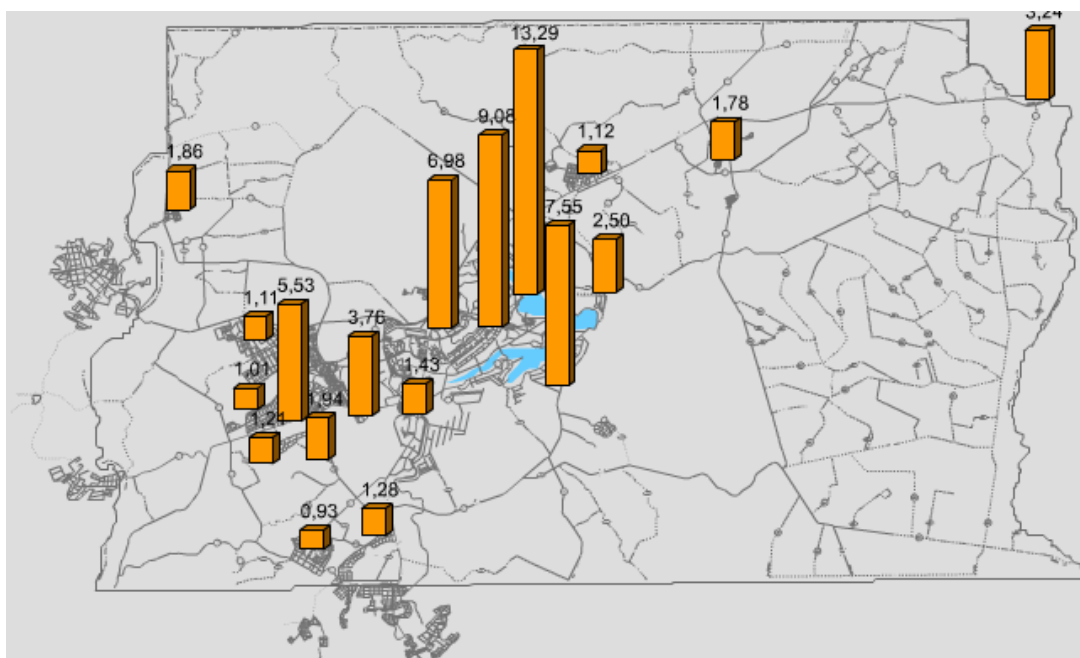

Source: SDUH Brasilia. Programa de Transporte Urbano del Distrito Federal, Brasilia, 2004

Figure 6:   Federal District of Brasilia. Employment distribution 2002

Source: SDUH Brasilia. Programa de Transporte Urbano del Distrito Federal, Brasilia, 2004

Figure 7: Federal District of Brasilia Per capita income distribution *ita* 2002

Source: SDUH Brasilia. Programa de Transporte Urbano del Distrito Federal, Brasilia, 2004