

THE PROCESS OF UPDATING THE BUILD AREA AND VEGETATION COVER IN THE TOWN OF CAMPOS DO JORDÃO, BRASIL.

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KEY WORDS: protect green áreas; environmental impact; remote sensing; urban occupation.

ABSTRACT:

This paper has the main goal to up date the database about urban occupation and the town expansion in the urban area of Campos do Jordão (SP) in Brazil, toward its green areas, with the proposal to evaluate the building areas comparing with the protect areas. Campos do Jordão is an official Protect Area classified APA – Environmental Protect Area, since 1983. The methodology use is: a) the representation – digital data – from the vegetation and building area; based on the maps made by the extinct Geography and Cartography Institute (IGC), from 1977; b) show by samples the invasion of public green areas in the neighborhoods by the human occupation and its percentage of deterioration; c) show using aerial photographs the percentage of nature cover (vegetation) remained in the town. Will be used computerize technology, using as a toll the remote sensing system, and the software SPRING. The aim to be achieve are: update the database of the building area and develop a comparing study among APA, Decrees (environmental law) and city position toward the protect areas

1. INTRODUCTION

Protected areas have been adopted in all the world as the main toll to preserve the biodiversity.

In Brasil, the great growth of urban areas has caused some environmental damage in theses areas. Some areas show environmental changes less visible, others show their natural characteristics very affected by the human occupation process. Therefore, each case requires their own mechanisms and their own environment management system.

This paper has the main goal to up date the database about urban occupation and the town expansion in the urban area of Campos do Jordão (SP), toward its green areas, with the proposal to evaluate the building areas comparing with the protect areas.

Campos do Jordão is an official Protect Area classified APA – Environmental Protect Area, since 1983.

The methodology use is:

1. The representation – digital data – from the vegetation and building area; based on the maps made by the extinct Geography and Cartography Institute (IGC), from 1977, and profile database exist in Campos do Jordão Main Hall about projects approved between 1977 and 2004.

2. Show by samples the invasion of public green areas in the neighborhoods by the human occupation and its percentage of deterioration.
3. Show using aerial photographs the percentage of nature cover (vegetation) remained in the town.

Will be used computerize technology, using as a toll the remote sensing system, and the software SPRING.

The aim to be achieve are: update the database of the building area and develop a comparing study among APA, Decrees (environmental law) and city position toward the protect areas.

2. REVISION BIBLIOGRAPHY

The Brazilian Federal Government, created the PNMA – National Politic of Environmental in 1981, Law n° 6.938; with the goal to preserve, enrich and recover the environment quality (Afonso, 1999, p.23).

The natural areas protected existent are classified, according to the São Paulo State Environment Secretary (1989), as:

- Natural Areas Tombadas
- Environmental Protect Areas – APAS
- Relevant Interest Areas – ARIES

- Areas under Special Protection – ASPES
- Ecological Stations
- Parks
- Biological Reserves

The APAs created in the state represent areas with samples of environmental diversity and landscape that characterize the paulista territory. Some show environmental changes less visible, others show areas very modified by the human occupation process.

The town of Campos do Jordão designated Environmental Protect Areas in June, 3rd, 1983, by the State Decree n° 20.956, added by the State Law n° 4.105; Municipal Law n° 1.984 (Municipal APA) and by the Federal Decree n° 91.304 (APA Serra da Mantiqueira)

The development of the town was first related with health and latter with tourism, both connected with the natural characteristics of the region. The development of the tourism brought the civil construction consequently the development of real state agencies. As a result many area were sold, occupied, deforestation was developed, rivers lose the volume of water, erosion and a general change in the landscape were verified (Relatório Zero).

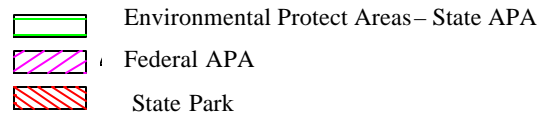
The State of São Paulo represent approximately 10% of the protect territory, its represent 72% of the total protected area by states in the country (JACOBI, 2000).

Inside of the state the bigger area is the State Park of Serra do Mar, with approximately 300 thousand hectares. The sum of these areas correspond more than 1 billion hectares. The properties of the Government correspond just 30% of these total (CONSÓRCIO MATA ATLÂNTICA, 1992, p.63). The forest and woods are a vary of ecosystems, that hold millions of species and also a important bases for the tourism.

Among the classification of protected areas, there are the Parks. They were created to protect natural areas with national and international relevant values, with the scientific, educational and leisure propose. In these areas, usually big extentions, are not allowed to use the natural resources (IUCN, 1991, p.211).

In the State of São Paulo, the Protected Areas are under different contest, that change in their environment, social and cultural aspects. As a example of paulista protect area, the State Park of Campos do Jordão (SÃO PAULO, 1991). Public power manage this area where they develop some environmental education, tourism and leisure activities

Figure 1. The figure show the town and its APA area (Source: APA Fonte Relatório Zero)



2.1. Environment Protection in Campos do Jordão

The State APA of Campos do Jordão covers the town total area about 269 Km². The main propose to create this APAs is to protect the biodiversity of the natural resources of Serra da Mantiqueira, therefore, begging regulate work, environment zoning and ruling the use of natural resources, like: water, flora and fauna (Plano Estadual de Recursos Hídricos 2000 -2003).

Capybaras, wild pigs, squirrels, pacas, gambá, wild cats, armadillo, jacu, parrots, and toucans compose the fauna.

In the forest left included in the Atlantic Forest Biosphere, there are many endemic and endanger species associated with the secondary florets. There are many continuous areas at Serra da Mantiqueira, like Araucaria and Pinho Bravo Forest, heterogeneous forest with rich vegetation associated.

2. 2. SNUC- National System of Protect Area

The Protect Areas are areas protected by special law, with the main goal to protect and preserve special ecosystem with its particularities, by the Federal constitution, in its art. 225, § 1.º, inc. III. These areas were chosen and protected by the Law n° 9.985, July 18th, 2000, named SNUC – National System of Natural Protect Area (Sistema Nacional de Unidades de Conservação da Natureza). This Law brings a new view related with its categories, such as:

1. The social participation at the creation and management of theses areas.
2. Guarantee a fair treatment for the traditional communities that are in the protected areas and offer methodology to produce with a sustainable view.
3. Adequate use of the financial funds needed.
4. Use land owners regulation (regularização fundiária).

This area under special protection can be located in private or public area. By being environment special areas, they are under the law and the public interest.

2.2.1. Area of Sustainable

The main propose of this areas are to combine the nature preservation and the sustainable use. This area allow the exploration of the environment in the way to guarantee the natural cycle of the natural resources, and make it possible in a social and economic aspect. Is included in this category:

Environmental Protect Areas

Public or private areas, general big extension, with some human occupation, enriched by natural resources, landscape or cultural specially important for quality of life and human well being, with the main goal to protect the biological diversity, orderly the process of occupation and allow the sustainable use of the natural resources.

3. METHODOLOGY

The methodology use will be:

1. The representation – digital data (figure 3) – from the vegetation and building area; based on the maps made by the extinct Geography and Cartography Institute (IGC), from 1977, and profile database exist in Campos do Jordão Main Hall about projects approved between 1977 and 2004.

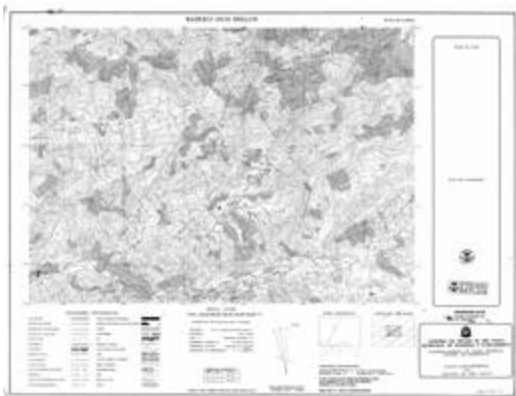


Figure 2. Map scanned in 1977.

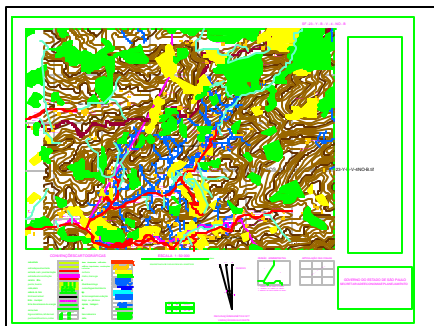


Figure 3. Digital data from the map bellow
Elaborated by the author.

2. Show by samples the invasion of public green areas in the neighborhoods by the human occupation and its percentage of deterioration. Exemplo Figure 4.
- 4.



Figure 4. Big area of degraded forest.
Author picture

3. Show using aerial photographs the percentage of nature cover (vegetation) remained in the town.

4. CONCLUSION

As we analyze the SNUC Law, may Environment Protect Areas, cover part of the town with its parks and botanic gardens and parts covered with natural vegetation and even forest. These areas are venerable under the legislation and the development of the human occupation, with no control methods in the town.

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