

# Preserving **Biodiversity** in São Paulo





### Population Growth

**1870 - 30,000**

**1900 - 240,000**

**2005 - 10,744,060**

**Urbanization  
Rate (%): 92.46**

**Area (km2): 1,509**

**Rate of Population  
Growth (average)  
2000/2005: 0.60**









## Green Areas

The remaining forest areas of the municipality of Sao Paulo are equivalent to 21% (32798 hectares) of its territory.

2 APA  
33 Urban Municipal Parks  
7 Natural Parks  
(6 in process)

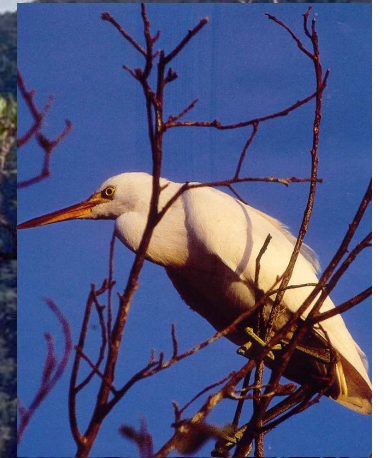








# BIODIVERSITY IN SAO PAULO





# BIODIVERSITY IN SAO PAULO

## **Mammals**

- It has been observed a total of 58 wild mammal species, with 47 endemic species, 18 of them threatened and 5 probably threatened

## **Birds**

- It has been identified 285 species of birds
- Among them, 44 species endemics to the Atlantic Forest



**Within the  
Ibirapuera Park  
135 species of  
birds have been  
identified,  
some of which  
are threatened  
by extinction**

## Guia das Aves do Parque Ibirapuera





# BIODIVERSITY IN SAO PAULO

## **Reptiles and amphibians**

There has been observed

- 37 species of reptiles
- 40 species of amphibians (21 endemic)





# BIODIVERSITY IN SAO PAULO

## Flora

Considering data from the Environmental Secretariat and the Biota project, on 46 points of observation and collection in the city, it's possible to identify 1,514 species of angiosperms, 73 pteridophytes and 8 gymnosperms.

# REMAINING GREEN AREA IN SÃO PAULO





# BIODIVERSITY IN SAO PAULO



# Threats

- Poverty
- Migration into environmental protected areas
- Illegal occupation of the land
- Illegal deforestation
- Illegal hunting
- Launching sewage in natura into water courses
- Illegal collection of forest species
- Lack of knowledge about biodiversity
- Protected areas without economic value







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POPULATION GROWING RATE	%/YEAR
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Município de São Paulo	0,40
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Distrito de Parelheiros	4,31
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Distrito de Marsilac	8,22
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# SAO PAULO PROTECTING BIODIVERSITY



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## **STRATEGIC MASTER PLAN**

Aproved in 2003, it defines the land use in São Paulo; stablshs special zones for environmental protection, to sustainable development, to agricultural activities, etc.

## **MUNICIPAL APAS.**

2001: Creation of the Municipal Area for Enviromental Protection – APA Capivari Monos

2006: Creation of the Municipal Area for Enviromental Protection – APA Borore Colonia.

# SAO PAULO PROTECTING BIODIVERSITY



**MUNICIPAL ENVIRONMENTAL  
PROTECTION AREA (APA)**

**CAPIVARI-MONOS**





# APA Capivari-Monos



# APA BORORÉ-COLÔNIA



FOTO *apud*. CAPOBIANCO & WHATELY, 2002



# SAO PAULO PROTECTING BIODIVERSITY

## **POLITICAL INTEGRATION**

- An integrated program for the protection of Sao Paulo's Environmental Areas was created in 2005, and was strongly reinforced in 2007, integrating policies and programs between the local government and the State of Sao Paulo.
- The project aims to protect the rich biodiversity and guarantee the preservation of the water sources which represents around 30% of Sao Paulo's consumption of potable water.

# SAO PAULO PROTECTING BIODIVERSITY

## **THE MUNICIPAL ENVIROMENTAL POLICE**

- A new Municipal Environmental Police Division was created in March 2007, with 200 municipal guards designated exclusively to protect both Environmental Protection Areas in the southern part of Sao Paulo City.



# SAO PAULO PROTECTING BIODIVERSITY

## **RIPARIAN PARKS (parques lineares)**

- Sao Paulo is developing a large programme to recover degraded riparian areas.
- There are about 20 riparian parks in projection and construction at many regions of the city.
- The main aim is to improve urban quality of life and recover the vitality of water courses.
- Riparian revegetation, leisure and bicycle exclusive routes are the core of this project.

# SAO PAULO PROTECTING BIODIVERSITY

## **MUNICIPAL PROGRAMME OF TREE PLANTING**

- Since 2005 the City is planting around 180,000 trees by year, using about 100 different species of native flora of the Atlantic Forest.
- The program aims to increase green covering of the city and to create corridors for circulation of the avifauna that stills lives in the city.



# SAO PAULO PROTECTING BIODIVERSITY

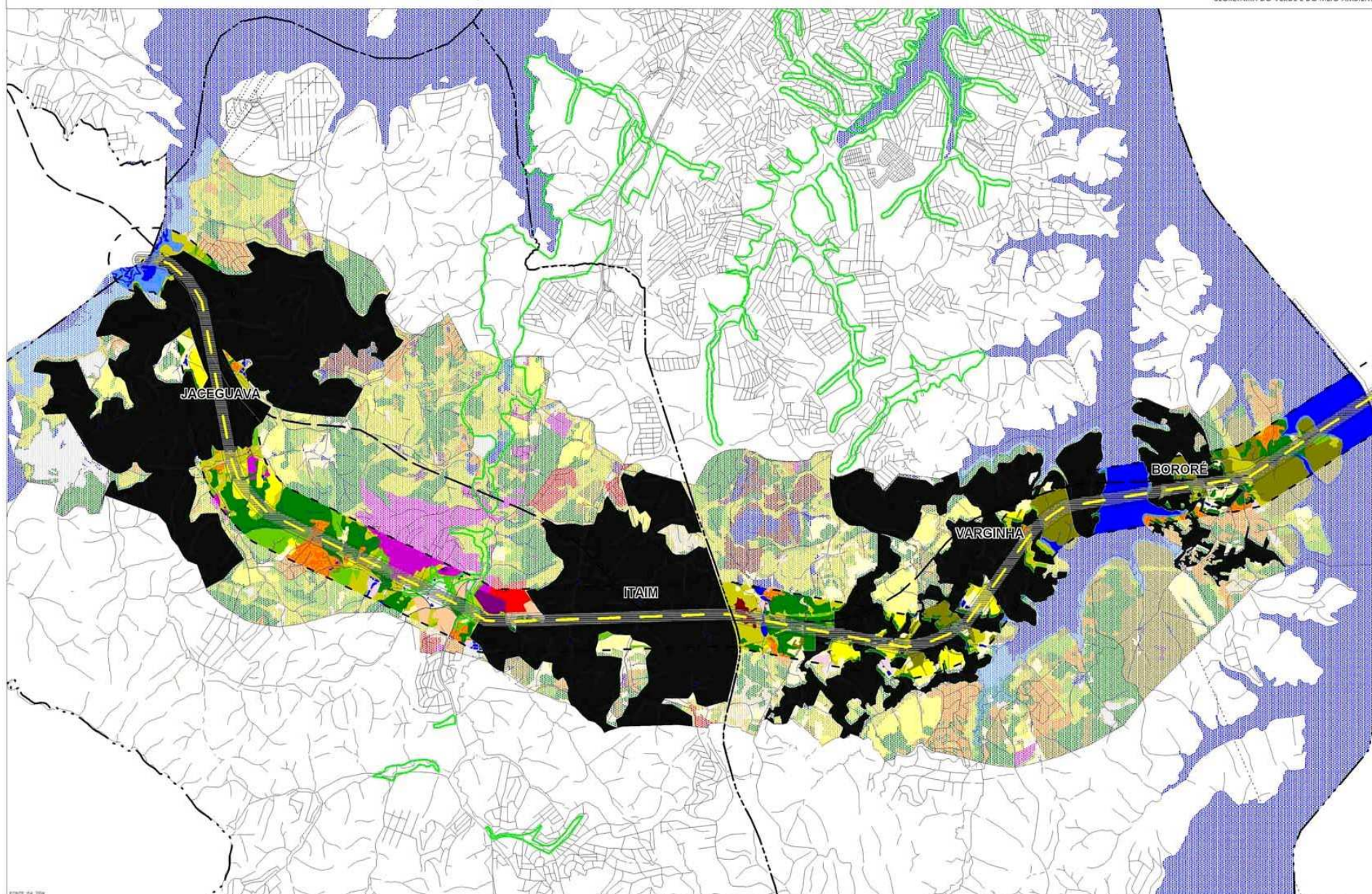
## **“Rodoanel” News Natural Parks**

- 4 natural parks surrounding the new highway belt will be created to compensate the environmental impact for its construction around the metropolitan region of Sao Paulo, in its southern zone.
- The creation of these four Municipal Natural Parks, with a total area of 1,200 ha and a 300 meters forest buffer zone on each side of the highway (24 km in Sao Paulo) will contribute to protect the biodiversity in a very threatened region of the City.



# RODOANEL MARIO COVAS (Trecho Sul - Modificado) - PROPOSTA DE UNIDADES DE CONSERVAÇÃO SVMA

PARQUES EM ZEPAMs e ESTRADA PARQUE em faixa de 300m por lado da via



**VEGETAÇÃO NATIVA**

- Matas
- Mata Secundária - Avançada
- Mata Secundária - Inicial

**USO RURAL**

- Chácara / Sítio
- Agricultura
- Campo Antropico / Pastagem
- Silvicultura Exótica

**USO URBANO**

- Urbano Denso
- Urbano Baixo Padrão
- Ocupação Dispersa
- Ocupação Dispersa - Baixo Padrão

**OUTROS USOS**

- Solo Exposto
- Clubes e Equipamentos Lazer
- Garagens e Industriais
- Minações



**ELEMENTOS SISTEMÁTICOS**

- Represas
- Represas (deletois)
- Hidrografia
- Parque
- Rede Viária
- Linhas Superficiais

**RODOANEL**

- RODOANEL (trecho 2002)
- RODOANEL (último traçado)
- Área com Perímetro

**Parques Propostos - RODOANEL e Plano Diretor**

- Parques ZEPAM
- Estrada Parque (300 metros)
- Parque Linear Proposto
- PCR 2004

Áreas em km² (valores aproximados)

ZEPAMs Interceptadas	Corte por RODOANEL	Parques ZEPAMs
Jacaguá: 7,4 (3,4 + 4,0)	0,4	7,0
Itaim: 5,4	0,4	5,0
Varginha: 5,0	0,5	4,5
Bororé: 1,2	0,3	1,0
<b>Total: 19,0</b>	<b>1,6</b>	<b>17,4</b>





# SAO PAULO PROTECTING BIODIVERSITY

## **International Herbarium Index:**

The municipal Herbarium is part of the international data base *Index Herbarium*, which unites botanic information's from all over the world, which enables the exchange between specialists and the public in general.

# Veterinarian Department



Veterinarian Department - Ibirapuera Park

This project incorporates a very qualified team of professionals specialized in veterinary, biological and nutritional sciences.

The Technical Department of Veterinary Medicine and Care for Wild Fauna, created in 1993, provides veterinarian care to wild animals in Sao Paulo city, specially for animals arrested in repression against wildlife smuggling.



Entrance of a Gavião-peneira



## Clinical Service Ararajuba



## Veterinarian Assistance

Clinical-surgical veterinary services, with laboratorial support, are delivered to the wild animals brought by individuals or by the Center for Control of Zoonosis, the Fire Department, the Police and IBAMA.

Veterinarians, biologists and nutritionists supervise the treatment.

## Feeding an anteater baby

### Rehabilitation

After treatment, many animals need to be reintegrated into nature through rehabilitation periods in nurseries and sanctuaries.

The rehabilitation process aims to recuperate the anatomy, functions and behavior of the animals that may be potentially released back into their natural habitats.



**Rehabilitation place for Caracarás  
Falcons – Anhanguera Park.**

## Destination

Majority of the animals are released in the area they were found or where their species use to live. Those not able to rehabilitation are destined to zoos, if authorized by IBAMA. Of the 23,753 native wild animals entered to the Division (1991 to 2006) around 12,250 (52%) were reintroduced into their natural habitats.



## Reintroduction

The Reintroduction Program enables a more detailed study of the animals and more detailed research about the best natural areas free the animals. During the 10 years of the program, 9 groups of monkeys were formed, with 5 births still in captivity, resulting in the release of 23 individual monkeys. Once in their natural habitat, two new births were confirmed.

Soltura de família de Bugios na região sul do município de São Paulo

# ENVIRONMENTAL EDUCATION

- Free University for Environment and Culture of Peace.
- Green and Healthy Environment Program.  
There are 6,000 health communitarian agents under training activities on health and environmental issues.
- Environmental Agenda on the Public Administration – A3P.



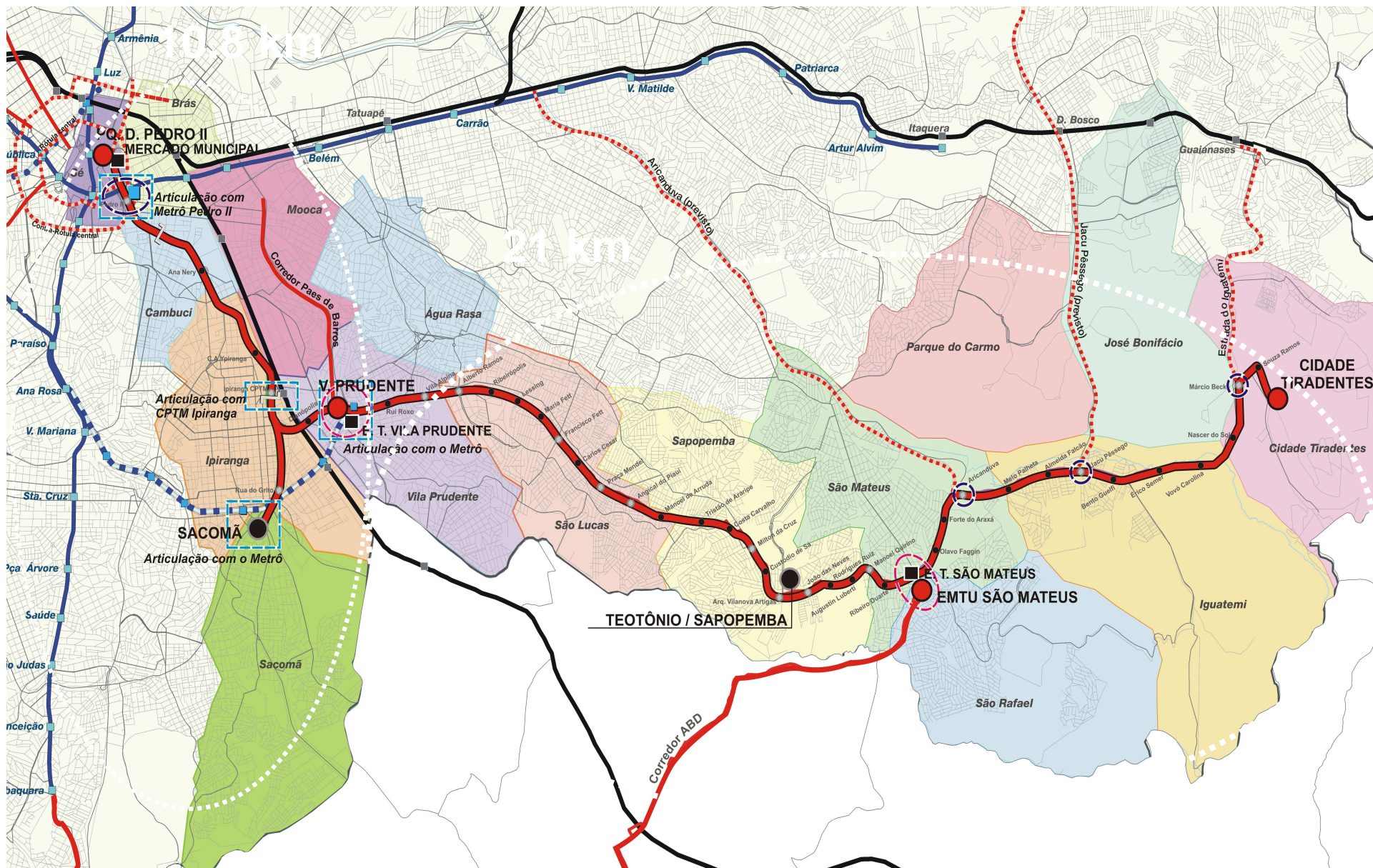


**Ipiranga Park and Museum**

## OTHER ENVIRONMENTAL ACTIONS

- Municipal Committee for **Climate Change and Eco-Economy**;
- Creation of a Technical Inter-secretariat group to propose a **Municipal Program for Sustainable (Green) Procurement**;
- “Expresso Tiradentes” a new **Bus Rapid Transit** with 33 km – 450,000 persons per day per direction.





**Extension of the BRT "Expresso Tiradentes" :**  
 165 km<sup>2</sup> (11% of the total area)  
 1.5 millions inhabitants (17% of the total)



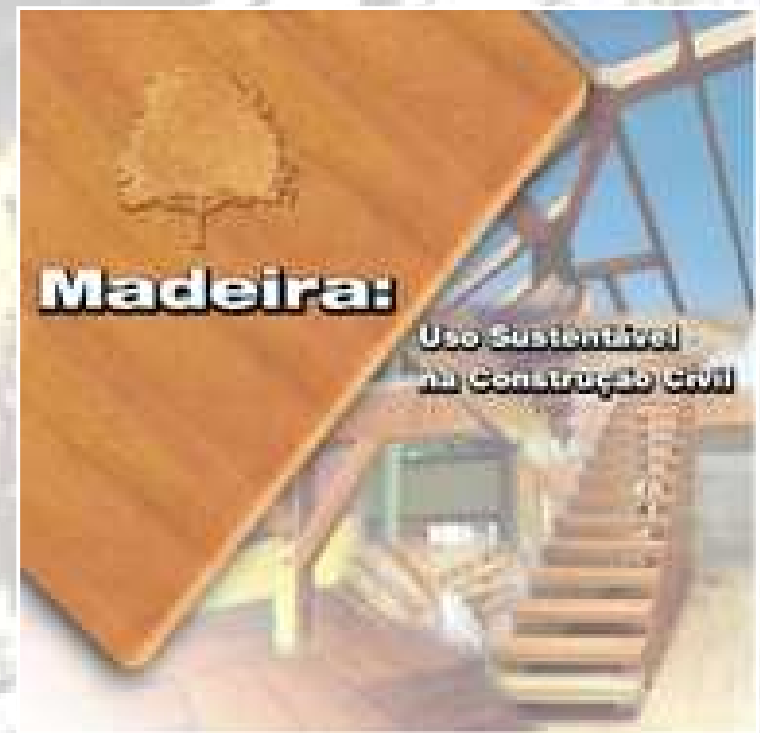
# São Paulo's Green Belt Biosphere Reserve

- Incorporated in 1993 as an integral part of the Atlantic Forest Biosphere Reserve, covering another 72 municipalities



# Amazon's Deforestation

- 47% of the wood exploited in Amazon is illegal;
- 70% is consumed inside Brazil;
- Sao Paulo consumes 20% of the internal market.



# São Paulo: Amazon's Friends Cities

June of 2005  
Adhesion to the  
Greenpeace campaign  
*'Friends of the Amazon'  
Cities*, with the  
Commitment of the  
Municipal Administration  
to eliminate illegal wood  
use from purchases  
municipal.







# Green and Environment Secretariat

## Secretaria Municipal do Verde e do Meio Ambiente



<http://www.prefeitura.sp.gov.br>