

## **URBAN SEGREGATION AND SUSTAINABILITY IN SAO PAULO, BRAZIL**

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### **Summary**

The economic sustainability of the Metropolitan Area of São Paulo is discussed in view of its urban, environmental and socioeconomic problems, causing a very segregated urban structure. Brazilian economic development has historically promoted widespread social exclusion, aggravated during the 1990s with Brazil's expanded role in current economic globalization.

The São Paulo Metropolitan Area, ranking first in the national economy and housing Brazil's largest urban population, has become the clearest arena of oppositional forces of economic change in Brazil. On one hand, it hosts the most advanced activities in the banking, financial and technological sectors.

On the other hand, it has been the stage for sharply increasing spatial segregation—due to an ineffective low-cost housing policy, associated with the structural high concentration of personal income, and increasing unemployment—and environmental problems, such as air pollution and traffic congestion, as outcomes of inefficient public transport.

### **1. Introduction**

This paper discusses the economic sustainability of the Metropolitan Area of São Paulo in view of its urban, environmental and socioeconomic problems, causing a very segregated urban structure. Brazilian economic development has historically promoted

widespread social exclusion, aggravated during the 1990s with Brazil's expanded role in current economic globalization. The São Paulo Metropolitan Area, ranking first in the national economy and housing Brazil's largest urban population, has become the clearest arena of oppositional forces of economic change in Brazil. On one hand, it hosts the most advanced activities in the banking, financial and technological sectors. On the other hand, it has been the stage for sharply increasing social exclusion and urban segregation.

Some of the essential issues that this metropolis must address energetically are air pollution, inefficient public transport, traffic congestion, an ineffective low-cost housing policy, associated with the concentration of structural income, and increasing unemployment.

These issues involve public authorities and the entire society, and will have to be dealt with suitably if adequate urban sustainability is to be achieved in the next decades. A factor conditioning a better quality of life for the majority of the population is São Paulo's ability to maintain its current economic leadership within the country and the Mercosur bloc.

## **2. São Paulo Environmental Features**

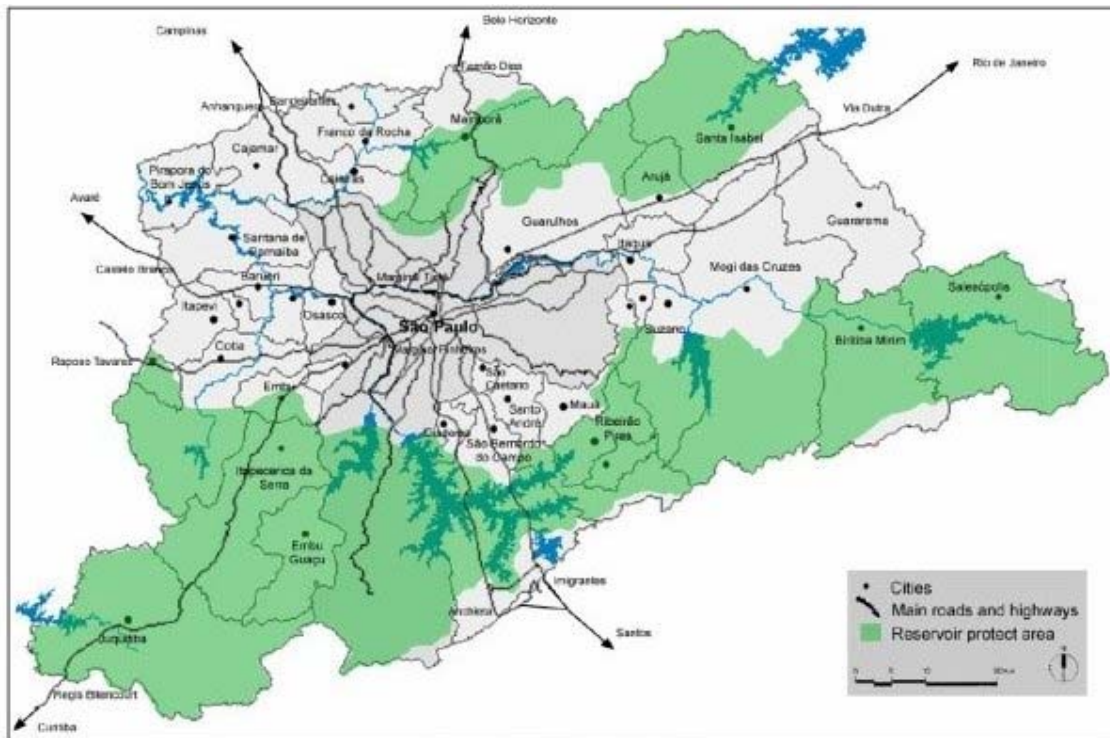
The São Paulo Metropolitan Area, with 39 municipalities, according to the Brazilian Census elaborated by the Fundação Instituto Brasileiro de Geografia e Estatística (federal agency responsible for the national statistics), in 2000 housed 17 878 703 inhabitants, representing over 10% of Brazil's population, and produces about 20% of the nation's entire value-added in manufacturing. São Paulo City is the metropolitan's core city, with 10 434 252 inhabitants at the same date. It harbors most of the modern businesses, services and leisure activities developed within the São Paulo state and Brazil.

The metropolis is located on the tropic of Capricorn and sits on a plateau ranging from 715 to 900 meters high called "Planalto Paulistano", which shapes the climate features—mild, with a cold dry winter and a hot humid summer. The annual average temperature is 19°C and the annual rainfall is 1500 mm., with most showers occurring from October to March, as registered in the reports of the Companhia de Tecnologia de Saneamento Ambiental (São Paulo State Company responsible for the control of environmental pollution). The weather is also strongly determined by large-scale atmospheric systems, such as high and low pressure zones, cold fronts, and solar radiation disparities throughout the year.

These influences result in frequent storms in the summer, and a clear dry sky with frequent downdrafts that cause thermal inversion, in the coldest winter months. The latter phenomenon usually disfavors air dispersion, and favors the build up of air pollution, which is normally high at this time of the year.

The entire metropolitan area is drained by the Alto Tietê water basin that cuts across the urban landscape east to west, and that is composed of three main rivers: Tietê, Pinheiros and Tamanduateí (Map 1). The central ridge, "Espigão da Paulista", has altitudes higher

than 800 meters. Situated between the Tietê and Pinheiros rivers, it also represents the most symbolic area of São Paulo City, the hub of modern head offices of banks and of other powerful corporations and entities.



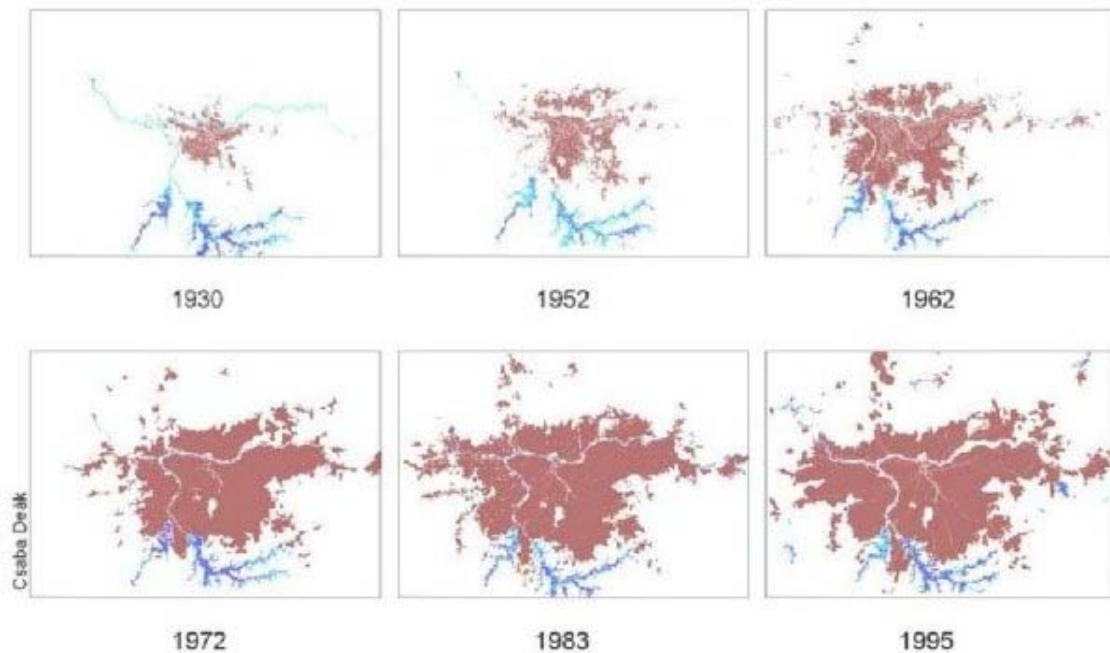
Source: EMPLASA (1994).

Map 1. São Paulo Metropolitan Area  
Geographical and Physical Information (1994)

The City's drainage system is a recurring problem during the summer months. Each year the flooding is aggravated by the expanding urbanized area (Map 2), resulting in increasingly larger areas of impermeable soil, especially in the region of the Alto Tietê hydrological basin. The urban areas most affected by flooding are those off the beltway built along the Pinheiros and Tietê rivers. This beltway is the main thoroughfare used to cross the metropolis and is the link-up with major state highways. The flooding along the banks of smaller streams dispersed throughout the urban landscape also contributes to the plight of the population, causing great and small disasters; muddy water invades homes and obstructs the flow of traffic, as frequently detailed in several reports by the Companhia de Saneamento Básico do Estado de São Paulo (São Paulo State Water Agency).

The city water supply is guaranteed by the connection of three basins: Alto Tietê, Piracicaba and Baixada Santista, which form the Cantareira System. Metropolitan water demand was roughly 57 m<sup>3</sup>/s in 1996, whereas water production was 59.7 m<sup>3</sup>/s, indicating a critical balance for any anticipated growth in the decades to come. This is even more alarming if we consider that the principal water reservoir areas, Billings and Guarapiranga, situated south of the metropolitan area, have been suffering from rapid

and intense invasion caused by ballooning, illegal, low-income housing settlements, as will be further discussed.



Source: Csaba Deák, from raw CESAD – FAUUSP

Map 2. Expansion of the urbanized area of Greater São Paulo (1930-1995)

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### **Biographical Sketch**

**Prof. Sueli Ramos Schiffer**, whose career has focused on urban and regional development, has been working at the School of Architecture and Urban Planning of the University of São Paulo (FAUUSP), as a researcher and teacher for 25 years. Appointed Titular Professor in 1997 and Head of the Department of Technology (one of the three departments of FAUUSP) from 1998 to 2002, Prof. Schiffer was leading over 35 professors who were involved in graduate and post-graduate teaching and research in this field.

Prof. Schiffer obtained her Bachelor’s degree in Architecture and Urban Planning (1975) from the School of Architecture and Urban Planning of the University of Sao Paulo, Brazil (FAUUSP), as well as her following degrees. For her Master’s degree (1983), she developed a thesis focusing on urban development and politics, with a case study of the city of Petrolina. The PhD (1989) and Associate Professor’s degrees (1992) were both achieved through dissertations that focused on the regional development of the State of São Paulo, with an integrated socio-economic and geographical approach.

After nine years of teaching environmental construction, while simultaneously carrying out research focusing on urban and regional development, Prof. Schiffer began teaching urban and regional planning methodologies. Since 1986, she has been engaged in academic research and governmental consulting work for national and international agencies and universities, in which the economic, historical and physical aspects of urban form and development were studied within an integrated approach.

In the second semester of 2001, Prof. Schiffer has taken a sabbatical term to carry out research at the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) in Rome, within the Heritage Settlements Programme, looking into the links between culture heritage investment and poverty alleviation. During her stay at ICCROM Prof. Schiffer also developed a research project focusing on recent trends within the São Paulo economy which is demanding new urban and management approaches, where heritage conservation may have a priority role in fostering social cohesion and minimizing increasing local poverty and crime rates.