

Using greenways to reclaim nature in Brazilian cities

Marisa T. Mamede Frischenbruder^a, Paulo Pellegrino^{b,*}

^a *Geography Department, School of Social Sciences, Pontifícia Universidade Católica de São Paulo, Rua Girassol 584/502-A, 05433-001 São Paulo, SP, Brazil*

^b *Design Department, School of Architecture, University of São Paulo, Rua do Lago 876, 05508-900 São Paulo, SP, Brazil*

Available online 19 December 2004

Abstract

This paper presents eight recent case studies of greenways proposed or implemented in Brazil ranging in scale from a state-wide plan to landscape design for a specific site and also describes the strategies used in each example to preserve, restore and create green spaces. Each case study is analyzed according to its capacity to contribute to a more sustainable urban environment and to foster a more livable and significant landscape. This “blue” and “green” infrastructure is happening as a consequence of changes in the criteria used by public administration and private agents which previously saw each open creek, wetland or forest patch in the middle of or adjacent to an urban area as an empty space and a potential building or road construction site. This more environmentally concerned approach to planning and design, previously shared only by some visionaries in universities and other research centers, is gaining momentum. It is becoming visible across the whole spectrum of Brazilian cities and regions, and is becoming part of the agendas of local communities and public administration.

These case studies were chosen from a survey undertaken by the authors among planners, designers and researchers in universities, in public and non-governmental bodies and in the private sector, involved in the planning and designing of greenways. © 2004 Elsevier B.V. All rights reserved.

Keywords: Urbanization; Urban green and blue infrastructure; Local authorities; Urban planning

1. Introduction

Greenways are linear open spaces that could perform ecological and social functions such as maintaining biological diversity, protecting water resources and promoting recreational and social cohesion, all by providing the crucial connectivity among green urban

areas and other remnant vegetation patches across a landscape (Hellmund and Smith, 1993; Forman, 1997). Following an inclusive definition of greenways as proposed by Ahern (1995), those linear elements in the landscape form networks planned, designed and managed for multiple purposes and their key attributes are:

- (1) Their linear configuration which offer advantages over other landscape elements in terms of movement and transport.
- (2) They realize a synergy based on the linkages across special scales.

* Corresponding author. Tel.: +55 11 3091 4527;
fax: +55 11 3091 4527.

E-mail addresses: marisafr@uol.com.br
(M.T.M. Frischenbruder), prmpelle@usp.br (P. Pellegrino).

- (3) Greenways are multifunctional and can make various uses compatible.
- (4) Social environmental sustainability can be achieved if one recognizes the potential of the greenways for creating a balance between social use of the landscape and conservation of natural resources.

These attributes make the greenways a tool that is strategically available to transform whole landscape mosaics just by focusing on riparian corridors and other environmentally sensitive areas through managing the flows, which could be used in a more synergistic manner (Ahern, 1995; Machado et al., 2001).

By bringing together design and ecology, the greenways can make a meaningful contribution to more livable cities while connecting people with nature, bridging the gap that is apparently irreversible between human needs and natural processes, at least in the rapidly urbanizing regions in the developing world (Pellegrino, 1987).

The lack of specific literature related to greenways in Brazil demonstrates how controversial this issue is in the planning and design milieu, as well as in academic debate. The use of the Portuguese equivalent word “caminhos verdes” is not yet in common usage, even in recent years and in the most relevant institutions.

In Brazil, besides specific laws and isolated projects, there has been little emphasis placed on open spaces or greenways to protect natural corridors in previous planning efforts. Nowadays, however, most Brazilian cities are creating master urban plans to regulate their growth and are introducing and implementing the concept of greenways, such as in the examples that have been gathered as part of this study.

The adoption of open space initiatives in near record numbers has been apparent over the last decade. With the rapid growth and consequent decay in environmental quality (Detwyler and Marcus, 1972; Cavalheiro, 1991; Bernstein, 1994), in many cities, the link between open space policies and growth management is becoming clearer than ever before. However, the impact of open space preservation on urban development patterns is not yet well understood. In fact, open space programs have rarely been examined as overt growth management tools (Pellegrino, 1995). This paper provides an overview of the nature, function and objectives

of greenways initiatives that are using state-of-the-art scientific, technical, legal, and social support.

It also speculates how these greenways may affect the shape and form of cities and how their regions can be enhanced by decision-making based on an inclusive and open public process, without precluding future development, and also assist in the revitalization of urban tracts by coordinating and encouraging improvements in infrastructure.

The case studies presented here were analyzed in terms of:

1. expansion and enhancement of public and open spaces based on their use as diverse mixed-use magnets for tourism, education and recreation, with residential, commercial and neighborhood amenities;
2. being part of a comprehensive transportation plan with expanded regional and local connections, linking neighborhoods and improving paths for pedestrian use;
3. promoting sustainability and excellence in design, with environmentally sensitive development.

In general, these selected greenways and their respective researchers and planners express a sense that economic growth can no longer be a license for environmental recklessness. They provide the current context and encourage their creation through connections that are made based on the principles used to describe an ecosystem at the edge or inner part of a city anywhere on the territory those greenways were established.

This leads to an acknowledgment that other areas of expertise could be drawn upon before the design process begins, such as geography, biology, anthropology, economics, landscape ecology, hydrology—the entire range of disciplines on which any plausible interpretation of the landscape must depend (Hellmund and Smith, 1993; Ndubisi, 1997). But without credibly constructed models, we have no means of judging the relative merits of whatever designs are suggested.

The change in the criteria used until recently by most public and private agencies in Brazil got a boost with the nation's new constitution after the end of the military regime in 1988. This new constitution created a set of laws for environmental affairs that was state-of-the-art at the time, consolidating a series of legal tools that, if strictly followed, could turn each waterway and their surroundings with native vegetation patches into greenways all around the country. For example, native

Download English Version:

<https://daneshyari.com/en/article/1050577>

Download Persian Version:

<https://daneshyari.com/article/1050577>

[Daneshyari.com](https://daneshyari.com)