

## Urban Ecology as a tool for analysis of the urban free spaces system

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The systems of free areas refer, within the concepts of Urban Ecology, to the relations of connectivity and complementarily, considering the environment, circulation, urban drainage, leisure, imaginary, memory and social life of urban spaces free of public or private buildings, planned or not. (Leite, 2011; Forman, 1997; Ahendt, 2004; Ahern, 1995).

For environmental and landscape studies, the concept of connectivity includes a set of possibilities regarding the connection of cultural and environmental values and contributes to new possibilities for planning of cities considering the challenges of sustainable urban development. In this work, we present a proposal of analysis of the potentialities of the use of a free urban area located in the Jardim Botânico neighborhood, in the South Zone of the city of Rio de Janeiro (Brazil), through the expanded analysis of the free area system as a part of the neighborhood object of this study.

The work was organized considering the definition of the area to be studied and the selection of the areas to compose the system of free areas (studied), connectivity analysis and covered area (local, urban, territorial) of the studied areas, survey of use and hierarchy of accessibility between public, private and transitional areas of free spaces, hydrographic, wind and vegetation analysis in the scope of the study and consultation of users regarding the perception of negative and positive aspects of the region, as well as potential future use of intervention in the field. The urban afforestation and the connection of the green corridors, as well as the rainwater management, were considered as relevant issues to compose guidelines of actions for the area under study.

The expanded analysis of the system of free areas, covering biophysical, urban and cultural aspects, based on the concepts of Urban Ecology, allowed us to determine the main characteristics to be considered in the intervention project of the studied area.