

Creating Sustainable Urbanity in the Fringe

The Periphery as an opportunity for future Centrality

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Abstract: The focus of this research – Sustainable Urbanity in the Fringe – is in the strategies to transform infrastructural improvements for containing risk hazards generated by climatic and geographical conditions, particularly in informal settlements, into sustainable and culturally relevant urban environments, in particular in South America (Colombia and Brazil).

Keywords: urban fringe, risk hazard, climatic issues, informal settlements, waterfronts.

Continuous growth of the Informal settlements in the floodable plains, with its impervious surfaces substituting marshes, has led to prolonged water invasions in vast urbanized environments in the world, in particular in South America in the countries of Colombia and Brazil.

Through focusing on proposals and projects, professors and students from the Universities of Florida, (USA), Sao Paulo (Brazil) and Chieti (Italy) in collaboration with urban administrators and local authorities, are creating a meaningful and multifaceted library of alternatives, exemplifying actions in specific situations, but also able to reach a level of generality that can be translated into alternative scenarios.

We have focused in the last three years, in the strategies to transform infrastructural improvements for containing risk hazards generated by climatic and geographical conditions, particularly in informal settlements, into sustainable and culturally relevant urban environments.

The University of Sao Paulo proposes to create a new water ring surrounding the urban development and providing a new transportation channel for goods as well as a container for the periodic floods. Jointly we are exploring the treatment of these infrastructural improvements as generators of positive urban environments that allow us to visualize new

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centrality opportunities in the periphery, while responding to the resilience to be built with the metropolitan scale water retention spaces.

The periphery, in this case Jardim Pantanal in the Eastern area of Sao Paulo, is constituted by informal settlements dating from the seventies. It has developed mostly without Government investments, by speculative private sectors. This studio aims to visualize the possibility of going far beyond the attention to the current needs in risks mitigation, and transforming these areas to accompany the Sao Paulo trend of a polycentric metropolis, into new local centralities.

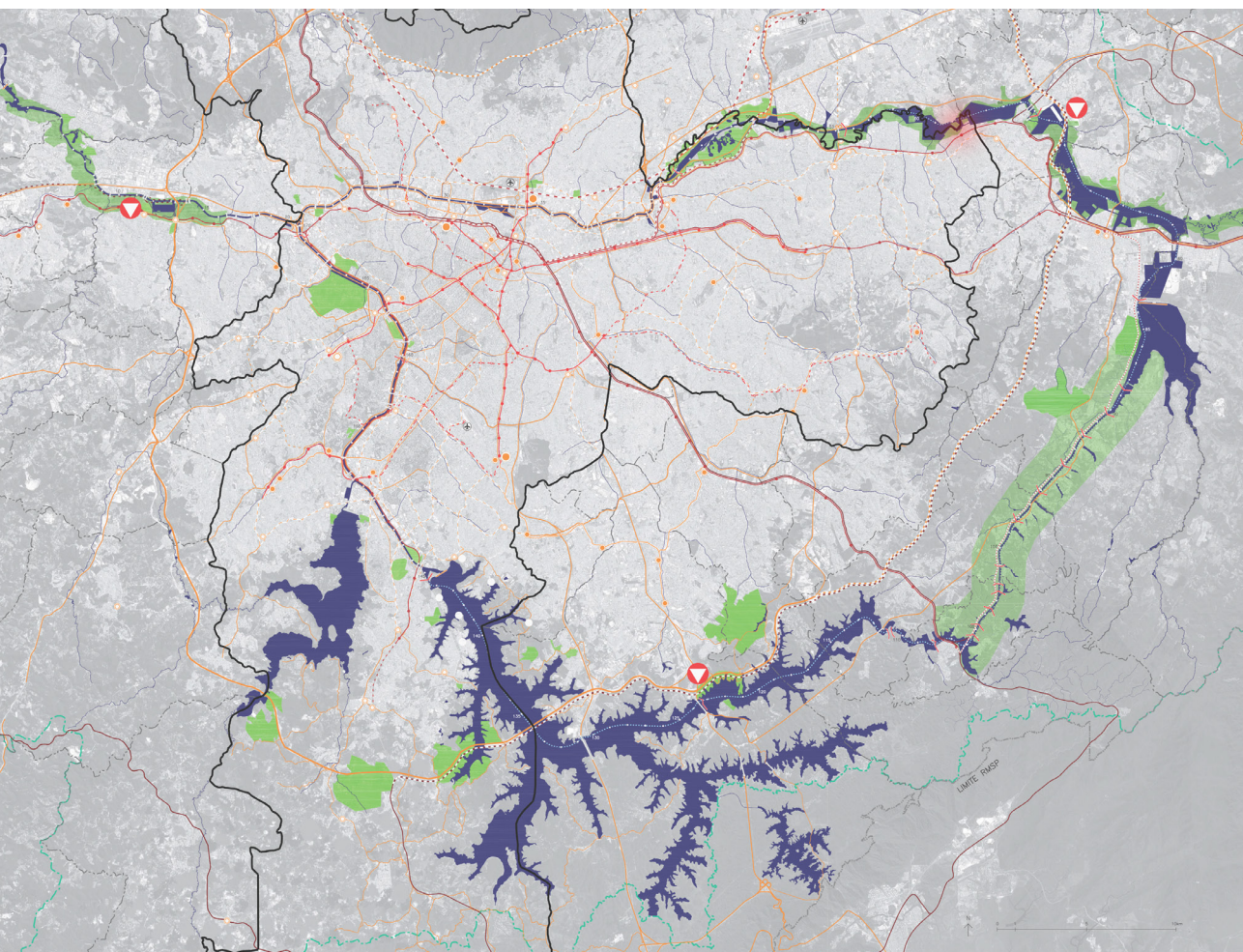


Fig. 1. The project for the Hidroanel Metropolitano de São Paulo FAUSP, where the Jardim Elena projects are developed in the north eastern areas

In this paper we will present projects in two locations, the area of Jardim Elena, in Sao Paulo, Brazil and the area of Agua Blanca in Cali, Colombia. The University of Sao Paulo has made ambitious proposals for the city, through the overarching Hidroanel Metropolitano, under the leadership of Professor Alexandre Delijaicov, (Fig.1) that creates a navigable waterway around the metropolis, with the double purpose of alternative navigation in barges for bulk products, and the containment of the floods. This is achieved by the construction of connected rivers and infrastructural basins, large enough to be able to retain the flood waters. The new proposals limit, border, and will finally protect, vast expanses of informal settlements that will then acquire a waterfront, that beyond its port activities, will be the new East side amenities provided to the settlements. This proposed infrastructural element, will then transcend its initial functional purpose of navigation and flood containment, for what it was proposed for, to become the spring board of a renovated peripheral identity. Various strategies were explored by our G 2 Studio 2013 in the Graduate School of Architecture,UF, co-directed by Nancy Clark and Martha Kohen, in the Florida-Sao Paulo Dialogues. They included the following six lines:

1. Urbanizing the Metropolitan access nodes (Fig.2). Understanding the transformation of regional train lines into metropolitan suburban lines, this project develops for the train stop a commercial and cultural hub, linked as well to the new waterfront by small scale waterborne transportation.

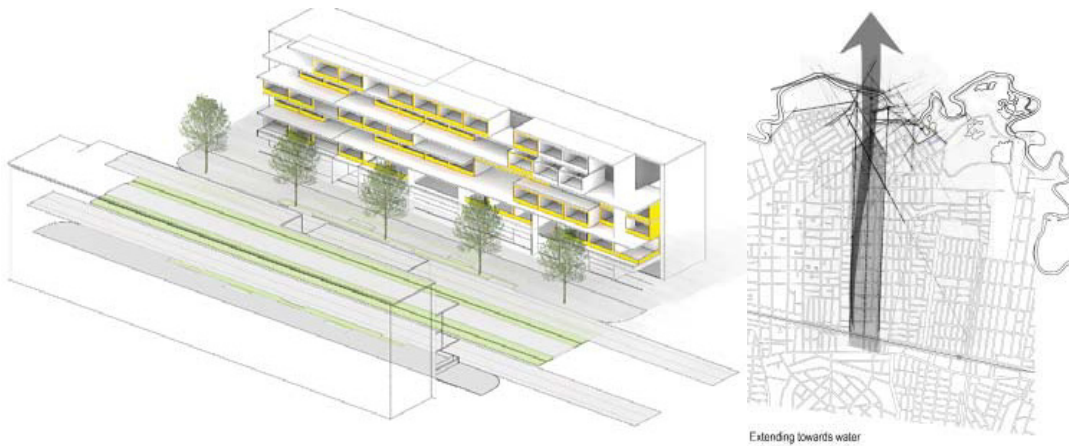


Fig. 2. Hidroanel Metropolitano de Sao Paulo USP

2. *Threading Metropolitan access to the waterfront* (Fig.3). This project focuses on linking, through urban substitution and improvement, the new metropolitan access point to the waterfront, envisioning adaptive and connective paradigms at territorial scale, replacing residential endangered units, creating economic development opportunities as well as visions of the alternative waterfront use.



Fig. 3. *Threading Metropolitan access to the waterfront*. Student Omayra Diaz



3. Maximizing waterfront values for education (Fig.4) This project develops the current Sao Paulo CEUs (Centros de Educacao Unificados) policy into a coastal location, addressing a Social pattern with an innovative outlook, potentially creating a springboard for increasing navigation potential, and managing new conditions in natural resources creating an unforeseen sustainable proposal.



Fig. 4. Maximizing waterfront values for education. Student Mario Lambert

between the natural and constructed worlds, inclusive of the infrastructural dimensions.

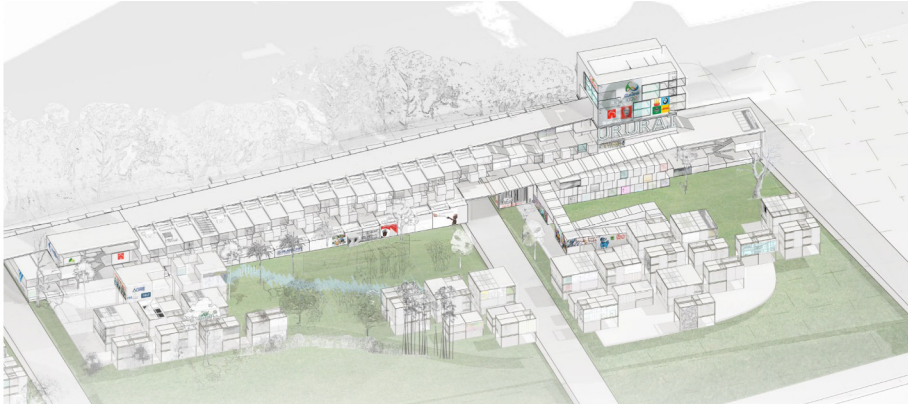


Fig. 6. Transitional Justice in Urai', Housing and Memory. Student Paul Stanley

6. *Creating a beacon identity for the periphery* (Fig.7) An ambitious proposal that creates the infrastructural framework for a metropolitan, and even national venue, associated with the transportation network, the residential eastern development, with the effect of creating a vertical identity marker, associated with the waterways infrastructure to define the character of the city of the future, housed in the infrastructural periphery.

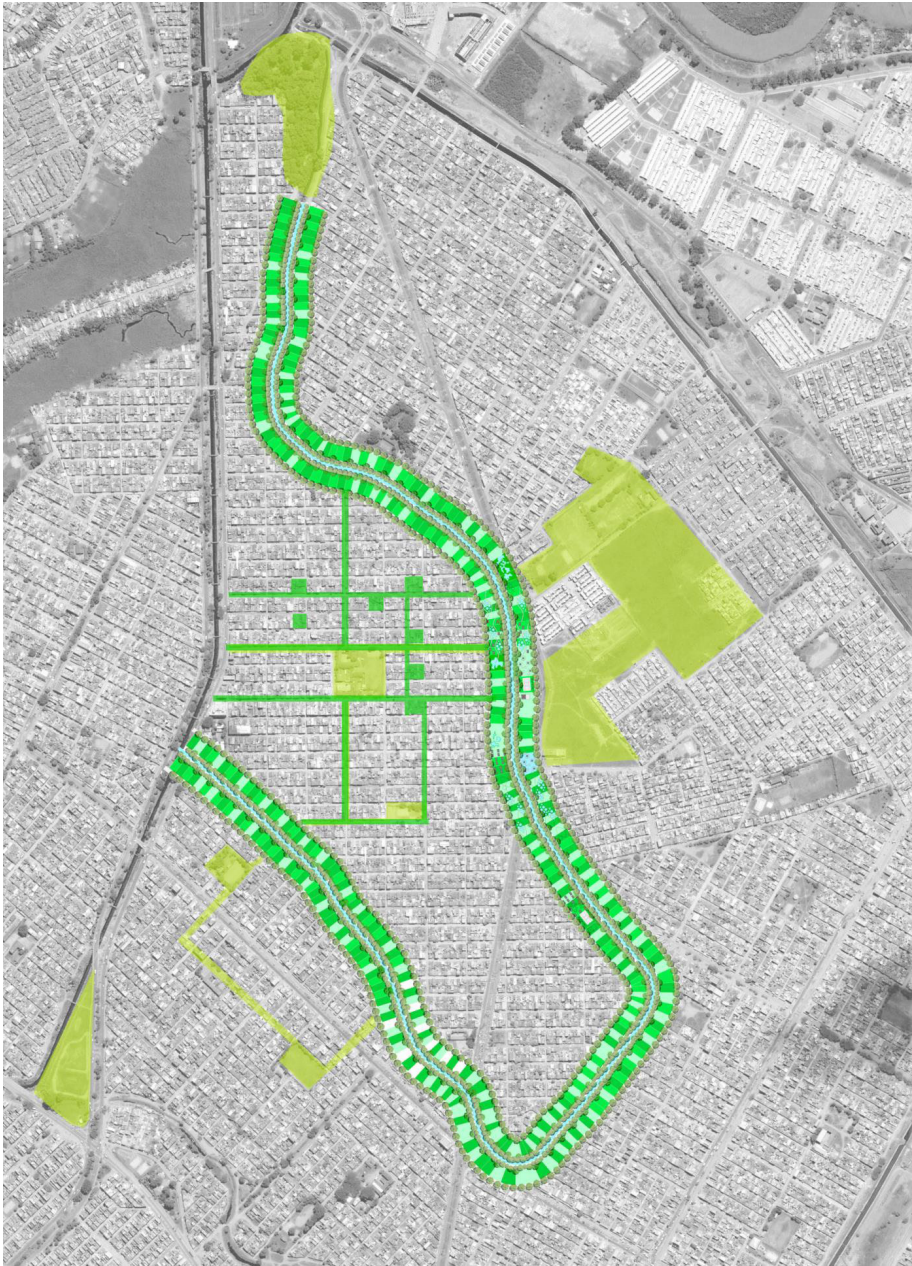


Fig. 7. The vertical Soccer metropolis: a Meca do Futebol. Student Jonathan Arcila-Garcia

For the city of Cali, the vastness of the phenomena of periodic flooding by the river Cauca directed the study (Fig.8) to recreate the original rivers and creeks patterns, but bordered by agricultural development acting as a buffer zone and simultaneously providing economic development opportunities. The figures show the aerial view of the flood plain with its channeled watercourses, and the proposal for renaturalization of the margins with the introduction of agricultural activities as buffer



Fig. 8. Agua Blanca, Cali. Student Kimmel Chamat



areas for the containment of water rise. In this case also, through the use of the infrastructural proposals, new goals of social inclusion and resilience are introduced, though the components for an enhanced cen-

trality are dependent of the effectiveness of the infrastructural conditions that precede them.

These strategies, stemming from infrastructural projects associated inclusively with urban design work in the direction of reestablishing the wholeness of the city, working in a multiplicity of concurrent realms involving the environmental , transportation, socio-economic, civic and cultural domains, ascribe pedagogical value to the integrality of the approaches, contextualized and summarized in the architectural realm through transmissible visioning accessible to communities and local authorities.

Credits

- (1) Hidroanel Metropolitano de Sao Paulo USP
- (2) Urbanizing the Metropolitan Access nodes. Student Marut Anguratanawech
- (3) Threading Metropolitan access to the waterfront. Student Omayra Diaz
- (4) Maximazing waterfront values for education. Student Mario Lambert
- (5) Lacing Neighborhoods with Art and Nature. Student Fernanda Marx de Andrade
- (6) Transitional Justice in Urai', Housing and Memory. Student Paul Stanley
- (7) The vertical Soccer metropolis: a Meca do Futbol. Student Jonathan Arcila-Garcia
- (8) Agua Blanca, Cali. Student Kimmel Chamat