Reinvigorated waterways for transportation and sustainable development, Puerto Suárez, Bolivia

Project description by author

Puerto Suárez city in the department of Santa Cruz, Bolivia, is part of the Pantanal. Divided between Brazil, Paraguay and Bolivia the Pantanal is a very complex and dynamic mosaic of lakes, lagoons, swamps and rivers of 200,000km² and the primary source of the Paraguay River. The Paraná-Paraguay waterway was the spine of metal extraction in colonial Bolivia. From the depletion of these resources and the income of industrial products, consolidated ocean port edges, leaving the central areas of the continent. With the decline of the railroad, the waterway is once again a possibility of sustainably linking the South American interior.

The original peasant inhabitants of Bolivia were stripped of their farmland and forced to move to large estates. In the early twentieth century, Puerto Suárez was the main river port of Bolivia. The ability to connect to the waterway through the lagoon Caceres - Canal Tamengo, water, and transoceanic route, by land, makes it a strategic location. The dock is the only piece of architecture that links the city with water, waiting the potential of the site as head proportional to its urban hub organizer and as a key land-water connector.

Under the Cities SOS (Workshop curriculum at the University of South Buenos Aires), a strategic plan between Bolivia, Paraguay and Brazil was established to retrieve the original condition of the continent and develop its internal potential. A system of production and housing units, nomads, who occupy the many gaps in the Pantanal, explore the possibility of settlement in an area characterized by large expanses of water varies, and produce economic and technical exchange with the proposed market port urban centers of the three countries, in this case the Caceres Lagoon and city of Puerto Suárez as index cases. The native population is no longer marginal farmer to become ac tor and owner of the means of production. Production cooperatives are generated to strengthen the quality of social life. Ports, water and civic square are the new platform of public life and social exchange, economic and technological development. The whole system re-links social friendly communities.

The water is no longer a void to become the new medium of agricultural people, and reactivated within the continent through the waterway. The natural rhythm of seasonal flooding determines the movement of nomadic production units, ensuring the sustainable use of natural resources. The architecture of the ports – the market creates gaps, gray water treatment, purifying water from the city before reaching the lakes and rivers. They also have biogas digesters that generate their own energy.

Floating dwelling unit: it can be transported according to climatic or environmental needs. Its flexibility is molded to different family structures evaluating a shaded outdoor space as a center of family life and community. The same private space becomes the deployment of mobile equipment.

Market: Water new civic square, is also the urban part where it adds value to farm production. Two arms of concrete flood-safe home and school, laboratories, and define a central area where the trade show, on a floating platform.

Relevance to target issues by author

Innovation and transversality – Progress

The project explores the possibility of harnessing the potential of water as a condition of the interior of South American continent. The aquatic environment becomes the factor that links the cities of the region, and is also the new production environment for the natives. The bioremediation as a method of filtering gray water, and productive environment and excellence are utilized and reinterpreted in this proposal.

Ethical standards and social equity – People

South America is a region that has suffered the effects of colonialism. The most significant result is the economic and social emptying of the continent, resulting in the enrichment of the oceanic port edges, and numerous displacements of people within. The cities of the interior have been relegated along with their inhabitants. In the case of Bolivia, the village farmer does not own arable land. This project seeks to restore dignity to the people neglected, giving one side an environment in which to meet their basic needs of shelter, education, livelihood, and strengthen the relationship between the city of Puerto Suárez to water.

Economic performance and compatibility – Prosperity

The system of production units and markets makes it possible to connect to the population of economic resources in a sustainable manner. Indeed, the strategic location of production units in the market gaps and on edges of cities in the Pantanal generates a dynamic system of sustainable business relationships. The production is not removed to carry outside the continent, but serves to feed back the economic and social ties within.

Contextual and aesthetic impact – Proficiency

The proposed architecture seeks to coexist with the natural environment. The market in Puerto Suárez implantation precludes any possibility of violence, which threatens the serenity of the landscape, and instead, seeks to link in a relevant way to people with the natural environment. Production units, by design, exploit the productive potential of water, and the ability to move the units nomadly, looking for gaps with sufficient water level according to the flooding periods.