Ecological river remediation park, Morelia, Mexico

Project data

Type of project: Landscape design
Estimated start of construction: February 2009

Main author

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Comment of the Holcim Awards jury Latin America

This project focuses on four social, environmental and urban objectives: To create a metropolitan park for Morelia in the province of Michoacan, Mexico; to provide new job opportunities for the community farmers; to install an effective flood control system; and to revalorize a heavily contaminated drainage channel.

The result is a unique lacustrine (lake-based) park with multiple water bodies each of them functioning in sequence for the biological treatment of wastewater. The green areas in between are used for the commercial production of trees, plants and vegetables to be sold at local markets. The public park is fully integrated and offers attractive leisure facilities. The whole planning and implementation process was a joint undertaking of the local farmers, public authorities and NGOs. The project has been commended because of its substantial contributions to social welfare, its environmental achievements and the successful public-private partnership.

Project description by author

Parque Ecológico Los Itzicuaros is located near Morelia, 300km west of Mexico City, in the state of Michoacan, an agricultural area that frequently floods. The municipal authorities have worked together with the Emiliano Zapata farming community to convert an area of ‘ejido’ land into a public park for ecological recreation, with cultural and economic benefits. Therefore two social and urban objectives are established together to create a metropolitan park for Morelia and to provide new job opportunities for the community’s farmers.

The topographical, geological and hydrologic conditions and the contact with an existing contaminated drainage channel present an opportunity to create a unique lacustrine (lake-themed) park, with a multiplicity of water bodies where each one provides a specific function in the biological treatment of wastewater. The sequential water bodies are designed to activate the biological treatment; the second lagoon is oriented to attract migratory birds, the third one would provide fishing and rowing, the fourth one a recreational lake for small boats and kayaks and the fifth one a visual lake with aquatic sculptures acting as aeration devices.

A fundamental concept of the master plan is the inclusion of extensive areas for the commercial production of ornamental trees and plants for use in the municipality, as well as the cultivation of vegetables. In an expanding urban area with few public open spaces, the park offers recreation, sports and leisure such as picnic areas, panoramic electric train rides, boats, kayaks, skateboarding park, running and cycling paths, and camping. A small flood, floating plant market, amphitheater, lookout terraces, and special interactive children’s natural play area. The diversity of uses and facilities is an opportunity to create associations opening a new agenda of economic possibilities for the community.

Relevance to target issues by author

Quantum change and transferability

Los Itzicuaros is an integrated multipurpose park. It allows the rural community to adapt urban requirements and preserve the land. The park provides unique water-based recreational activities, as well as cultural activities that benefit directly the surrounding new urban community.

Ethical standards and social equity

Since the beginning of the design process, the community farmers took part in decision-making, during the meetings the three key stakeholders involved (community, government and designers) discussed the architectural and urban program of the park, and also the environment implications. The community farmers retain land ownership and continue land use as it has been over centuries. This land will continue to be productive, and the land owners will have income for this land’s products, and will manage all the attractions of the park, while initial funding will be provided by the government to create the park.

Economic performance and compatibility

Since the park works as a bio-ecological water treatment plant, passive water recycling system and flood mitigation system, the government will address the large-scale impacts on downstream land that will no longer be flood prone or receive polluted water. The hydrological analysis of the flooding zones was made in order to determine the depth of specific zones. This analysis helped to establish the location of the lake system, reducing the construction cost. And farmers will produce trees to green and reforest the city and surroundings.

Environmental quality and energy conservation

The ecological functions of the park are: conservation of open space within the city, biological treatment of wastewater from the channel, infiltration of rain water to the aquifer, indigenous tree plantings, humidity released to the atmosphere and the attraction of a variety of migratory and wetland birds. A cultural center acts as an entrance to the park geared to young, and adult population from nearby communities. Workshops for computing, library and children’s room, multipurpose room and dance and theater workshop.

Contextual and aesthetic impact

As an aquatic and ecological park, the landscape reinforces the original lake-valley, retaining the Michoacan’s lacustrine (lake-based) traditions and rich biodiversity. The system of six lakes is generated by a strict geometry, emphasizing the constructed qualities of a new landscape.