

FUTURE OF THE PIEDRAS RIVER PROJECT

EXECUTIVE SUMMARY



The Future of the Piedras River: Development, Environment, and Community introduces a new conservation model for Puerto Rico. This report, presented to the Conservation Trust of Puerto Rico, is focused on the case of the Piedras River watershed, one of the last natural refuges in San Juan, and uses the Historic San Juan Aqueduct as an entry point. Acquired in 2005 by the Conservation Trust, one of the most respected environmental organizations on the island, the Aqueduct represents the beginning of an important milestone in urban planning and natural resource management in the city. This system, which once provided drinking water to all of San Juan, is located at the heart of the Piedras River and, as such, is the stage on which the different developmental pressures that exist along the river converge: uncontrolled urban growth, aggressive land use patterns, and a general lack of environmental awareness. In particular, it is important to note the proposal to channel the Piedras River, which is currently presented as the only solution to the problems of flooding and poor land use along the watershed. These and other pressures define the challenges of conservation within the urban context.

We assert that the work of the Conservation Trust in the watershed cannot be centered only on the restoration and preservation of the Aqueduct, but rather should embody a vision that recognizes the river as a comprehensive system, around which a variety of diverse actors and interests converge. In contrast with what we call the traditional conservation model, which is based on the acquisition and custody of environmentally-fragile and historically-significant properties, as well as a cautious political position in the face of interest groups that oppose natural protection, we present a more inclusive and comprehensive model, adapted to the context of the Piedras River. Specifically, we propose a model to the

Conservation Trust that has three fundamental pillars:

1. **Alternative investments** in local infrastructure, both physical and social. In the urban context, this means not just restoring key properties like the Aqueduct, but also improving access to the site and supporting local organizations and businesses.
2. **Co-management** of conservation areas and the formation of **alliances** with organizations that share the Conservation Trust vision. Protecting the Aqueduct and revitalizing the river requires acting along the entirety of the watershed and collaborating with communities that are geographically separated but that are connected by the river. This is especially important in an urban context where there exist external pressures that are contrary to environmental conservation.
3. Adopting a **strategic activism**, with which the Conservation Trust systematically facilitates and mediates between the diverse actors that are present within the watershed, thereby confronting the environmental issues in the area such as poor land use and the delicate balance between the environment and urban development.

This new model of conservation is the result of five months of work by 16 planning students from the University of Puerto Rico (UPR) and the *Massachusetts Institute of Technology* (MIT). This report is based on detailed field-based research carried out in San Juan, during which the team members worked throughout the watershed in order to get to know its communities and

stakeholders. Specifically, we worked in three distinct areas: upriver, mid-river, and downriver. Within each of these zones, we collaborated with environmental organizations and residents of communities close to the river. In the upriver area, we focused on Caimito neighborhood (“the countryside within the city,” as residents refer to it), a place with strong community organizations. In the mid-river zone, home of the Aqueduct and where dense neighborhoods exist next to vital green areas like the Ecological Corridor of San Juan, we worked with leaders from the Venezuela, Capetillo, and Cupey neighborhoods. In the downriver area, the team worked in Puerto Nuevo and Nemesio Canales, communities that are affected by continual flooding that, despite being alienated from the river, maintain an interest in finding alternative modes of economic development that do not cause them to turn their backs to the river. Based on this research, we developed three specific goals to arrive at a new model of conservation:

- **Boost the capacity of organizations, communities and individuals in the Piedras River watershed.** The investment in social infrastructure could adopt diverse forms, from educational projects to workshops on sustainable business. The interventions should take into account existing initiatives in each community and facilitate the co-management of conservation projects in a participatory manner.
- **Establish new physical relationships with the river and improve the social dynamics between communities and the Conservation Trust.** To sustain environmental and development initiatives, it is necessary to start with the basics: formalizing the physical connections with the river and strengthening the personal and institutional links with communities. Simultaneously, this work plants the seeds of confidence in each community and facilitates the formation of a network of ally organizations.

- **Protect and improve the ecological state of the River.** In the urban context of San Juan, the preservation of the river should recognize the dual role of groups who live in the watershed: on one hand, communities use the river and they benefit from its environmental amenities, and on the other, they are in the position to be the principal protectors of the river. As such, the ability of the Conservation Trust to improve the ecological state of the river depends on its proactive and inclusive interactions with communities near the river.

This report includes a range of strategies and projects that accompany these goals. They include, among others, creating alliances with micro-business development institutions, establishing environmental education initiatives with local schools, supporting school gardens, and developing a boardwalk close to the Aqueduct. Additionally, we detail the social and economic dynamics of each part of the watershed, in an effort to prioritize actions and facilitate joint work with populations in the watershed, state and non-governmental institutions, and the Conservation Trust. We believe that the new model of conservation, sustained by ongoing field work and by adopting achievable goals and strategies, strengthens the current work of the Conservation Trust. It also creates the base for the Trust and its allies to work together successfully in contexts like the Piedras River watershed, where urban development patterns reveal a complicated dynamic between the urban and the rural. The environment and the communities of San Juan find themselves at a critical juncture, with two paths ahead. On one hand, the traditional vision aims to channel the river and further institutionalize the planning approach prevalent on the island since the post-war period, gray and ignorant of the relationship between nature and humanity. On the other hand, our experience with the Piedras River presents a fascinating challenge: the possibility of a harmony between urban development and environmental protection in San Juan.