



Nature-based Solutions to Restore Urban Hydro-social Systems

The Bogotá Life-Lab focuses on restoration actions and capacity-building activities to support peri-urban communities. These activities aim to protect forest and wetland ecosystems, while strengthening communities in border territories, and social acceptance of NbS. Community participation and co-creation have been key for the development and success of the pilot projects.



75% of Bogotá is rural, yet

>1% population occupancy

Bogotá has

11 Ramsar Wetlands
& District Wetland
Reserves

Nature-based Solutions Benefits



Challenges

34% population growth and 16% urban footprint increase

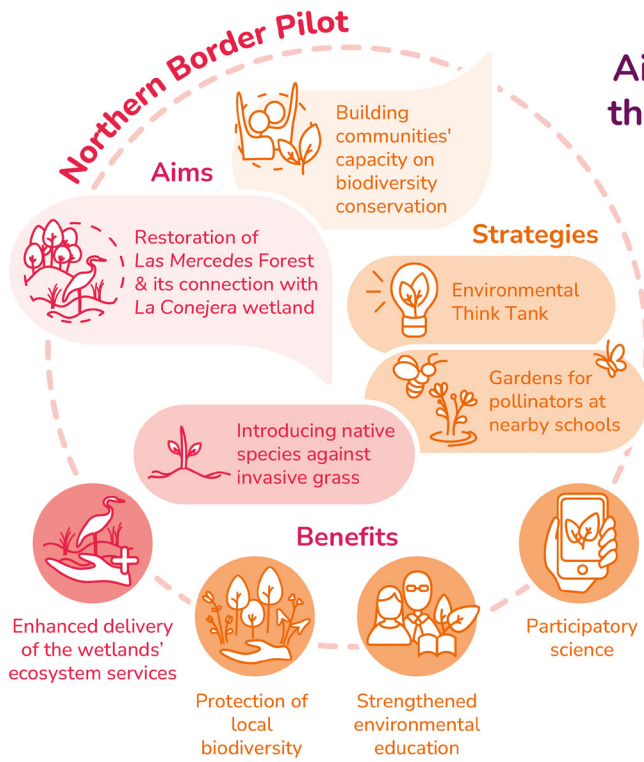
Water supply for ca. 20.000 people depends on threatened ecosystems

Loss of traditional human-nature relationships

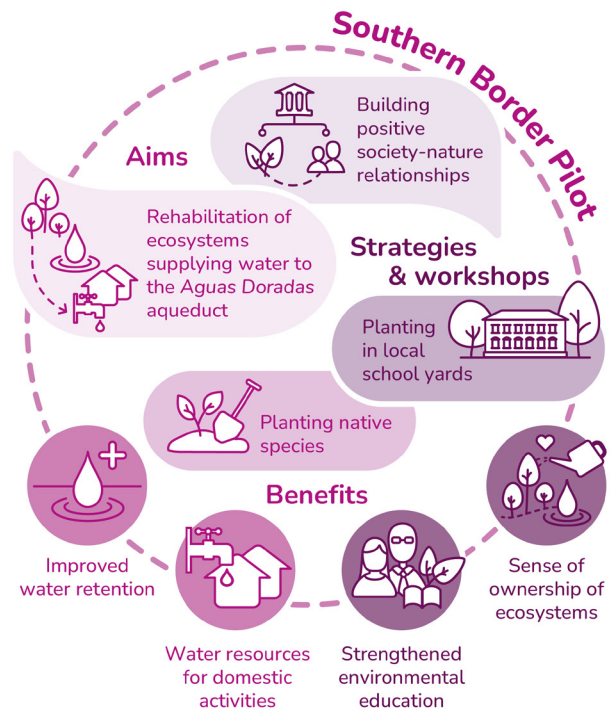
Background

Communities in Bogotá's peri-urban areas face challenges related to precarious socio-economic conditions: unequal access to basic services, such as water, food, or housing; lack of public space; and increased vulnerability to natural disasters. In response to these conditions, some citizens and institutions have initiated strategies associated with ecosystem protection, tourism opportunities, and processes for self-management of water. However, with current scenarios of rapid urban expansion, particularly on the northern and southern edges of the city, communities face the degradation of strategic ecosystems of the Andean forest and wetlands; decrease in water quality and quantity; and loss of their traditional livelihoods due to reduced availability of fertile soil and the uprooting of young people.





Aims, strategies and benefits through social-environmental approach



Communities and strategic ecosystems in peri-urban areas of Bogotá have been negatively impacted by an array of challenges related to informal and unplanned urbanization. In this context, the CONEXUS Life-Lab established two pilots in the southern and northern borders of the city, in which, together with local stakeholders, restoration actions were prioritized. These actions aim to recover the ecological conditions of and the positive society-nature relationships with the Andean forest and wetland ecosystems, on which livelihoods of communities depend.

Southern Border Pilot

The Southern Border Pilot supports the rehabilitation and protection of ecosystems on which the water supply of the

Aguas Doradas community aqueduct depends. The focus lies on recovering water bodies on private plots of aqueduct users by planting native species. The planting contributes to water retention and soil recovery, which improves water availability in dry periods and ensures its use in productive and domestic activities. Likewise, plantings at the local school yard strengthened environmental education processes and a sense of ownership of local ecosystems. The interventions and methods were defined through a series of workshops on social and environmental issues of interest to local communities. Such workshops built the community's capacity, while the parallel implementation of interventions ensured the interest of actors over time.

Northern Border Pilot

In the Northern Border Pilot, Bogotá’s Botanical Garden is leading the restoration process of the *Las Mercedes* forest and its connection with the *La Conejera* wetland, as well as the creation of an environmental think tank to build local communities’ capacity of biodiversity conservation. The CONEXUS Life-Lab supported this process through demonstrative pilots on the role of native herbaceous species against the impacts of *kikuyu* grass, an invasive species affecting ecological restoration processes. In addition, gardens and fences for pollinators were implemented at nearby schools, which also strengthened environmental education and participatory science processes led by young people and children. Such activities supported the protection of local biodiversity, the enhancement of the wetland’s ecosystem services and its value as public good and socio-cultural heritage.

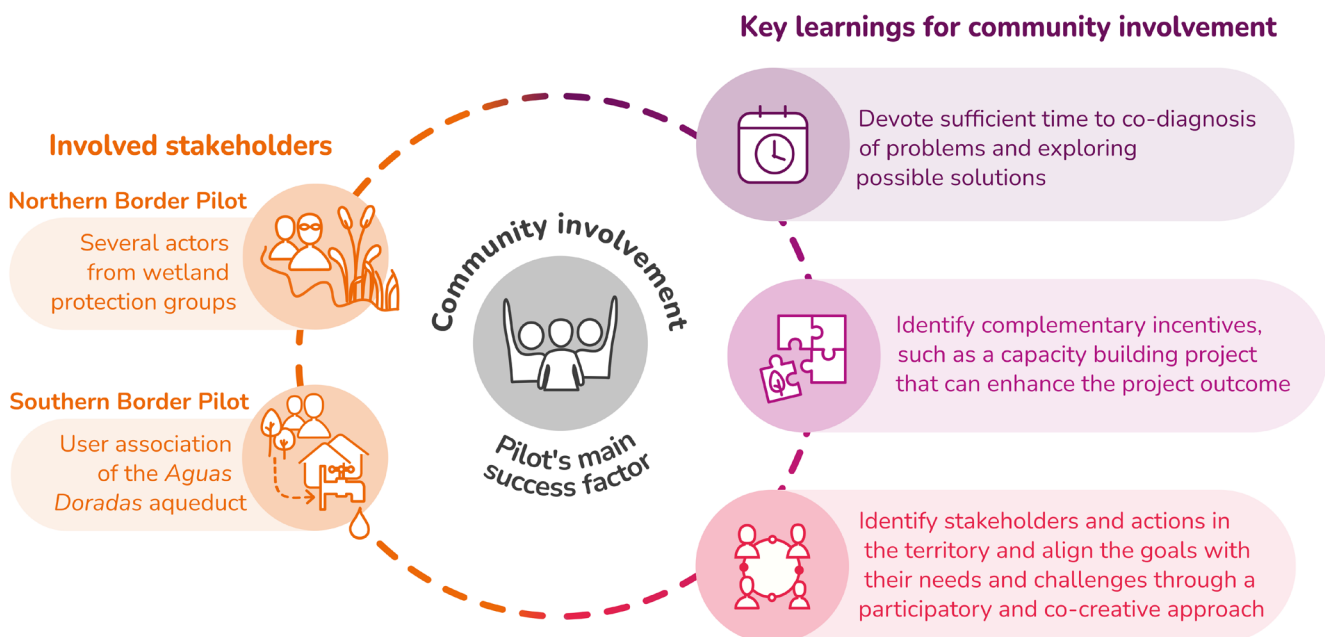
As a parallel strategy, a living classroom was established to strengthen capacities of different local actors and to promote knowledge exchange between both territories.

“In the workshop, I learnt that nature is associated with the sense of community and with social, political, and economic aspects.”

Camila Jiménez, 13 years old, El Uval school

Pilot success main factor: community involvement

To grasp the challenges faced, ample time was devoted to co-diagnose and explore possible solutions that are coherent with the needs of different stakeholders. This participatory and co-creative process has been key to the pilots. In the case of the Southern Border pilot, the CONEXUS project team worked with the



user association of the *Agua Doradas* aqueduct, which has been working to manage potable water for its community. In the case of the Northern Border pilot, the team involved several actors from wetland protection groups. Aligning and complementing the objectives of the project with those of the communities have led to a better reception of the proposed activities. Participants contributed with great ideas and came up with their own initiatives for the development and success of the project.

It is essential for the process to identify stakeholders and actions that are already present in the territory, in order to align particular needs and challenges with the prioritization and design of solutions, as well as to identify complementary incentives, such as capacity building or the involvement of young people in initiatives that have traditionally been led by adults.

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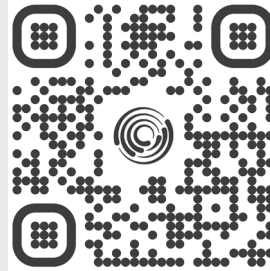
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Key messages



1. Due to their constant presence, educational institutions, such as schools and universities, are fundamental in the implementation and maintenance of NbS.
2. Capacity-building processes alongside action implementation maintain the interest and participation of local communities
3. Promoting positive society-nature relationships implies integrating communities' values, interests, and narratives about nature and NbS



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City Partners



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