

Through two decrees and a broad interinstitutional committee, the Villavicencio mayor's office seeks to recover six of the more than 270 wetlands identified in the municipality and their associated biodiversity, including endemic and endangered species, by proposing another alternative for the care of these ecosystems.

Although there are important environmental areas in the municipality of Villavicencio, such as **wetlands**, one of the biggest problems is the loss of ecosystem services due to urbanization and noncompliance with management plans. As a result, these areas are exposed to land movements, deforestation, land filling, draining of swamps, hunting of animals, and pesticides affecting fish and amphibians, among other harmful activities to the ecosystem. These problems have been reported over the years by environmental organizations and have been the subject of control and monitoring processes by the Secretary's Office of the Environment.

Within the long road of the institutional framework to address this environmental deterioration is the Land Management Plan (LMP) 287 of 2015. This instrument has made it possible to generate, establish and

implement **buildability rights** for construction and regulate the ownership of these environmental areas. The necessary conditions were thus established in the approval of Decrees 304 of 2020 and 152 of 2021, which seek to promote the protection of the municipality's wetlands.

Firstly, through Decree 304 of 2020, a broad inter-institutional committee was created that has carried out different diagnoses of six wetlands in Villavicencio to recognize the potential of these areas and manage them in the best way possible. The problems identified in this work gave rise, on the other hand, to the formulation of Decree 152 of 2021, which regulates the management in-

strument called "transfer of additional buildability rights for environmental conservation applicable to regional protected areas." This new regulatory framework allows landowners to understand that the protected land, which previously had no value and was seen as a burden, is now seen as a benefit. They, therefore, may do their part to protect it until, in return, they can opt through the decree for a higher building height or additional density.

These planning tools illustrate how the infrastructure sector is a key partner in urban biodiversity conservation and can also benefit from coordinated action with the local authority.

BIODIVERCITIES BY 2030 TRANSFORMING CITIES WITH BIODIVERSITY

COLLABORATIVE WORK STRATEGIES

The creation, study, and implementation of Decrees 304 of 2020 and 152 of 2021 have occurred through various processes:

- > Intersectoral dialogues: Decree 152 has been an opportunity to get to know the various stakeholders in the territory related to protected areas. NGOs and environmental leaders in the city have become critical allies of property owners in monitoring and controlling their properties.
- Inter-institutional coordination: The joint work through workgroups between the Villavicencio 1. Identify owners who have partial building plans² or mayor's office and Cormacarena¹ was fundamental in the creation of the decree.
- Participatory diagnosis: Thanks to the approach of **2.** Estimate the extent of the area and the conditions in the Secretary's Office of the Environment to environmental protection groups and communities liv- 3. Identify various social problems such as illegal ocing in areas near wetlands, the formulation of the decrees took into account the knowledge that these groups had in terms of biodiversity. Another form of 4. Share and make the conditions and benefits of the citizen participation consists of bioblitzes: citizen science activities through which the inventories of protected areas, wetlands, and forest reserves are strengthened thanks to the use of citizens' mobile devices

RESULTS OF THE BIOBLITZ 2021

NUMBER OF SPECIES



OBSERVATION SITE	Birds	Mammals	Macro-
		Marrinais	invertebrates
Alma Viva Metropolitan Park	47	0	0
Bavaria Forests	46	1	0
Coroncoro Wetland	18	0	0
La Gloria Park	27	1	9
TOTAL	138	2	9

Communication and outreach: The pro-nature discourse has been promoted through communicational pieces that expose the city's natural wealth, the importance of not building on these lands, and some of the norms, decrees, and laws that support all these processes.

A total of 12 participatory spaces, 4 workgroups, and 5 participatory diagnostic tours have been convened.

STEPS FOR IMPLEMENTING DECREE 152 OF 2021

- urban development permits³ in progress and whose properties include protected areas.
- which biodiversity can be found there.
- cupations that lead to the loss of the land's environmental value
- decree known and agree on the terms of the assignment.⁴ The benefits that the owners may receive are defined as:
 - > Buildable square meters (MCE for its acronym in Spanish), which may not exceed the occupancy rates defined by the LMP. They may be built to a greater height, but not with a greater occupancy in area.
 - Number of buildable units (NUC for its acronym in Spanish), represented in social interest housing (VIS - for its acronym in Spanish) and priority interest housing (VIP - for its acronym in Spanish).

As an example, it can be understood that for every 9.3% of land in building rights, the builder will obtain 930 m² of buildable area per hectare, equivalent to 9 cm per square meter.

- A new space for environmental governance is created for protected areas, which is multilevel and includes the mayor's office, Cormacarena, the community, and various environmental organizations.
- The Secretary's Office of the Environment should coordinate and carry out recovery and conservation programs for protected areas in possession of the mayor's office, per the corresponding management plan.

KEY LESSONS

The transformation of wetlands and other areas The transformation of wedgings and office of environmental importance makes it necessary to review their zoning. There are preservation or con-



Owners of land located in regional protected areas can take advantage of the management instrument described in Decree 152 of 2021. The purpose of this norm is to transfer to the municipality of Villavicencio the ownership of the generating areas in exchange for receiving greater buildability in receiving areas. The following are two hypothetical examples illustrating how this mechanism could be applied in regional protected areas.

Type of assignment

EXPERIMENTATION

Buildable square meters (without exceeding the maximum allowed in the LMP)

Assignment calculation

Area to be received* $\times 9.3\%$ ** = m^2 to be granted *Generating area **Benefit ratio.

Elements to which it applies

151

Commercial buildings, equipment, and housing projects other than social and priority interest housing.





Elements to which it applies

Two-family, multi-family, and

high-rise housing projects.

Kirpas - Pinilla - La Cuerera Soil Conservation District

Type of assignment

Number of buildable units (Maximum 250 units)

Assignment calculation

Hectares to be received* x number of homes** = number of constructible homes to be granted *Generating area **For priority interest housing, multiply by 42 units. For social interest housing, multiply by 28 units.



social interes housing to be granted



servation areas that have lost all their biodiversity, so it is essential to update and modify some of the official documents that are guidelines for the wetland man- owners to be able to transfer area to the municipality. agement route.

Calatrava Wetland Ecological Park Recreation Area

Many environmental management plans are obsolete, expired, and without characterization. There is also no control or monitoring of such plans, and these are overloads that hinder the implementation of the decrees.

The instrument's recent application demonstrated the need to review the requirements for Some deeds and topographic surveys do not match.

It is urgent to create transparent policies and governance instruments that protect the permanence of biodiversity conservation initiatives such as the decrees referred to here that seek to strengthen conservation strategies.