UNIVERSITY OF CAMPINAS (UNICAMP)

Ecological Corridors at the University of Campinas

The Unicamp Ecological Corridors project is being developed on the Zeferino Vaz and Fazenda Argentina campuses. The Zeferino Vaz campus was planned in the early 1960s with the main objective of integrating academic areas and promoting interaction between students and teachers. This led to the creation of the large circular central square that connects the areas of health, biology, and the exact and human sciences. Despite being integrative in this sense, the territorial planning of this campus did not consider its natural characteristics, isolating fragments of native vegetation and channeling existing streams to make way for roads and buildings.

After decades of occupation and construction of new buildings and roads, the first results of this planning process began to emerge through accidents with local fauna, and flooding. Therefore, since 2009, the university has been seeking to reverse this situation. Flooding is being addressed with sustainable drainage projects, the redevelopment of channelized waterways, and nature-based solutions.

Accidents involving fauna are the justification for Unicamp's Ecological Corridors project. This project was strategically established for the university in 2021 and aims to connect the preservation areas of the Zeferino Vaz and Fazenda Argentina campuses with each other and with vegetation external to the university, allowing the natural flow of fauna and flora through the construction of wildlife crossings, planting and maintaining vegetation in ecological corridors, as well as their fencing and signage. Before this, some actions were developed by the Animal Monitoring Center of the Environment Division to minimize the problem of environmental degradation through community awareness and environmental education; the installation of specific traffic signs and physical barriers in Áreas de Preservação Permanente (APP) meaning Permanent Preservation Areas; and conducting a feasibility study for the implementation of fauna crossings.

Implementation

The work involved the following development stages:

- a survey of previous actions related to the project, which brought forward projects carried out between 2009 and 2016 to raise awareness in the community to minimize the impacts of the presence of animals on campus, including road signage, campus PPA fencing, and a feasibility study for the implementation of ecological corridors;
- conducting a current field survey with photographic documentation to better understand the area as a whole and its ecological diversity;
- conducting a survey of local fauna based on sightings and accident records from the Animal Monitoring Center of the Unicamp Environment Division;
- preparing the project management process by establishing various personnel and teams, acquiring financial resources, preparing technical documentation for project bidding, complying with new bidding laws, and monitoring the bidding process for each phase of the project.

Outcomes and Future Directions

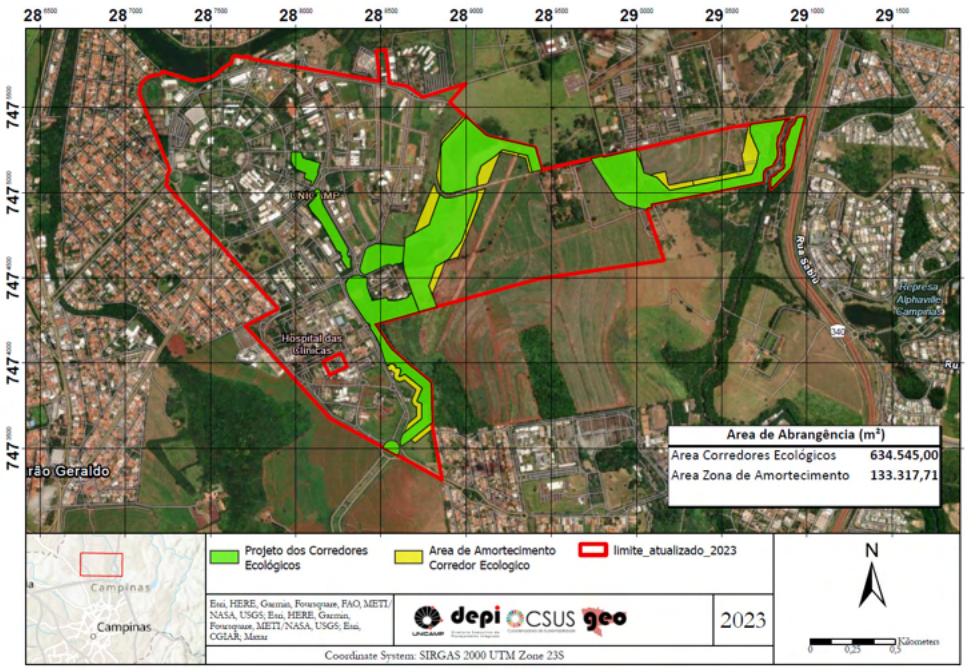
The implementation of Unicamp's ecological corridors will:

- Reduce the degree of isolation of remaining vegetation areas.
- Improve gene flow through seed dispersal and increase the survival rate of animal and plant species.

- Reduce the number of accidents at intersections between wildlife crossings and road systems.
- Improve sustainability indicators for environmental preservation and conservation.
- Implement 217,000 m² of ecological corridors, 92 m of wildlife crossings, 6,500 m of fencing, and 300,000 m² of ecological restoration area.

Until October 2023, alignments were made with internal and external bodies, including the Municipality of Campinas and owners of surrounding properties. Areas for ecological restoration have also been defined. In terms of contracts, the executive projects for aerial and underground wildlife crossings have already been contracted and the ecological restoration project is in the bidding process.

The Unicamp Ecological Corridors project represents the university's concern in ensuring environmental preservation and conservation, as well as the duty to guarantee the safe flow of wildlife between its APPs. The project is aligned with the 2030 Agenda for Sustainable Development and has direct impacts on the Sustainable Development Goals (SDGs), including SDG 13 – Climate Action against global climate change, as it sequesters carbon equivalent to a green area of 300,000 m²; SDG 15 – Life on Land, as the project's objective is to preserve animal species, and; SDG 17 – Partnerships for the Goals as alignment with various bodies and internal and external partnerships is needed to guarantee the successful implementation of the project, although UNICAMP is financing this. This project is pioneering in terms of its facilities and results, and represents an example to be followed by other universities and public bodies that have green areas in their territories.



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