Control, Training and Commitment: Results of the project "Control of the invasive species *Leucaena leucocephala* in the Jaragua-Bahoruco-Enriquillo Biosphere Reserve, Dominican Republic"

Dominican Republic, 17 November 2025 – The Jaragua-Bahoruco-Enriquillo Biosphere Reserve is an area of great importance for biodiversity in the Dominican Republic. It encompasses four national parks: Jaragua, Sierra de Bahoruco, Lago Enriquillo and Isla Cabritos national parks. Located in the south-west of the country, the reserve covers an area of 5,770 km² and includes unique landscapes of remarkable beauty and biodiversity across coastal, marine and terrestrial ecosystems, and a high level of regional flora and fauna endemism. It also harbours genetic resources of inestimable value.

Lago Enriquillo, Dominican Republic. © CI-Atabey.

However, it faces significant threats from the presence of invasive alien species, such as Leucaena leucocephala (known locally as granolino). This plant, originally introduced in the 1980s for fodder, has since spread rapidly throughout the region, displacing native species and altering local ecosystems. Its ability to form dense colonies and its resistance to adverse conditions makes it a threat to the reserve's biodiversity. Moreover, International Union for Conservation of Nature lists it among the 100 most harmful invasive organisms in the world.

The project 'Control of the invasive species Leucaena leucocephala in the Jaragua-Bahoruco-Enriquillo Biosphere Reserve, Dominican Republic' implemented by Fundación CI-Atabey, mobilised community and institutional actors to develop and deliver a coordinated response involving training, awareness-raising on and control of this invasive species. Supported by the Critical Ecosystem

Partnership Fund (CEPF) Small Grants Mechanism and implemented in close collaboration with the Ministry of Environment and Natural Resources, the 12-month initiative combined community action, environmental education and technical strengthening.

Through an awareness and training campaign, which included social media, radio spots, and community meetings in the four provinces of the reserve's three core areas, the initiative directly reached more than 250 people, with notable participation by women and young people, and indirectly impacted thousands of people in the Jaragua-Bahoruco-Enriquillo Region.

A participatory technical control plan was developed and implemented under the project. Critical areas invaded by Leucaena were georeferenced, and park ranger brigades in the three core areas of the Biosphere Reserve were strengthened with specialised equipment and tools, laying the foundations for the continuity of the work.

From top left clockwise: Technical team from the provincial office of the Ministry of the Environment in Pedernales together with the project team; Brigades carrying out Leucaena control work in the coastal area of Lake Enriquillo; Community training session on invasive species control in Neyba and La Descubierta; Training on the use of tools for park ranger brigades at Lake Enriquillo and Isla Cabrito. © CI-Atabey.

One of the project's most significant advances was the transformation of local farmers' attitudes towards Leucaena leucocephala, driven by the awareness and training campaign. The slogan 'Cut it low and don't let it grow' proved to be highly successful as it encapsulates a key technique for the sustainable management of this invasive species. Keeping the plant below one metre in height allows for efficient consumption by livestock that feed on its tender shoots before flowering, while interrupting the reproductive cycle, thereby significantly reducing its ability to propagate through pods.

Truck loaded with Leucaena leucocephala branches for livestock feed in Barahona. © CI-Atabey.

This change in perception and use of Leucaena has been one of the most significant achievements of the project. The awareness campaign promoted its use as fodder in the municipalities of Neyba, Duvergé and Oviedo, as well as in dairy processing plants in Barahona. Currently, regular consumption by local livestock producers, mainly in the municipalities of Neyba, Duvergé, and Oviedo, as well as in dairy processing plants in Barahona, is estimated at approximately three truckloads per week, equivalent to 156 tonnes of biomass used per year. This practice represents a concrete advance in the sustainable management of the invasive species, with an estimated indirect impact on the reduction of Leucaena of around 12 hectares per year, strategically complementing the direct control actions implemented by the project.

The implementation of this practice represents a concrete step towards a more sustainable production model that is compatible with conservation objectives, showing how technical knowledge can be translated into everyday actions with a high environmental impact.

Beyond the environmental impact, the project promoted a sense of territorial co-responsibility, consolidating local capacities and encouraging the active participation of civil society in the defence of its natural heritage. As part of its legacy, it leaves behind a long-term strategic plan and an informed community, ready to continue the work.

This experience shows how science can inform community and institutional action to conserve biodiversity and strengthen local resilience.

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References

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