



Established in 2011, Conservación de la Biodiversidad del Usumacinta (COBIUS) is a non-government organization focused on protecting the Usumacinta River Basin, an ecological basin with historical and environmental importance in southeastern Mexico and northeastern Guatemala. Their projects range from conservation and rehabilitation initiatives, community education, biodiversity, and geographical research and monitoring. They have established close collaboration with researchers and local communities to carry out their projects grounded in the belief that conservation should not be an imposition but a process for and with the people. In its 12 years of existence, the organization has conserved 255 species in 16 protected natural areas through a total of 60 projects that have reached over 65 local communities.

Impact Background

The Usumacinta River Basin (URB) is an important landscape in Mexico as it is one of the least-deforested transboundary river basins out of six shared by the country with its southern neighbors. It is also considered a biodiversity hotspot as it houses the largest extension of humid tropical rainforests in North and Central America, contains habitats for important wildlife species in the region, and has invaluable ecosystem services like providing waters and nutrients that sustain the Chiapas and Tabasco wetlands.

IMPACT OVERVIEW

Provides additional income to fishermen affected by the presence of invasive fish species in Mexico by purchasing it and processing it into clean-label pet snacks

No. of beneficiaries	200 families
% Women	40

COMMUNITY

	Country	Mexico
	Municipalities	Balancan, Tabasco
	Communities	Mestizo people of Rancheria Leona Vicario, San Jose del Rio, Ejido Leona Vicario, Multe, Santa Ana

Moreover, the URB was home to centuries of Maya history and has become an invaluable part of history and archaeological heritage. While today, the URB defines the border of Guatemala and Chiapas, it once separated the ancient settlements of the rival Maya cities of Piedras Negras and Yaxchilán, which were both founded in the first millennium BC¹. Archaeological evidence suggests that the two cities sought to take control over the Usumacinta to use as a trade route to deliver goods such as salt, cacao, and obsidian to the Gulf of Mexico. Because of this historical importance, the river basin has been sought to be protected.

The URB brings forward the important linkage between environmental conservation and culture with increasing acknowledgment of indigenous rights. However, most of the Maya sites in the URB are now affected by erosion and looting, and there is constant pressure to use the area for grazing. Political unrest, accompanied by a wide range of issues like drug trafficking and smuggling, conversion of native habitats to agricultural land, infrastructure, and tourist projects, have continuously challenged the resiliency of the URB. The Mexican government even attempted to construct a massive hydroelectric facility on the Usumacinta River in 2016².

Communities including Rancheria Leona Vicario, San Jose del Rio, Ejido Leona Vicario, Multe, Santa Ana, in Balancan, Tabasco are mestizo peoples who reside nearby; they carry both the risk and richness of the URB. Indigenous people of Balancan, Tabasco are of mixed descent as their ancestors have inhabited the area before. These communities mostly rely on the URB for their livelihood as fishing is their main source of income, with only 10% of them engaging in other industries like small-scale livestock, corn cultivation, and trade. Given this dependence on the river basin, its protection and conservation are paramount for the communities it serves. With impending threats to the URB, it is important to ensure its continuous protection as it remains to be an important source of livelihood for local fishermen. Devilfish, lionfish, and silver carp have threatened the population of native fisheries and thus, negatively affected local fishing economies. Environmental issues such as river shoreline erosion and degradation of water quality also exacerbate the situation. Devilfish now make up 70% of the wild fish caught. Before, fishermen were able to capture 50 to 100 kilograms of marketable fish, but this figure has gone down to less than 10 kilograms. Conversely, devil fish capture has increased to over 100 kilograms daily, but due to lack of demand, it is simply considered as waste and is thrown away, causing pollution of the water.

Impact Delivery

COBIUS' activities range from biodiversity monitoring, research on ecological conservation, environmental education, and conservation of wild fauna and flora.



Photo 1 Devil fish catch. Source: COBIUS website

Consistent with COBIUS' conservation and restoration projects, they ventured out to rehabilitate the URB through a market-based solution that provided local fishermen with additional income. COBIUS partnered with Pezzy Pets, a distributor of sustainable pet snacks sourced from wild-caught Mexican devilfish and lionfish. Since these species are otherwise considered waste for local fishermen, this partnership provides an additional income for fisherfolks and compensates for the loss of livelihood due to the low catch of marketable fish around the URB. It also restores native freshwater fisheries by controlling the population of invasive species. Pezzy Pets will be purchasing 100% of filleted devil fish from URB's partner fishing communities, giving them a steady and reliable source of

¹ [Usumacinta River Cultural Landscape | World Monuments Fund \(wmf.org\)](https://www.worldmonumentsfund.org/)

² [Indigenous Communities Attempt to Halt Construction of Massive Hydroelectric Facility in Chiapas \(unm.edu\)](https://www.unm.edu/)

income. In the long term, they hope to focus on supplying dried devil fish & other invasive species to pet food brands and manufacturers once demand has stabilized.

Key processes of the business include retrieval of devil fish, washing, filleting, drying, packaging, and shipping. For every kilogram of devil fish, 20% of which is recovered, filleted, and dried.

Process	Kg Recovered	Duration	Income
Filleting	60 kg (20% of raw devil fish)	4 hours	30 pesos per kg
Drying	-	12-14 hours	600 pesos per kg

Apart from this, COBIUS has been continuously monitoring the use of devilfish and the conservation of the riparian areas and the riverbank. They have partnered with researchers from educational institutions to research and provide solutions to the problems of invasive fish.

Outcome

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| <i>Improvement of livelihood</i> | <ul style="list-style-type: none"> Provides additional income for local fishermen around the URB by providing a market for devilfish and lionfish |
| <i>Environmental preservation</i> | <ul style="list-style-type: none"> Conducts research and monitoring to restore native freshwater fishes, as well as the conservation of the river basin areas. |
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