

Mitigation Strategies Proposed To Save Endangered Animals In Nicaragua

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A canal project designed to connect the Caribbean Sea with the Pacific Ocean could seriously deplete and disrupt the habitats of a number of endangered animals living in Nicaragua. (Photo : Christopher Jordan, Global Wildlife Conservation)

The proposed Nicaraguan interoceanic canal project puts jaguars, white-lipped peccaries and the globally endangered Baird's tapir at serious risk in their native habitat. Researchers warn that a rigorous conservation plan, designed to help animals navigate through the canal zone, must be implemented to preserve their genetic

diversity.

As it stands now, the project calls for the building of an interoceanic canal that would connect the Caribbean Sea with the Pacific Ocean, effectively dividing Central America. Consequently, this interoceanic canal would deplete and disrupt the habitats of some of the country's rare and endangered animals.

Using occupancy models, researchers from Michigan State University, Global Wildlife Conservation (GWC) and Panthera determined which part of the canal's proposed path interferes with the animals' crucial habitat. Using this information they then developed a conservation plan that, if implemented, could preserve areas vital to the animals' survival.

"We need to conserve the genetic diversity of these species for them to have healthy populations, but the proposed canal could prevent this by impeding their movement into and out of the Indio-Maiz Biological Reserve," [explained](#) Wes Sechrest, chief scientist and CEO of GWC. "This study offers realistic recommendations to prevent a wildlife crisis in a country that is home to, and a vital corridor for, some of the planet's most celebrated species."

Jaguars are listed as near threatened on the International Union for Conservation of Nature's Red List of endangered species. In Nicaragua, however, they are especially rare with a population totaling less than 500. Furthermore, the Baird's tapirs are close to critically endangered and it is believed that overhunting has made the white-lipped peccary the most threatened mammal in Central America.

The biological [reserve](#) occupies about 4,500 square kilometers on the southeastern corner of Nicaragua bordering the San Juan River. Within the proposed interoceanic canal area, researchers found that a relatively thin strip of forest stretching from the eastern edge of the proposed Lake Atlanta to the Caribbean coast is the only remaining area bridging the gap between breeding populations.

In other words, jaguars, white-lipped peccaries and Baird's tapirs rely on this strip of land to find mates in neighboring habitats. This, researchers say, is key to conserving the animals' genetic diversity and therefore healthy, viable populations.

"We urge the canal development company and the Nicaraguan government to implement these suggestions to ensure they avoid doing irrevocable harm to wildlife and the ecosystems that depend on these species," Sechrest added.

Researchers [recommend](#) five adjustments for the proposed canal design that would make it easier for large mammals to move through the area. This includes moving the location or adjusting the size of Lake Atlanta to minimize flooding of those habitat areas; building small, forested islands that species could use as refuges; and other measures that can be taken to help large mammals cross the canal.

Even still, creating the interoceanic canal would result in insurmountable deforestation in the remaining protected areas.

"Our previous surveys documented the severe loss of forest cover not only in the Wawashan Reserve, but also the corridor linking the key protected areas of Bosawas and Indio-Maiz," said Alan Rabinowitz, CEO of Panthera. "This was primarily due to unchecked agricultural encroachment progressing rapidly throughout the region. But if we can

now save that thin line of coastal habitat, even where the canal is proposed, jaguars and other mammals will have a chance."

The study was recently [published](#) in the journal PLOS ONE.

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