

ENVIRONMENTAL
VALUE 



ITM INDIGENOUS TERRITORIAL MANAGEMENT

▶ **T A C A N A INDIGENOUS PEOPLE**

**INDIGENOUS TERRITORIAL MANAGEMENT
CONTRIBUTES TO REDUCING DEFORESTATION**



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Tropical forests and the advance of deforestation in the Amazon

Forests contribute in many ways to human development through the maintenance of essential environmental services such as climate regulation, watershed protection, the provision of fresh water, shelter for wild plants and wildlife that are vital food sources, and local livelihoods. Furthermore, intact forests reduce environmental risks such as floods, droughts, and landslides.

With the arrival of globalization, the Amazon is experiencing agricultural expansion and industrial development, resulting in deforestation and the degradation of ecosystems. The reduction of forest cover is one of the most pressing environmental problems in the region, putting at risk biodiversity and important environmental services. In the context of climate change, deforestation accounts for 20% of total global carbon dioxide emissions. The deforestation rate in the Amazon for the period 2000-2013 was 3.6%. The deforestation rate in indigenous territories was found to be much lower, at 0.8% even lower than deforestation rates in protected areas (1.1%) (RAISG, 2015). This means that forest loss was 4.5 times lower than the average for the region.

In the Bolivian Amazon, two factors are driving rising deforestation rates: 1) the conversion of forest to pasture, industrial agriculture, and farming; and 2) the development of new roads. Between 2000 and 2013 the national deforestation rate was 3.1% (RAISG, 2014), similar to the rest of the Amazon.

In the northern Amazon of La Paz, the expansion of agriculture and pastoral activities are the main causes of forest loss and environmental degradation. Conservation efforts depend on local capacity for land management. This involves the planning of current and potential land use, institutional strengthening, and project implementation for the sustainable management of natural resources. Indigenous territories have significantly lower deforestation rates compared to the rest of the region and only slightly higher than rates in neighboring protected areas.

Territorial management and its contribution to reducing deforestation

The study of territorial management and avoided deforestation between 2005 and 2014 in the Bolivian portion of the Greater Madidi-Tambopata Landscape, under 3,000 m a.s.l., focused on four indigenous territories (Tacana I, Tacana II, Araona, and Lecos de Apolo), three national protected areas (Madidi National Park and Natural Area of Integrated Management, Apolobamba National Natural Area of Integrated Management, and Pilón Lajas Biosphere Reserve and Indigenous Territory) and three main roads (Yucumo-Rurrenabaque, San Buenaventura-Ixiamas, and Rurrenabaque-Reyes). Results reveal that deforestation in the landscape was five times lower in units that have territorial management (protected areas and indigenous territories) than in areas of the landscape without territorial management (0.06% vs. 0.3%).

A more detailed analysis shows that the level of annual deforestation between 2005 and 2014 in indigenous territories – titled and performing territorial management – has been relatively uniform and very low at 0.09%, similar to forest loss in the protected areas of the landscape (0.03%).

For the 2005-2010 period, the annual deforestation rate in indigenous territories was 0.09%, comparable to the deforestation rate for the 2010-2014 period (0.1%). Deforestation in protected areas was even lower: 0.03% for 2005-2010 and 0.04 % for 2010-2014. The most vulnerable protected area is the Pilón Lajas Biosphere Reserve and Indigenous Territory: 0.09% per year (2005-2010) and 0.1% (2010-2014), probably due to its proximity to human settlements near the Yucumo-Rurrenabaque road.

The greatest deforestation in the landscape occurred in areas close to three major roads, with an average annual rate of 2.6% for 2005-2014, especially along the Yucumo-Rurrenabaque road (4%). The overall rate was higher along the three major roads for 2005-2010, with an average of 2.7%, while for 2010-2014 it fell to 2.5 %. Projected forest loss for 2021 was estimated using historical deforestation rates from the period 2005-2010, and considering three possible scenarios 1) the absence of land management efforts outside of the Tacana indigenous territory; 2) land management within the Tacana indigenous territory; and 3) road infrastructure improvements along the Yucumo-Rurrenabaque road.

The results reveal that the lowest deforestation levels within 5 km of the San Buenaventura-Ixiamas road for the 2005-2010 period took place within the managed Tacana indigenous territory (0.5 %), while forest loss was higher (2.3%) in private properties and migrant farmer land without land management. Nevertheless, the highest deforestation levels in the Bolivian portion of the



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Greater Madidi-Tambopata Landscape was found in areas within 5 km of the Yucumo-Rurrenabaque road (3.7 %). The study projects that deforestation for the Tacana indigenous territory will be 4.6 times less than in adjacent areas with no land management, and 7.4 times less than areas subject to improved road infrastructure. Thus, the active management of the Tacana indigenous territory would mitigate the loss of 22,219 hectares of forest between 2010 and 2021. This analysis indicates the effectiveness of strategies aimed at reducing over-exploitation by strengthening land and natural resource management capacities to mitigate forest loss under collective ownership. It also shows that indigenous peoples' traditional ways of life and intimate relationship with their environment can guarantee the preservation of intact forests and the sustainable use of natural resources.

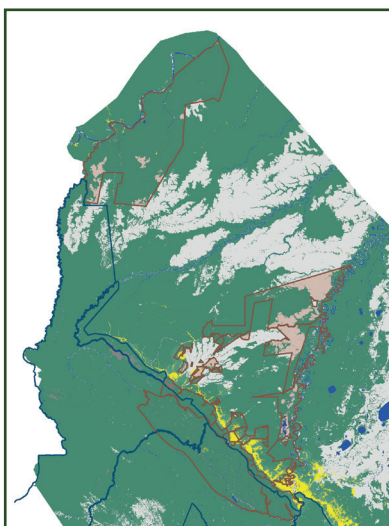
It is also important to point out that 87% of the indigenous territories of northern La Paz are forest, equivalent to an area of 1,667,640

hectares. Furthermore, on average each hectare stores 192 tons of carbon. In total 320,186,880 tons of carbon are stored, representing an enormous carbon deposit that contributes to mitigating the effects of climate change.

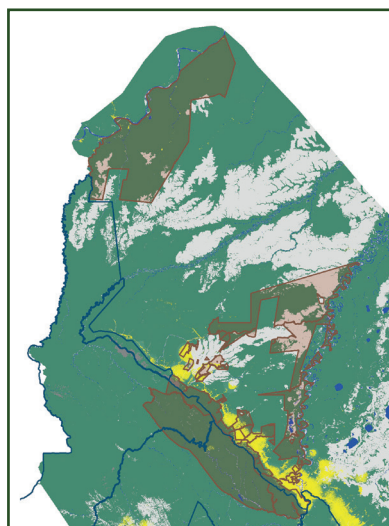
Indigenous territorial management contributes to biodiversity and watershed protection, as well as connectivity corridors. This includes, for example, the biological corridors that connect the Tacana indigenous territory with Madidi National Park to secure the flow of wildlife, protect habitats and threatened species populations, and ensure the sustainability of subsistence hunting.

In 2015, the Tacana Indigenous People Council (CIPTA) received the Equator Prize for their efforts to reduce deforestation in their territory. This prize is awarded by the United Nations Development Program (UNDP) every two years to recognize practical and local solutions that contribute to sustainable development and nature conservation.

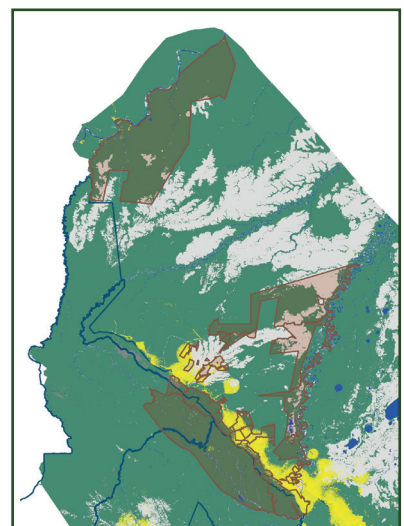
Deforestation scenarios 2010-2021



Scenario with Indigenous Territorial Management (Deforestation rate of 0.5%)



Scenario without Indigenous Territorial Management (Deforestation rate of 2.3%)



Scenario with improved road Yucumo-Rurrenabaque (Deforestation rate of 3.7%)

* Deforestation scenarios based on the historical period 2005-2010

DEFORESTATION

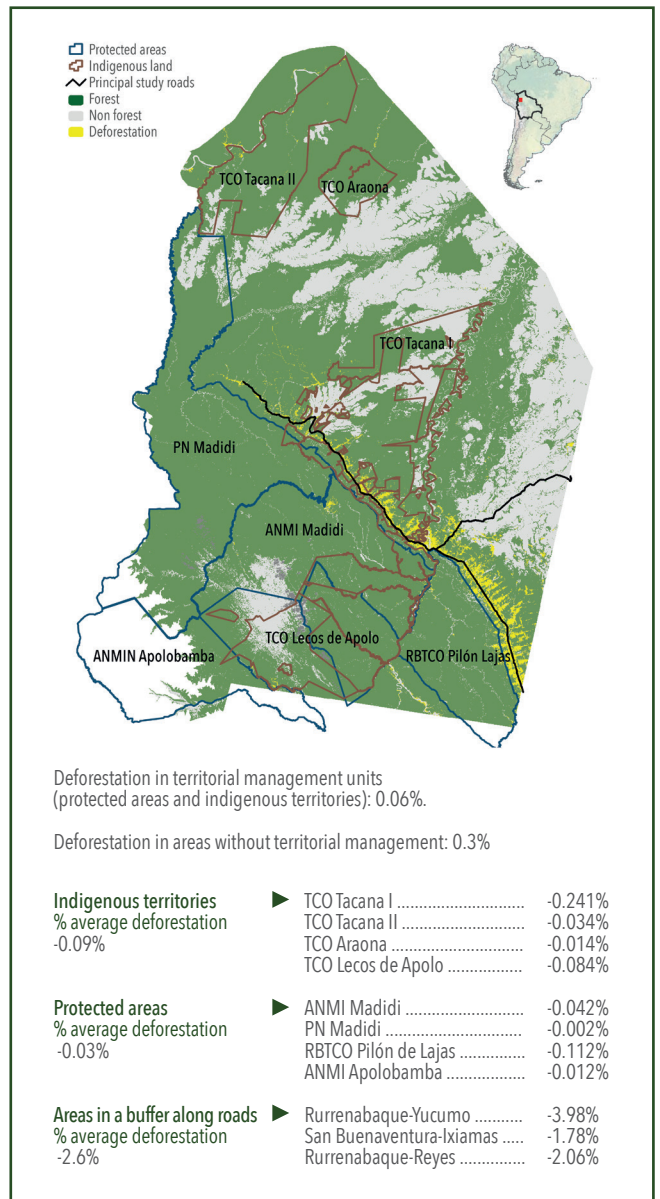
Indigenous communities are committed to looking after their forests and developing sustainable livelihoods that also contribute to mitigating the effects of climate change. Together with protected areas, managed indigenous territories contribute to the protection of wildlife and the reduction of forest loss in the Amazon. In fact, deforestation rates in these territorial management units are significantly lower than deforestation rates in areas in the landscape without land management.

The importance of forest conservation within indigenous territories

- Indigenous territories represent 28% of the Amazon's surface area. Deforestation rates are low in these areas (0.8%), lower than rates found in protected areas (1.1%), between 2000 and 2013.
- Conserved forests are important reservoirs of carbon that help maintain climate stability and fulfil essential environmental functions.
- The territorial management of indigenous lands in northern La Paz Department has been successful in reducing annual deforestation by 0.09% on average on average, between 2005 and 2014.
- In 2015 the Tacana people were awarded the Equator Prize for their efforts to reduce deforestation within their territories. The award recognized the contribution of Tacana communities to sustainable development resulting in 4.6 times less deforestation than in other surrounding areas close to roads.
- Indigenous territorial management ensures the protection of biodiversity and watersheds and maintains connectivity corridors with adjacent protected areas.

DEFORESTATION IN INDIGENOUS TERRITORIES IS LOWER THANKS TO THE PEOPLE'S COMMITMENT TO FOREST CONSERVATION

Territorial management units and avoided deforestation in the Greater Madidi-Tambopata Landscape



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