



WORLD
LAND
TRUST

Biodiverse CO₂ in Xilitla

Our Carbon Balanced
project in Mexico



Country: Mexico

Partner/Organisation:
Grupo Ecológico Sierra Gorda (GESG)

Biome

Tropical and subtropical coniferous forests

Ecoregion

Sierra Madre Oriental pine-oak forests

Habitats

The project area contains ~16,000 acres of higher elevation cloud and temperate forests that are of good condition and high conservation value. Temperate forest areas (above ~5,900 ft) are dominated by oaks, pines and cypresses, while lower altitude relic cloud forests contain a very high diversity of tree species. These forests store high amounts of carbon (approximately 160 tCO₂e ha⁻¹) and provide an important contribution to landscape hydrological dynamics by influencing high rainfall patterns and regulating rivers and streams, which are critical to life in the Huasteca Potosina region.

Project summary

Located high in the mountains of the Sierra Madre Oriental, adjacent to the Sierra Gorda Biosphere Reserve, this project will protect the temperate and cloud forests of Sierra de Xilitla from the significant threats posed by wildfires and timber extraction. To do this, high-quality and community-based forest management will be established within areas of communally held village land known as *ejidos*. In addition to having high biological value, these forests also act as a protective buffer to the neighbouring forests of Sierra Gorda and play a significant role in the formation of clouds and microclimates. Funding for forest protection will be derived from voluntary carbon offsetting payments, with natural forest regeneration sequestering 13,800 tCO₂e annually. The creation of a Carbon Fund run by the State of San Luís Potosí will provide the project with long-term financing. The project is being implemented by WLT's in-country partner, Grupo Ecológico Sierra Gorda (GESG).

Main threats to the area

The main threat to the forests is the expansion of agricultural activities like crop cultivation and livestock grazing. Illegal and clandestine logging remains a real threat to higher elevation forests despite low returns and poor incomes for communities. The management of the forest is also threatened by the impact of climate change and forest fire incidents. The loss of extensive historical forest cover from the coast of the Gulf of Mexico to the highest peaks of the Sierra Madre has contributed to drier conditions, with recent droughts and low rainfall seasons significantly elevating the risk of catastrophic forest fires. Cloud forests like the ones protected by this project are not adapted to fire.

Global prioritisation

The project falls within the Madrean Pine-Oak Woodlands and Mesoamerican Biodiversity Hotspots, as well as the Sierra Madre Oriental pine-oak forests Crisis Ecoregion. The project also borders the Sierra Gorda Biosphere Reserve, where WLT is already working with GESG.

Bearded Wood-partridge



Jaguarundi



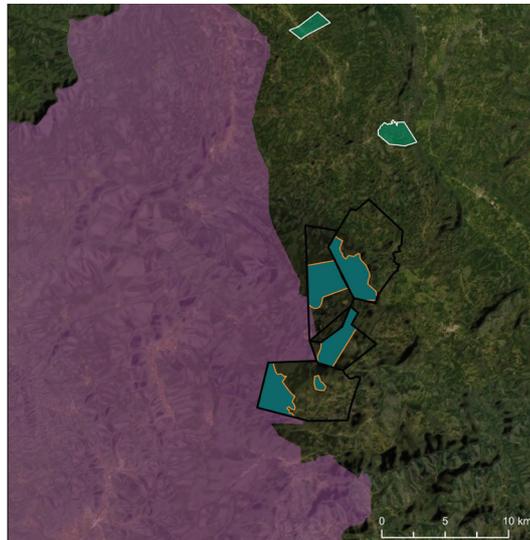
Ocelot



Key species¹

Jaguar (*Panthera onca*, NT), Jaguarundi (*Herpailurus yagouaroundi*, LC), Ocelot (*Leopardus pardalis*, LC), Margay (*Leopardus wiedii*, NT), Puma (*Puma concolor*, LC), American Black Bear (*Ursus americanus*, LC), White-tailed Deer (*Odocoileus virginianus*, LC), Tayra (*Eira barbara*, LC), Crested Guan (*Penelope purpurascens*, LC), Bearded Wood-partridge (*Dendrortyx barbatus*, VU).

¹ The International Union for the Conservation of Nature (IUCN) Red List of Threatened Species includes categories of Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT) and Least Concern (LC)



- WLT Supported Property
- Xilitla Project Area
- Sierra Gorda Biosphere Reserve
- Protected Area



Biodiversity

The forests are hugely biodiverse in tree flora and iconic mammals including Jaguar, Puma, American Black Bear and Ocelot. The area is also important for endemic and threatened birds including the Bearded Wood-partridge and Crested Guan, as well as being an important stop-off area for Neotropical migrants. The project area includes important populations and a high diversity of threatened amphibians listed on the IUCN Red List as Critically Endangered.

Local communities

Large amounts of land in the project region are given over to *ejidos*, a traditional indigenous system of land tenure that combines communal ownership with individual use. Individual community members manage designated parcels of the *ejidos*, in accordance with communally agreed land-use regulations as coordinated by the *ejido* directors. Indigenous peoples have a strong representation in the project *ejidos*, particularly Nahuatl and Teenek populations and to a lesser extent Mestizos (mixed ancestry). The forest is owned and managed by five *ejidos*. Agricultural activities like livestock rearing and the cultivation of corn and bean crops are the main livelihoods here. Agriculture is practised on a subsistence basis relying on traditional, unimproved techniques that do not allow households to be self-sufficient. Casual, informal agricultural labour is the main source of income for households within the communities.

Main methods for land protection

Reserve management, community support, conservation investments.

Partner/NGO

Grupo Ecológico Sierra Gorda (GESG) have been a WLT partner since 2007. WLT supports GESG with funding for land purchases, with the aim of increasing GESG's network of reserves within the Sierra Gorda Biosphere Reserve. In addition, WLT supports the ongoing protection of Sierra Gorda by funding rangers through the Keepers of the Wild programme and fire management activities. Since 2005, GESG has also been running its own carbon sequestration programme in the Sierra Gorda Biosphere Reserve; WLT contributed to this in 2007 by purchasing carbon offsets for the WLT Carbon Balanced programme.

UN Sustainable Development Goals advanced by this project

