Regenerating forests and farmland in Mexico's Sierra Gorda

Government: Querétaro, Mexico

Region: Latin America

Sector: Land use and forestry

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Summary

Forests cover more than a third of Mexico. They provide important cultural and ecological benefits and contain a tenth of the world's biodiversity. They are also the main source of subsistence and commercial opportunity for the local communities that own them. Between 1990 and 2005, Mexico lost about 7% of its forest cover (about 4.7 million hectares) as forests were converted to agricultural and livestock activities.

Land dedicated primarily to livestock production covers a similar area. When managed improperly, this land creates greenhouse gas (GHG) emissions from the livestock themselves, as well as from the degradation of soil. With regenerative land management, however, grazing lands can be made more profitable and can become important sources of GHG emission reductions.

The need to support economic opportunities for Mexico's rural communities, while also conserving forests, has led the State of Querétaro to promote an initiative to re-green Mexico through the promotion of regenerative land management practices. The State provides monetary incentives to communities that remove cattle from their forests and adopt regenerative practices at their ranches. The payments are funded through proceeds from a carbon tax that the State has placed on private vehicles, which is also matched by the National Forestry Commission (CONAFOR) on a one-to-one basis.

In addition to forest restoration, the project also trains technicians, students and ranchers in regenerative land management practices such as hydrological keyline design and holistic planned grazing. In partnership with Querétaro State´s Secretary of Agricultural Development, clear steps have been taken to incorporate these activities into the public policy agenda, so that soil regeneration practices are reinforced institutionally.

The project managers at Grupo Ecológico Sierra Gorda (GESG) are working with large ranches that fulfill the necessary criteria to generate carbon-offset credits from the project.

The methodologies developed through the project to monitor carbon sequestration (the capture and storage of carbon dioxide) in forests and soils and the tools for adaptation can be applied to other states in Mexico and internationally and are available upon request.

Results

While the project is getting underway, pilot projects for both the forest restoration and planned grazing components have been successful. Forest restoration through payments for ecosystem services has been implemented for several years in the old growth oak forests of the Sierra Gorda by GESG in partnership with Bosque Sustentable A.C. (BSAC), and currently provides payments for the preservation of approximately 6,000 hectares each year. Similarly, the planned grazing component began as a pilot project on approximately 82,000 hectares in the states of Querétaro, San Luis Potosí, Chihuahua and Sonora.

If these activities are expanded, including growth in existing states and replication in additional Mexican states, GESG estimates that the forest restoration component will restore 338,000 hectares, reducing Mexico's GHG emissions by 2.5 Million tons (Mt) over five years. The planned grazing component will regenerate 788,000 hectares and reduce 7.2 Mt over five years.

Anecdotally, Sierra Gorda ranchers have said that their participation in the pilot projects, including the trainings by GESG, have increased their income and improved their cattle's overall health.

Challenges

According to Martha "Pati" Ruiz Corzo, Director and co-founder of GESG, one of the main challenges with the project was initially trying to secure financing through global protocols, which were not aligned with local realities and were costly to implement. The solution was to work directly with the State of Querétaro to secure the finance required and also to help meet state goals, such as offsetting GHG emissions from the state's vehicle fleet.

Key lessons learned

- Providing monetary incentives to landowners through payments for ecosystem services is key to the success of the project. Without these monetary incentives, the landowners would understandably seek other commercial opportunities for their land.

- Reliable monitoring, reporting, and verification of the GHG emissions reductions resulting from project is also critical. The local protocol used in the project is currently undergoing validation by the Initiative for Climate Action Transparency (ICAT) as an early adopter for transparency in public policies.

- Incorporating soil and forest regeneration tools, such as holistic planned grazing, can increase rancher productivity, healthy food production, land regeneration, and biodiversity. Regular civic engagement also helped gain the buy-in of rural communities.

More information

For more information on the project, visit here.

For more information on payments for ecosystem services, visit here.

For more information on holistic planned grazing, visit here.

For more information on Grupo Ecológico Sierra Gorda, visit http://sierragorda.net

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