

Carbono Biodiverso

A Local Protocol for Climate Action
to Protect the Heart of Mexico





Prologue

In Querétaro we have a clear mission: promote economic development through environmental protection. Today, more than ever, we know that without healthy ecosystems, clean air, and decisive climate action a future is not possible

The Carbono Biodiverso protocol, developed by Grupo Ecológico Sierra Gorda, has become a benchmark for innovation and collaboration. This initiative demonstrates that it is possible to mitigate the effects of climate change while protecting forests, regenerating ecosystems, and generating tangible benefits for local communities. The Sierra Gorda of Querétaro, one of Mexico's most valuable natural heritage sites, is today the stage for a pioneering model that manages to capture atmospheric carbon, restore forests, while at the same time offering economic benefits to local landowners.

The Secretariat of Sustainable Development of the executive branch of the state of Querétaro has joined these efforts by implementing a key mechanism: the State Seal of Low Carbon Emissions. This badge is an integral part of our state's comprehensive climate policy, which was strengthened in 2021 with the creation of an industrial carbon tax and an emissions offsetting system. Its hybrid design and tax incentives allow companies to reduce their tax burden through the implementation or financing of decarbonization projects such as Carbono Biodiverso, the first scheme of its kind in Mexico.

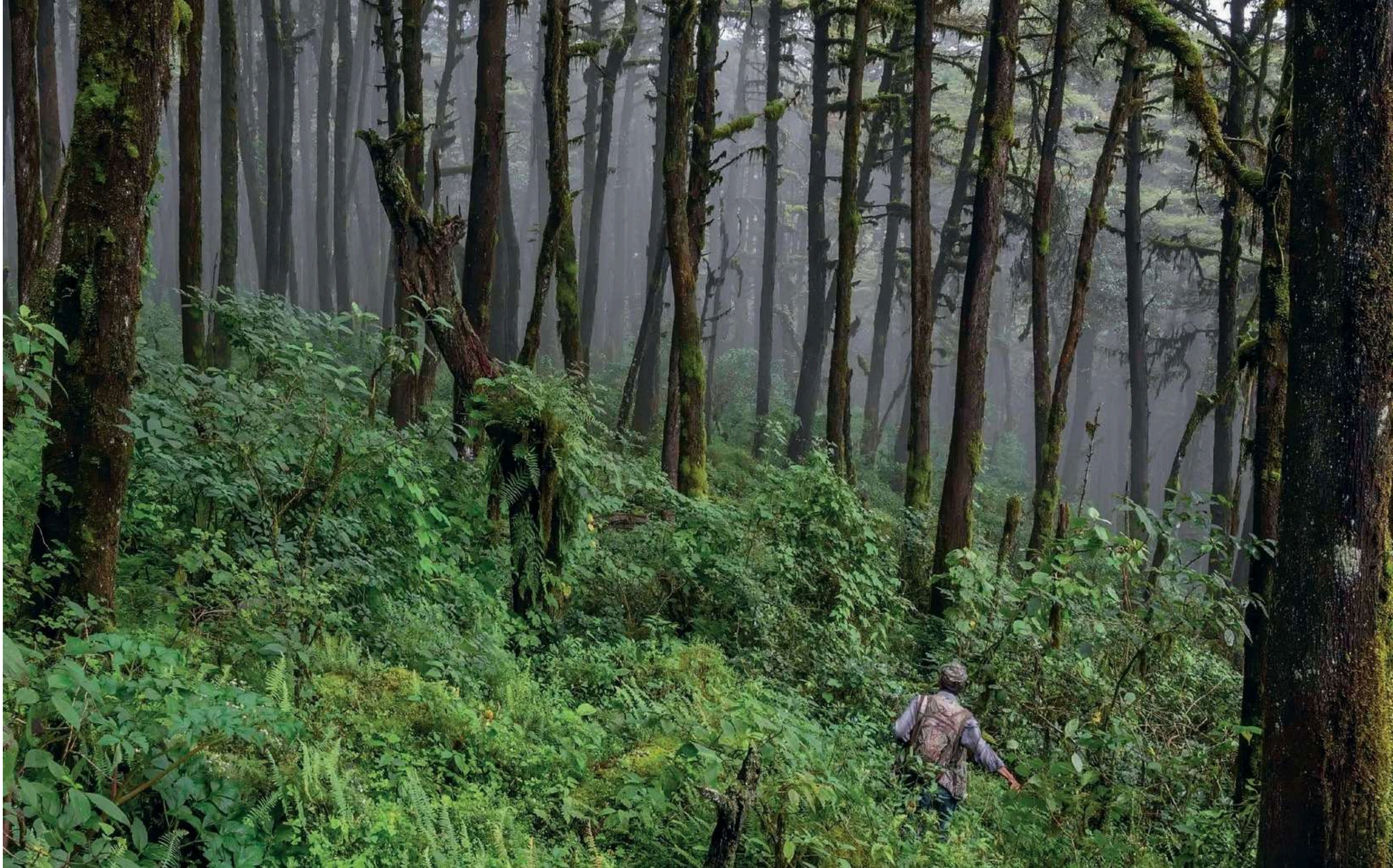
Therefore Querétaro not only fosters a competitive and responsible economy, but it also offers a way for the private sector to become a central part of climate action. The State Seal of Low Carbon Emissions represents trust, transparency, and appreciation for those who choose to measure, reduce, or compensate their carbon footprint, strengthening the link between public policy and community-driven conservation projects.

This book is a testament to the value of partnerships and collaboration between civil society, communities, the private sector, and the government. Its content reflects that the sum of efforts not only yields measurable results in emissions reduction, but also provide a hopeful alternative in the face of global challenges.

Querétaro continues its drive towards a low-emissions future. The Carbono Biodiverso Project and the State Seal of Low Carbon Emissions are proof that local action can have a global impact, and that our state is committed to building a sustainable and resilient future for generations to come.

Marco A. del Prete T. 2021-2027

*Secretary of Sustainable Development of the Executive Branch
of the State of Querétaro*



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An inclusive, nature-based solution

Martha“Pati”Ruiz Corzo

Executive Director Grupo Ecológico Sierra Gorda

The deterioration of Mexico’s forests and jungles stems from a variety of causes, all rooted in the absence of economic returns for private landowners, ejidos, and communities.

As a result, agricultural activities, timber extraction, and land-use change have squandered natural capital in exchange for meager economic returns. This is what has happened in the state of Querétaro as well, where ecosystems have suffered profound disturbances, their capacity to provide environmental services has been diminished, biodiversity depleted, and soils degraded.

We want to regreen Mexico to restore its natural capital.

This is precisely why Grupo Ecológico Sierra Gorda I.A.P. (GESG) has spent 39 years developing multiple solutions to advance community well-being, regenerate the Sierra Gorda’s ecosystems, build local capacity, innovate within a circular conservation economy, restore forests and soils, mitigate climate change, and develop and apply a protocol that works for the communities who own these forests.



About

The Local Protocol for Subnational Actions for Forest Regeneration (Local Protocol), developed and implemented in the state of Querétaro, Mexico, is a pioneering carbon compensation model that aligns corporate sustainability efforts with environmental protection and regional socioeconomic development.

Developed by **Grupo Ecológico Sierra Gorda (GESG)**, drawing on nearly four decades of experience and a deep knowledge of the region's socioeconomic reality, and in partnership with the **Secretariat of Sustainable Development (SEDESU)**, this protocol guarantees fair compensation for landowners while promoting nature-based carbon capture, forest regeneration, and biodiversity recovery.

Designed as a non-profit alternative to international carbon standards such as those of Verra and Climate Action Reserve, standards with requirements that are unworkable for rural landowners, the local protocol was not developed for the conventional market, but as a transparent and fair emissions reduction system. It is the result of an emerging climate action

mechanism derived from regional public policy, designed in favor of landowners, with a strong technical field presence, where resources flow directly to beneficiaries and project operating costs are reduced. As a tool that can be replicated by other civil society organizations with local knowledge, field experience, and a scalable approach, it offers a more flexible, inclusive, and fair model that can be applied in other forest areas in Mexico. Technical protocols to improve forest management have also been successfully established and applied.

OpenForests developed a fully integrated digital system that manages land registration, carbon inventory, synchronized payments, a registry, and satellite image-based project oversight. This system ensures efficiency, transparency, and scalability.

So far, GESG has issued multiple certificates and enabled the removal of thousands of tonnes of atmospheric carbon, protecting large areas of forest and benefiting local communities, where regeneration is now promoted and the conservation of existing forests is guaranteed.



From that corner bathed by the flashes
of the sun that fills our triumphant sky;
from the flowering earth where among flowers
my sweet and serene infancy slipped in,
wrapped in the memories of my past
which is blurred in the distant horizon;
I watch the strange specimen, never forgotten,
of the oddest sower there was on the mountain.

I still don't know if he was wise, crazy or
prudent, that man who was dressed in humble
attire; I only know that on looking at him,
everyone regarded him with deep respect.
And it's perhaps that his stern and noble
gesture astonished all for being arrogant:
Even the woodsmen looking at the oak tree
feel the majesties of the giant!

One autumn afternoon I went up to the
mountain and as I looked at the sower, I
watched smiling. Ever since men existed on the
earth none have toiled with such determination!

I wanted to know, curious, what the madman
planted on the mountain lone and brave.
The poor wretch listened to me kindly
and said with deep melancholy:

"I plant flowers, pines and sycamores; I want to
fill this hill with fronds,
I want others to enjoy the treasures that these
plants will give when I die."

"Why so much effort in a day's work without
seeking reward?", I said. And the madman
murmured, with his hands on the hoe:
"Maybe you think that I am mistaken;
perhaps, being a boy, it really amazes you
the unlimited impulse that ignites my soul;
for those who do not work, I work and struggle;
if the world does not know it, God understands
me!"

Today selfishness is the stupid master
to whom we pay homage in several ways:
if we pray, we ask solely for our own bread.
Never do we ask heaven for bread for everyone!
In our own misery, eyes fixed,
we look for riches that are in our own interest
and we confront everything for our children.

Is it perhaps that other parents don't have
children? We live being brothers in name only
and in brutal wars, with thirst for thievery.
There is always a fratricidal within man;
and the man, for man, is always a wolf.

That is why when I contemplate on this sad
world, I labor and impose on myself a rough job
and I know that my poor example is worth a lot,
though poor and humble it seems and is.
We must fight for those who do not fight!
We must demand for all those who do not beg!
We must make those who do not listen to hear
us! We must cry for all who do not cry!

We must be like the bees in the hive
that make for all, sweet honeycombs.
We must be like the water that flows serenely
offering the whole world fresh streams.
We must imitate the wind that plants flowers,
the same in the mountain as in the plains.
We must live life sowing love,
with the sight and the soul always in exaltation."

Said the madman, and with noble melancholy,
through the thicket of the mountain he
continued climbing and on losing himself in the
shadows, still repeating: "We must live sowing,
always planting!"

The Sower



How it works

Compensation of carbon

Companies established in Querétaro can offset up to 70% of their emissions, of which at least 25% must be compensated through forest conservation projects in the region such as the Carbono Biodiverso project managed by Grupo Ecológico Sierra Gorda (GESG). **The Carbono Biodiverso Registry** is instrumental in ensuring transparency and accountability for client companies.



Control and Transparency

We have developed a meticulous registry for our transaction management and supervised inventory control.

The **GESG Carbono Biodiverso Registry** is complemented by continuous on-the-ground assessments and satellite-based tools, via the **OpenForests platform www.explorer.land**, which is available to other project promoters and clients using the local protocol. This monitoring system provides verifiable evidence of impact, reinforcing trust between stakeholders, companies, and regulatory bodies.

Certification and Reporting

Companies submit their carbon compensation reports to **SEDESU's Emissions and Compensation Registry**. Once verified, and when they have offset their emissions with forests belonging to a local landowner, they receive a State Seal of Low Carbon Emissions, which is used to access tax incentives and achieve regulatory compliance.

The Carbono Biodiverso Registry



Latest News

Uber Protects Sierra Gorda



Reserva de la Biosfera
Sierra Gorda

Reserva de la Biósfera
Sierra Gorda

Jalpan de Serra

Landa de
Matamoros

Acatitlan de
Zaragoza



Zonas Núcleo ANP:
Reserva de la Biósfera
Sierra Gorda



Corredor
Biológico Sierra
Madre Oriental

Arroyo Seco

Valle verde

El Portugués

Pinal de Amoles

Peñamiller

Villa Emiliano
Zapata

The Carbono Biodiverso Registry

Revolutionizing Carbon Capture for Local Impact and Global Transparency

Global carbon markets are increasingly scrutinized for their lack of transparency and often limited local impact. In response, at a subnational level, Mexico is spearheading the development of a more accountable and inclusive system. With a significant portion of Mexico's vital forests facing threats from deforestation and degradation, losing hundreds of thousands of hectares annually to agriculture and other pressures, the urgency for an efficient, transparent, and scalable carbon offset model is undeniable.

Enter the **Carbono Biodiverso Registry**, a groundbreaking digital platform built for Grupo Ecológico Sierra Gorda to support a robust local methodology and facilitate reporting, verification, operational transparency, and visibility.

OpenForests, a leading forest monitoring and transparency technology company, collaborated with experts in the Sierra Gorda to design a data management and accountability system across three sectors: the private sector, civil society represented by **Grupo Ecológico Sierra Gorda (GESG)**, and the public sector represented by the **Secretariat of Sustainable Development of the State of Querétaro (SEDESU)**.

As a pioneer in local conservation and the voluntary carbon market, this software solution seamlessly integrates GESG's established **Carbono Biodiverso protocol** with cutting-edge digital tools, ensuring the full traceability and integrity of carbon units brought to market.

The Carbono Biodiverso Registry software is designed to directly link carbon offsets with verifiable and real forest restoration efforts, turning regenerative conservation into a profitable activity for local landowners, providing sustainable economic opportunities for rural communities, and offering corporate buyers a credible and transparent way to participate in a truly impactful carbon economy.

The challenge: a critical need for trust and transparency

Traditional carbon markets have often struggled with issues of opacity, making it difficult for stakeholders to verify the real-world impact of carbon offset projects. This lack of transparency undermines trust and can deter potential investors and participants. In Mexico, the challenge is particularly acute, given the immense pressure on its diverse forest ecosystems. Even though these forests are crucial for biodiversity and climate regulation, they face continuous threats from illegal logging, agricultural expansion, and land-use change. An effective solution is needed to not only facilitate carbon capture but also ensure the benefits flow directly to the communities restoring vital forest ecosystems.

The solution: the Carbono Biodiverso Registry – a paradigm shift

GESG, with over three decades of on-the-ground conservation experience in the Sierra Gorda Biosphere Reserve and a pioneer in nature-based solutions for the voluntary carbon market since 2002, recognized the need for a localized yet robust carbon accountability mechanism. **The Carbono Biodiverso Protocol** was developed to simplify the often-complex processes of global carbon markets, making participation accessible for small landowners.

This initiative, based on local experience and strengthened by a valuable alliance with the government of the State of Querétaro through the Secretariat of Sustainable Development (SEDESU), has become a blueprint for how local and regional governments can develop impactful public policies.



“Designed to respect the specific situations of local landowners, this viable local protocol ensures payments for carbon offsets go directly to the beneficiaries, not project developers. This establishes a virtuous cycle, with remaining funds reinvested in other community development initiatives.”

Martha “Pati” Ruiz Corzo

It is focused on **regenerative forest management**, which requires the discontinuation of practices like grazing in forests, timber extraction, and unsustainable land-use changes, in addition to the reporting of wildlife sightings and other signs of ecosystem health on site to enhance CO2 capture and environmental services.

The Carbono Biodiverso Registry was created to bring this vision to a wider audience and ensure unparalleled transparency. GESG partnered with **OpenForests** to leverage its expertise in building customized software systems for robust data management and impact visualization on the **explorer.land platform, the map-based project visualization platform of OpenForests**.



This digital registry offers:

- **Full Traceability:** The registry ensures complete traceability of each carbon offset unit, meticulously calculating its value and linking it to specific land parcels. While individual landowner data remains private, the underlying information is rigorously audited by the Querétaro government and an independent third party, ensuring data integrity and anonymity.
- **Streamlined End-to-End Management:** The platform simplifies the entire process from land registration to carbon removal calculation, processing of transactions and the final payout to landowners. This fosters seamless management from the local landowner level to the company level, reducing administrative burdens and increasing efficiency.
- **Transparent Transactions:** Corporate buyers gain trust through full traceability of every carbon removal unit obtained and detailed annual reports outlining their local impact. While company names are only made public with explicit permission, the system fosters trust and accountability in offset purchases through its robust verification and auditing processes.

Impact on landowners: empowering local stewards

The **Carbono Biodiverso Protocol** offers a transformative economic pathway for **local landowners and rural communities**. By participating in the program, they receive direct financial incentives for preserving and restoring their forests. This not only provides sustainable economic benefits, but also:

- **Reduces poverty:** Offers an alternative income source, reducing reliance on unsustainable practices.
- **Promotes conservation:** Encourages long-term commitment to forest health and biodiversity protection.
- **Builds capacity:** Educates landowners on best practices for ecosystem management.

Both women and men in families are contacted and, when possible, are paid together to ensure that all the guardians of Mexico's natural heritage are directly rewarded for their vital conservation efforts, creating a virtuous cycle of ecological and economic benefit that is profoundly changing lives and landscapes.



Benefits for corporate buyers: credible offsets, real impact

For companies seeking to meet their **Net Zero** targets and demonstrate genuine environmental responsibility, the **Carbono Biodiverso Registry** is authorized under Querétaro's State Registry of Carbon Compensation Projects and offers a compelling opportunity.

The strength of **Carbono Biodiverso** comes from a climate action plan and a solid regulatory model under the **Secretariat of Sustainable Development (SEDESU)**, which **has endured three changes in state government** and welcomes collaboration with local civil society organizations, in this case **Grupo Ecológico Sierra Gorda (GESG)**.

This partnership ensures that local needs are met with integrity, accountability, and transparency. After undergoing the Ecological Footprint for Sustainability Planning program, the state of Querétaro took steps to incentivize the private sector to lower their emissions and in 2022 passed a law to implement the **Querétaro Seal**, a state-driven regulation for lowering emissions. Through an innovative carbon tax system, companies in Querétaro can now directly offset their emissions with verified local carbon projects within the Sierra Gorda Biosphere Reserve.



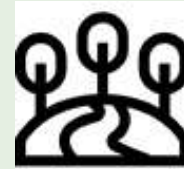
41,261 hectares

Area covered by Carbono Biodiverso projects



6 felines

Protected in the Sierra Gorda Biosphere Reserve



6 ecosystems

Sustained by Carbono Biodiverso



330 transactions

Processed for companies

Period 2020–2025

Companies compensating their emissions and acquiring **carbon removal units** through this registry benefit from knowing that these units are:

- **Locally Sourced:** Support conservation efforts within Mexico and directly contribute to specific regional development goals.
- **Transparently Verified:** Provide clear evidence of impact through digital monitoring and reporting, third party evaluation, and state oversight.
- **Socially Responsible:** Directly benefit local communities and empower landowners.
- **State-Backed:** The involvement of **SEDESU** and the **Querétaro Seal** adds an unparalleled layer of government endorsement and regulatory confidence, ensuring the integrity and longevity of the offsets.

This robust framework allows businesses to validate their environmental commitments with tangible, verifiable, and officially recognized action, avoiding the pitfalls of greenwashing and building stronger relationships with their stakeholders.

The future: scaling transparency and impact

The Carbono Biodiverso Registry represents significant progress towards the creation of a more equitable and effective **carbon market**. As global demand for high-quality, transparent carbon offsets grows, this software model, developed by GESG and OpenForests, offers a scalable blueprint for other regions and countries. It demonstrates that with the right technology, strong local partnerships, and a commitment to transparency, carbon markets can truly drive both environmental regeneration and sustainable rural development.



How the actions of SEDESU and Grupo Ecológico Sierra Gorda impact the circular economy and conservation

Their actions profoundly impact both the circular economy and conservation in the Sierra Gorda Biosphere Reserve through a model inspired by the Commonland Foundation's 4 Returns framework (inspiration, social, financial, natural).

Circular conservation economy

GESG has promoted a **regenerative synergy** that mobilizes economic resources and society at multiple levels, bringing together local communities, the private sector, civil society, the government of the state of Querétaro and SEDESU's regional public policies, as well as financial resources from other foundations and private civil society organizations. This model enables:

- **Monetization of ecosystem services:** Forest owners receive payments for environmental services, such as carbon sequestration and scenic beauty, generating direct and sustainable economic returns.
- **Development of new productive skills:** Training is provided in activities compatible with conservation, community climate education, regenerative forest management, waste management, nature tourism, and sustainable production, integrating communities into green value chains.
- **Landscape restoration:** The resources generated are reinvested in restoration efforts, livestock exclusion, forest regeneration, and local capacity building, creating a virtuous circular economy that multiplies environmental and social benefits.
- **Financial innovation:** This model, implemented in the Sierra Gorda Biosphere Reserve, introduces innovative financial mechanisms for the protection and restoration of natural capital, linking conservation actions to economic and social development.

Ecological conservation and restoration

GESG's work has transformed conservation in the Sierra Gorda by:

- **Recovering natural capital:** By removing livestock from forests, preventing logging, and promoting regenerative management practices, the forests of the Sierra Gorda have been able to recover naturally, increasing carbon capture, recharging natural springs, and improving habitats for flora and fauna.
- **Restoring ecosystem services:** Restoring forest ecosystems ensures essential services such as carbon sequestration, local climate regulation, improved air and water quality, and the protection of endangered species can continue.
- **Conserving biodiversity:** The Sierra Gorda is home to one of the greatest diversities of ecosystems and species in Mexico. GESG's actions have been key to protecting and restoring the biological richness of the region.
- **Strengthening community resilience:** By improving the social and economic well-being of communities through conservation, GESG has reduced the pressure on natural resources and increased local participation in land management.

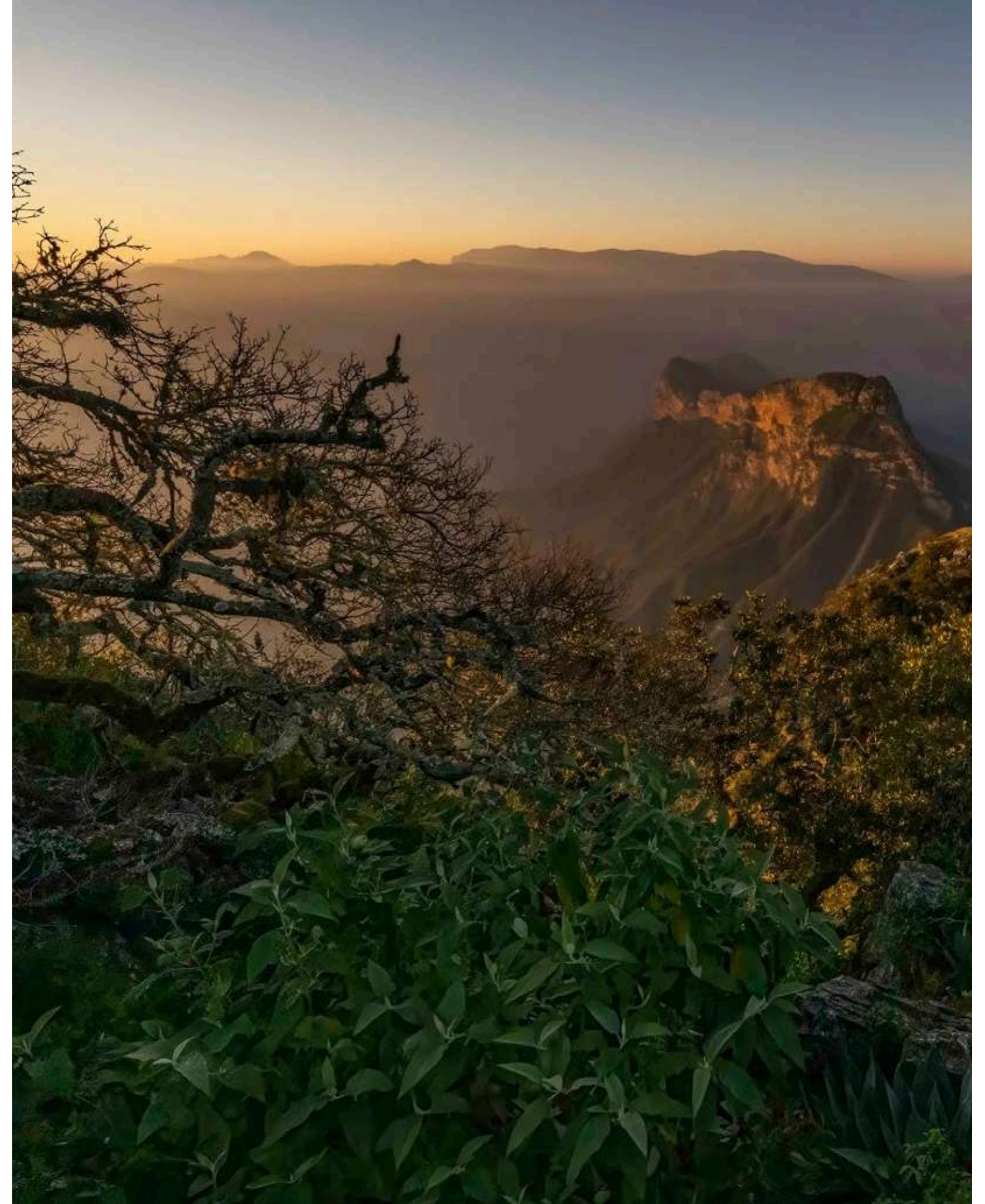


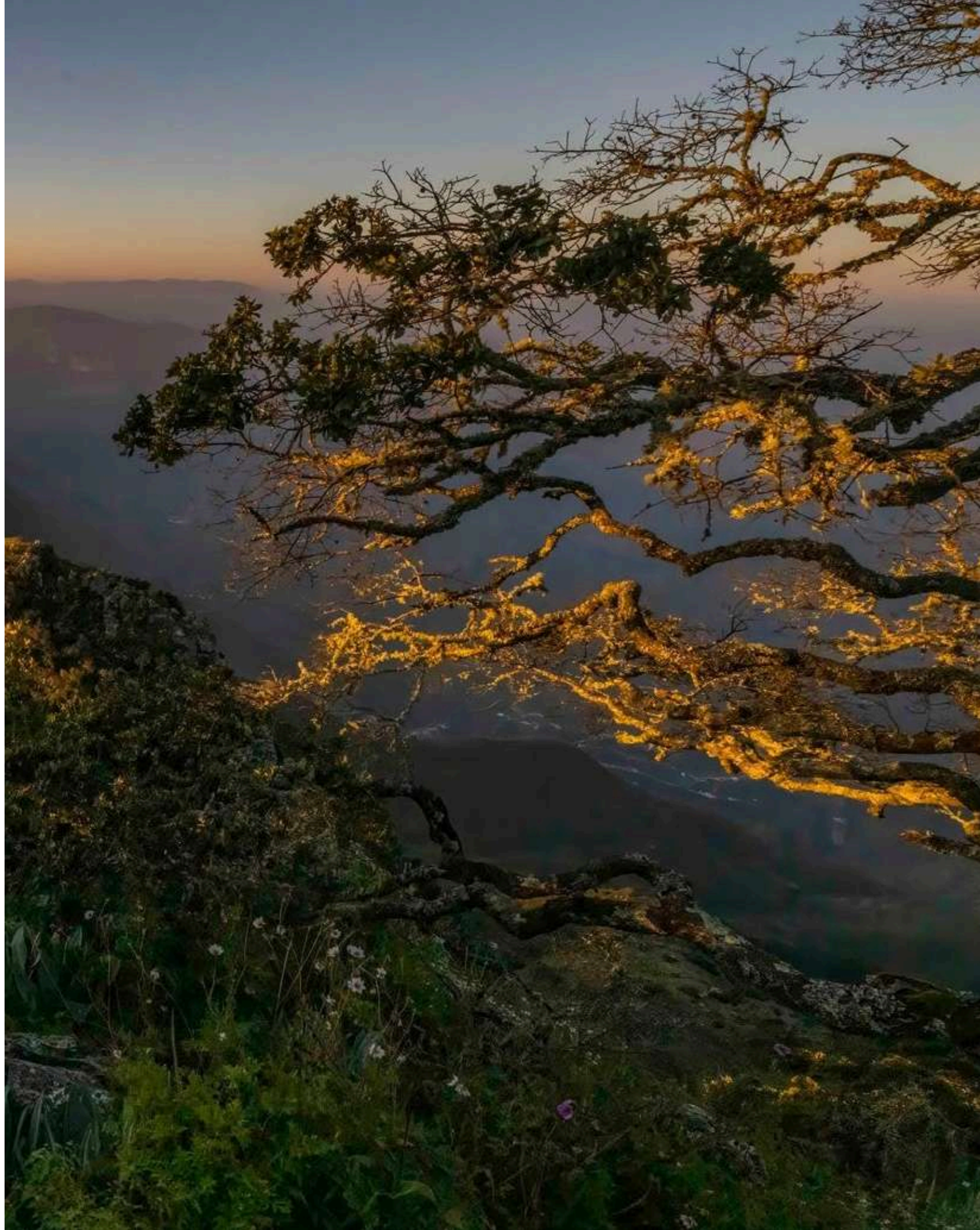
Territorial extent

The Sierra Gorda Biosphere Reserve covers **383,567 hectares** in five municipalities in the state of Querétaro, Mexico: Jalpan de Serra, Landa de Matamoros, Arroyo Seco, Pinal de Amoles, and Peñamiller, with 638 communities. The Reserve is characterized by rugged terrain, canyons crisscrossing the landscape, and mountains formed from marine sedimentary rocks.

Added to this are another 41,495 hectares in the municipality of Xilitla in the state of San Luis Potosí which are home to magnificent cloud and temperate forests in the upper altitudes. These forests represent an invaluable natural capital and are the last remnants of the great forest that once extended all the way from the Gulf of Mexico coast to the high peaks of the mountain range.

The 4 Returns analysis was carried out in the local area, which includes 300 high impact communities that GESG has continuously worked with for many years. The rest of the territory is also impacted indirectly as a result of being part of the Biosphere Reserve, where the mirror effect and natural protected area regulations are in effect.





4 Returns framework: integration and long-term vision

The **4 Returns framework** allows GESG to evaluate and plan its impact holistically based on:

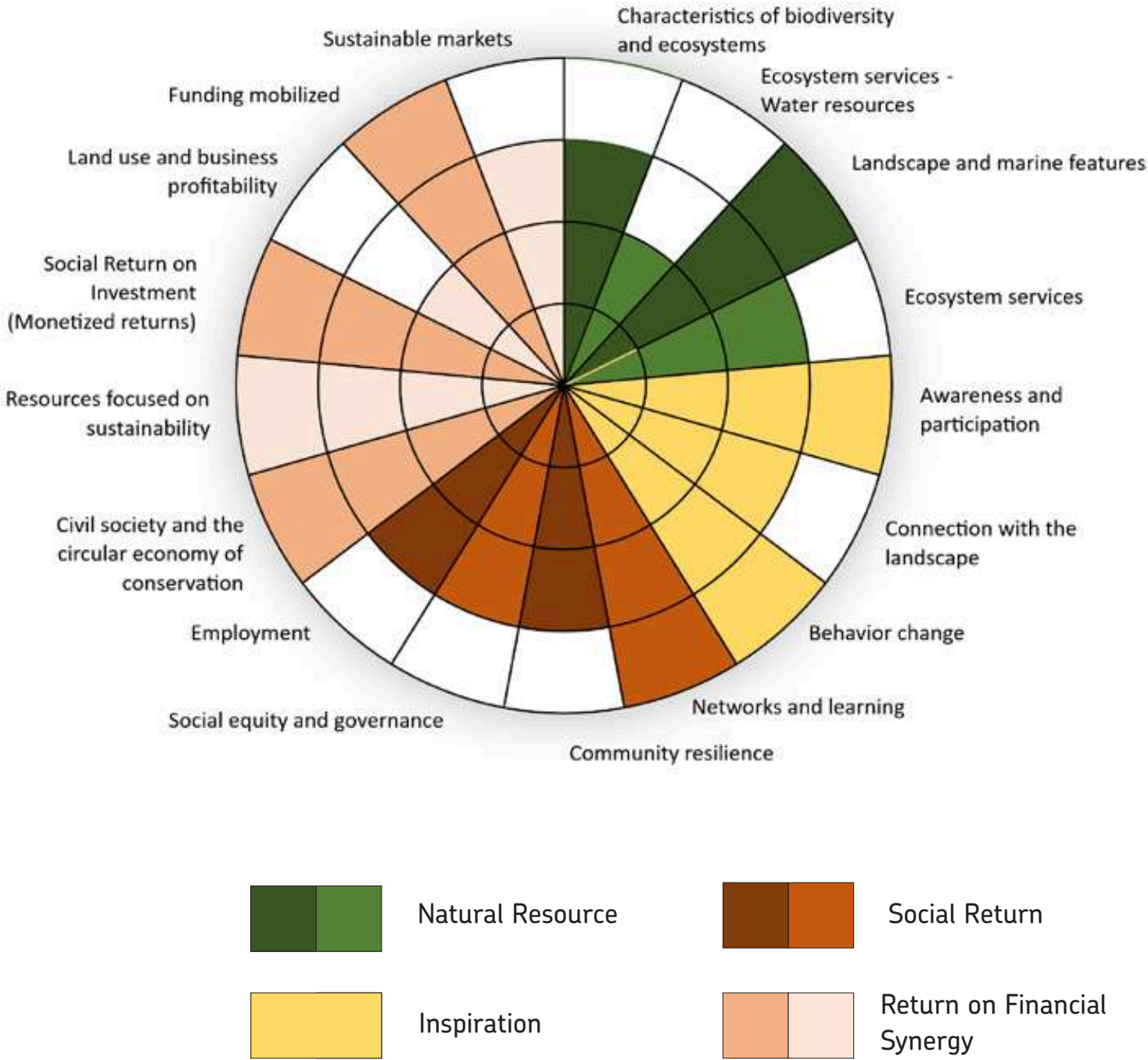
Return of inspiration: Promoting awareness, connection with the landscape, and behavioral change toward sustainable practices.

Social return: Improving well-being and community cohesion, promoting participation and environmental education for all institutional, social, and business actors. **Financial return:** Generating sustainable income through a circular conservation economy, ensuring the economic viability of ecological restoration.

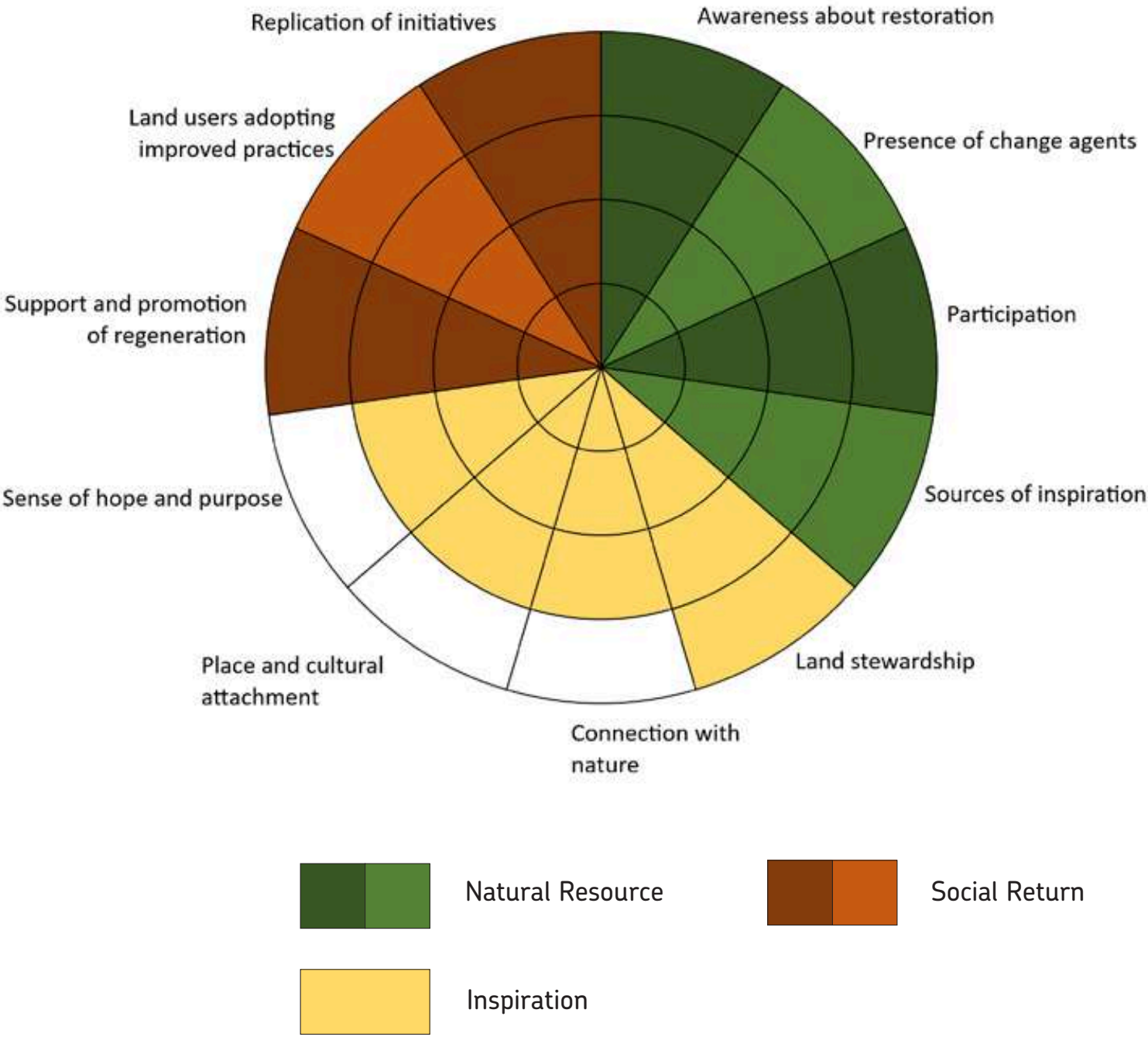
Natural return: Restoring biodiversity, soils, water, and the ecological functionality of the landscape.

Taken together, GESG's actions within each of these areas **transform natural capital into economic, inspirational, social, and ecological value**, positioning the region as a national and international benchmark for the circular conservation economy and nature-based climate action.

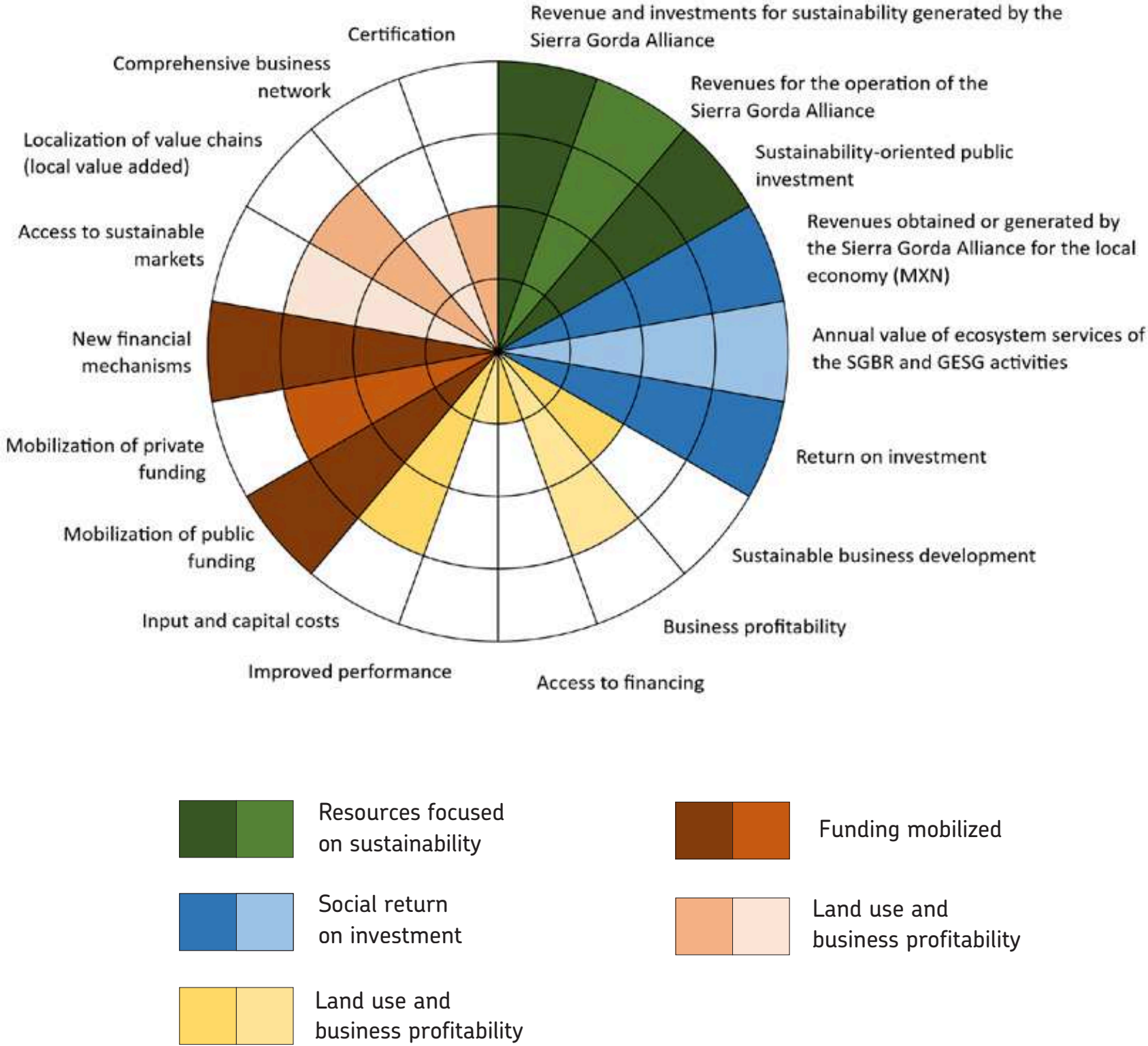
4 Returns Sierra Gorda 2026



Inspiration benefits for multiple stakeholders



Financial Returns





The 4 Returns: Reflections on the Results

Having discussed the results of the diagnosis, some notable factors, domains, or areas for further exploration within each return were identified.

Inspirational returns

One of the key actions for inspirational returns is to continue pushing for the participatory conservation model while strengthening local capacities and developing an ecological, entrepreneurial citizenry with the tools and habits needed to relieve pressure on the territory.

Natural returns

In the case of natural returns, the promotion of the local protocol, which respects the realities of local communities, drew the most attention as the action that can most effectively promote forest regeneration and restore spaces for biodiversity. Additionally, wastewater treatment and the cleaning of contaminated sites were identified as key actions that have reduced pollution and the associated health risks to ecosystems.

Social returns

In the area of social returns, capacity building and knowledge sharing initiatives were identified as high-impact actions for empowering local people and promoting entrepreneurship. These initiatives have created real opportunities for those with entrepreneurial aspirations by providing follow-up and training, leading to the creation of viable and sustained projects that now generate their own resources. Furthermore, we have already inspired greater ecological consciousness in multiple generations

of students, whom we now find at all levels among teachers, community leaders, and officials who share the same drive to restore nature, earning us recognition as a pioneering, high-impact strategy for Mexico and Latin America. We have already achieved significant transformational change, developing a culture that perceives nature as alive and sees itself as part of that fabric, with innovative habits and skills that enable active participation and local action.

Financial returns

For GESG it is important to talk about the financial sustainability of the organization, as this is what enables landscape restoration, as well as the strengthening of local skills and capacity, the development of local infrastructure, the integration of a larger area into regenerative management, and the development of new opportunities for local entrepreneurs. All this is financed by the Carbono Biodiverso project, which has proven to be a virtuous tool for inclusive and participatory conservation and nature restoration. It is generating new sources of income that are being integrated into the circular economy, restoring the social fabric, ensuring the continued provision of nature-based services, and enabling the effective implementation of the UNESCO MAB Biosphere Reserve designation, thereby proving the power and success of a regional public policy when it is tied to a local protocol with so many social and environmental benefits.

Climate Actions for Sustainability

Photography Exhibition



Left: The small restaurants of the Ruta del Sabor represent the very best of regional cuisine. They are part of a GESG initiative that encourages and empowers local female entrepreneurs, boosting their operations and income. In all cases, the restaurants are the property of the founders and can be found along the main highways of the Sierra Gorda.



Left: Farmers from the Sierra Gorda come together for the Feria de las Semillas at the Rancho Suelo Vivo to exchange and protect the genetic diversity of various crops, including some that are at the brink of disappearing. This activity is complemented by a course on the development of organic fertilizers, crop rotation, and more sustainable agricultural practices.

Top Right: Remedios Valen offers a wide variety of hand-crafted herbal and cosmetic products that have positioned her as a successful micro-entrepreneur of the Sierra Gorda. This contributes to the development of a true conservation economy.



Bottom right: In the community of La Colgada, Pinal de Amoles, a women’s cooperative consolidated by GESG has run Bordados Sierra Gorda since 2004. Through their work, they are keeping embroidery tradition alive and turning their embroidery skills into a source of income, pride, and empowerment, all while bringing different generations together and ensuring the tradition is passed on.





Top left: Oromiller operates as a local cooperative in the semi-desert of the Sierra Gorda, adding value to oregano cultivation by turning it into medicinal and cosmetic products.

Bottom left: The proper management of organic waste is without a doubt an effective way to lessen the amount of waste that reaches the Jalpan de Serra landfill, reduce the production of leachates and potential infection sources, and produce higher quality compost.



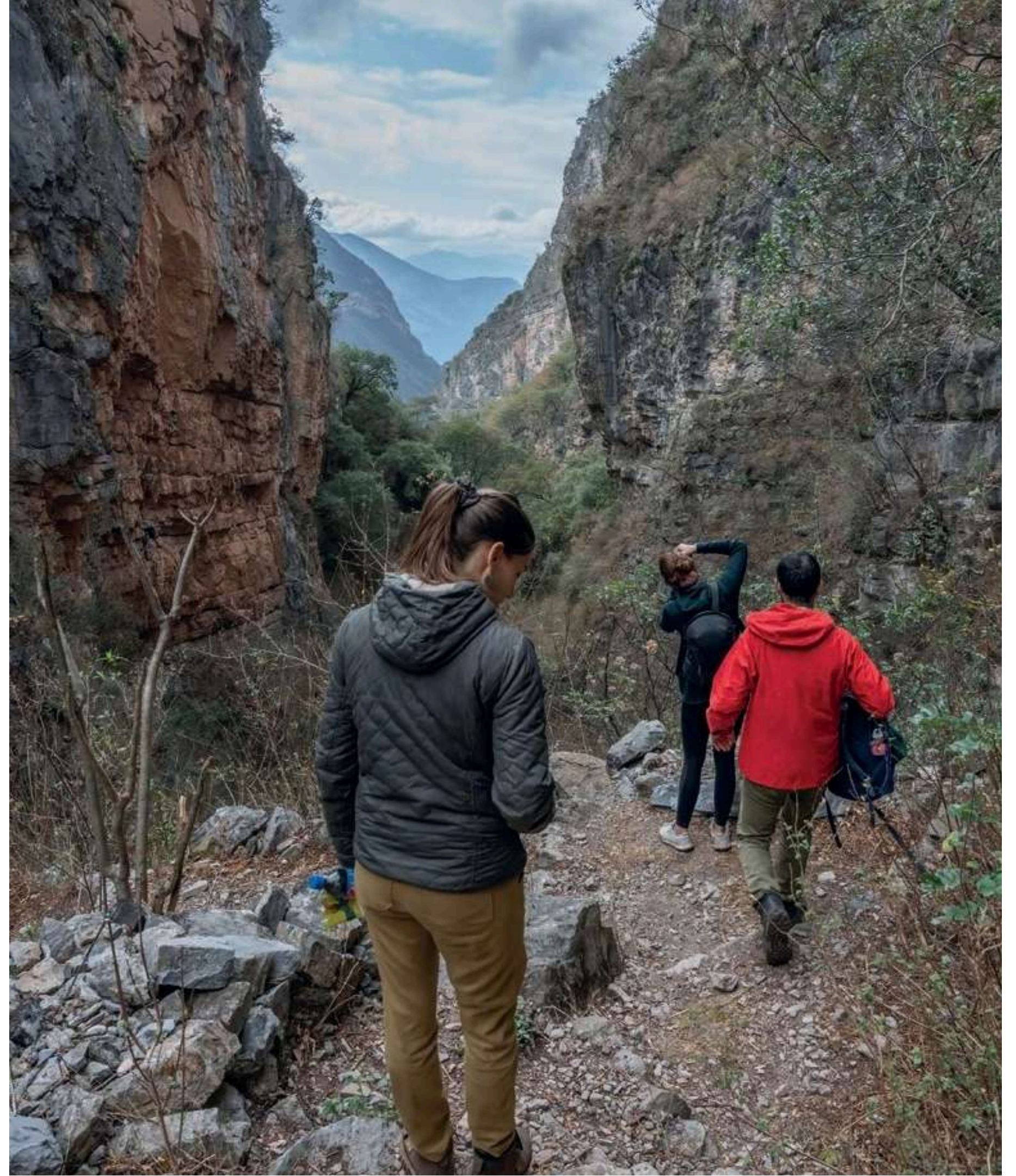
Right: The Fiestas de la Tierra, organized every year by GESG in partnership with Sierra Gorda teachers, also include gastronomic exhibitions where women prepare regional dishes and recipes that would otherwise be lost, strengthening the regional identity and culture of the Sierra Gorda.





Left: Climate change is leading to extended drought seasons, increased heat waves, and more unpredictable rain, making water supply and availability more concerning every year. This is why we built 75 steel water tanks with protective liners to allow communities to harvest the rainwater caught by existing basketball court roofs.

Right: Ecotourism that respects site carrying capacity directly benefits local communities and landowners while leaving no trace. Welcome to the hiking trails and routes of the Sierra Gorda Biosphere Reserve.



Regenerating the Forests of Querétaro

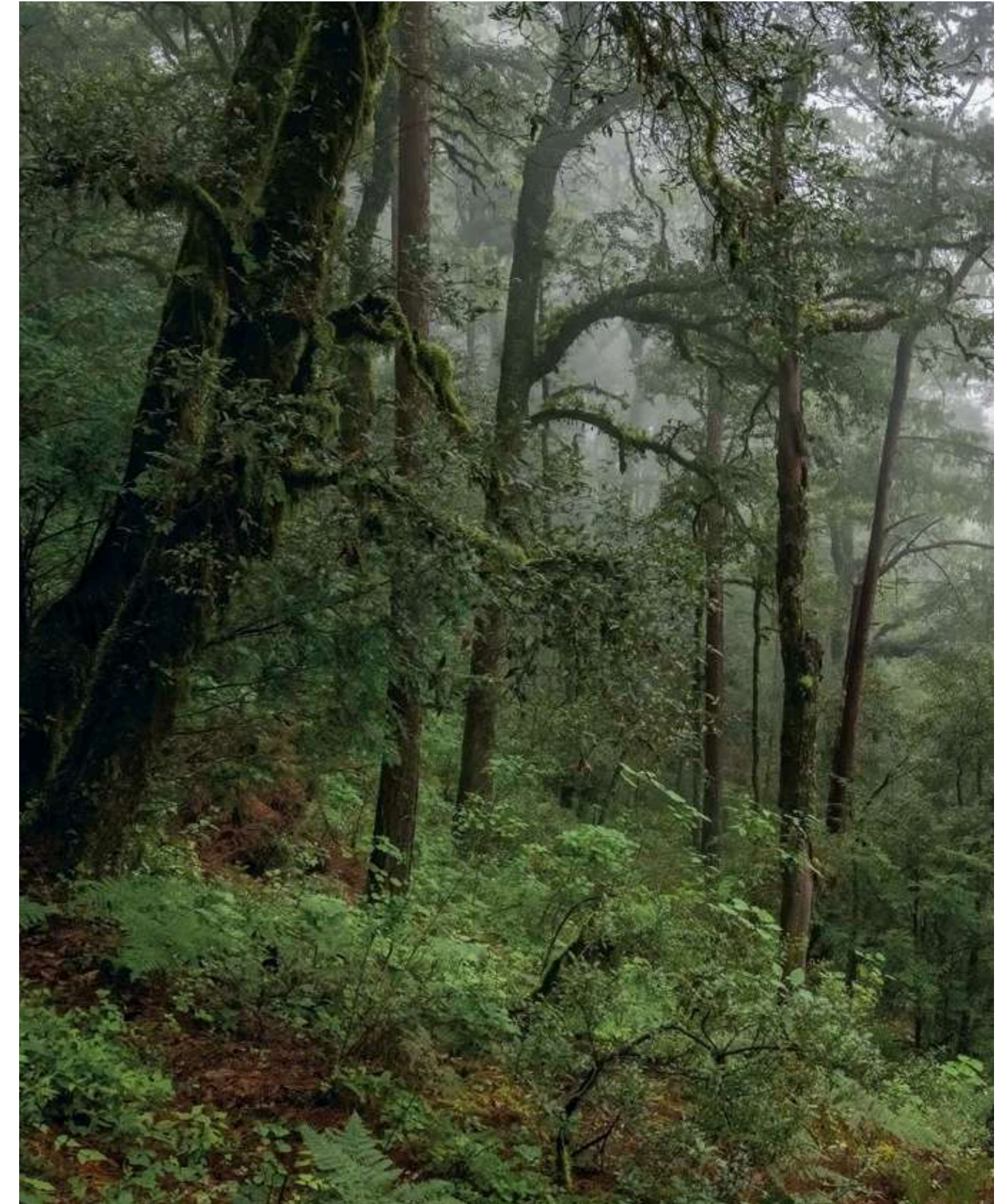
Photography Exhibition

The tops of these young Liquidambar trees appear to reach for the stars. This is a species that migrated from north to south and now grows in Mexican cloud forests and has four distinct seasons: a green spring of small tender leaves, a deep green, leafy summer, a fall of reds, ochres, and yellows, and a winter without leaves.





Above: The beneficiaries of Carbono Biodiverso are now part of a virtuous circle in which protecting and restoring forests represents a greater income than their traditional agricultural activities.



Right: Mexico is the country with the greatest number of both pine and oak species and that is reflected in the extensive mixed forests that they form in the mountains of the Sierra Gorda. Thanks to the Carbono Biodiverso project, these forests now represent a natural asset that is appreciated and valued by landowners.



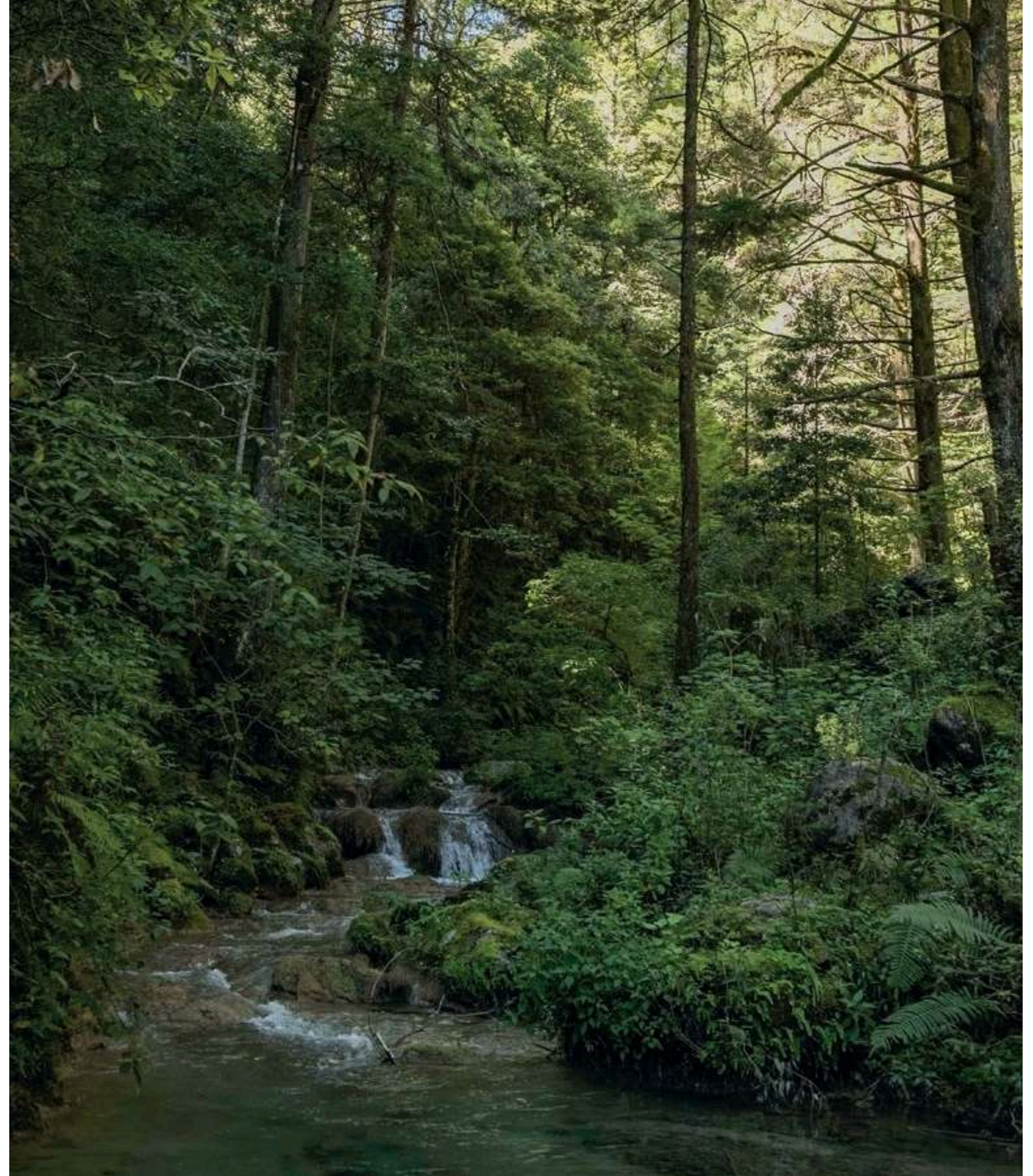
Below: The Sierra Gorda is home to parakeets, six species of parrot, and the green macaw, all of which are endangered and depend on healthy forests and jungles with minimal human impact to survive. By protecting their habitat, we protect their access to food, nesting places, and resting places.





Previous: Green macaws are the undisputed queens of the Sierra Gorda, but they are a threatened species that has lost much of their habitat to human activity. This is why protecting the forests on which they depend to survive is of the highest priority.

Right: This mountain stream flows because it is part of a healthy watershed, where temperate forests form a great blanket that captures water and CO₂. It is small streams like this one that flow into bigger waterways that thousands of people in the Sierra Gorda depend upon.





Top left: The oak forests that cover great parts of the Sierra Gorda are true sponges and sinks that capture and store vast amounts of water and CO₂, produce oxygen, and regulate temperature. Thanks to the Carbono Biodiverso project, many are now regenerating and their ecological functions and health are improving.

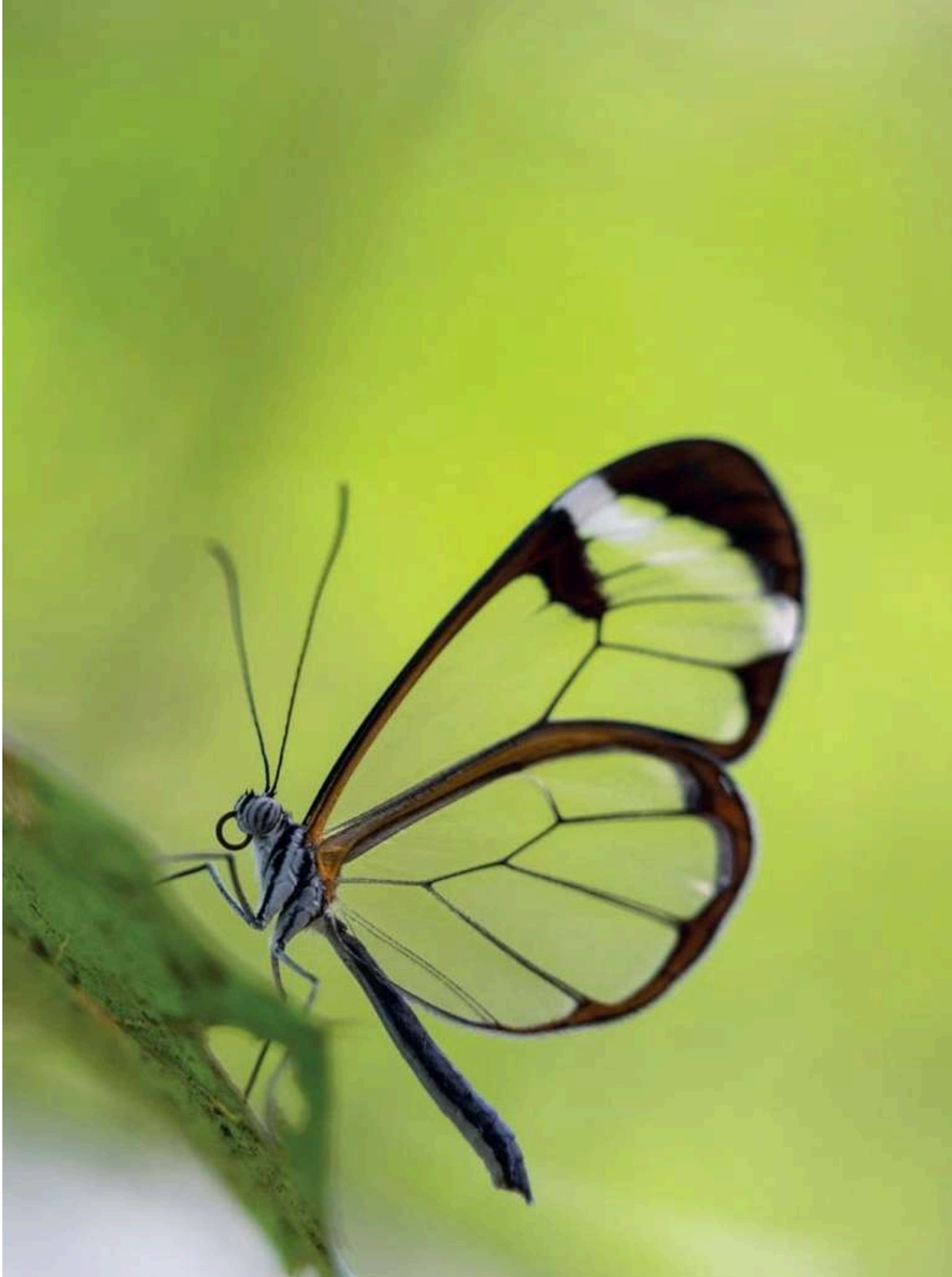


Bottom left: This young pine tree is surrounded and connected to all its family through its roots and the mycorrhizal networks and fungi that allow them to share nutrients and water with each other. Throughout its life and as it grows, this tree will accumulate carbon and store it in its biomass.





Top: The Decorated Leaf Litter Frog can be found in some of the cloud forests and caves of the Sierra Gorda and is one of the many amphibian species that is threatened by habitat loss and climate change. It depends on dark and humid places where thick vegetation maintains a high humidity level.



Right: The Crystal Butterfly is one of over 800 species of butterfly found in the Sierra Gorda. This species is found in dense forests with high humidity levels. It is now protected in the forests that are part of Carbono Biodiverso, where livestock has been removed and biodiversity is recovering.



Left: Indigenous Náhuatl landowners from the state of San Luis Potosí after receiving their payments for participating in the Carbono Biodiverso programme in 2025.

Right: The Querétaro Seal of Low Carbon Emissions from the SEDESU is consolidating the virtuous circle for the landowner of the Sierra Gorda. For the first time, their natural capital is providing them with a greater income than traditional activities, allowing them to improve their financial situation while mitigating the effects of climate change and protecting biodiversity.

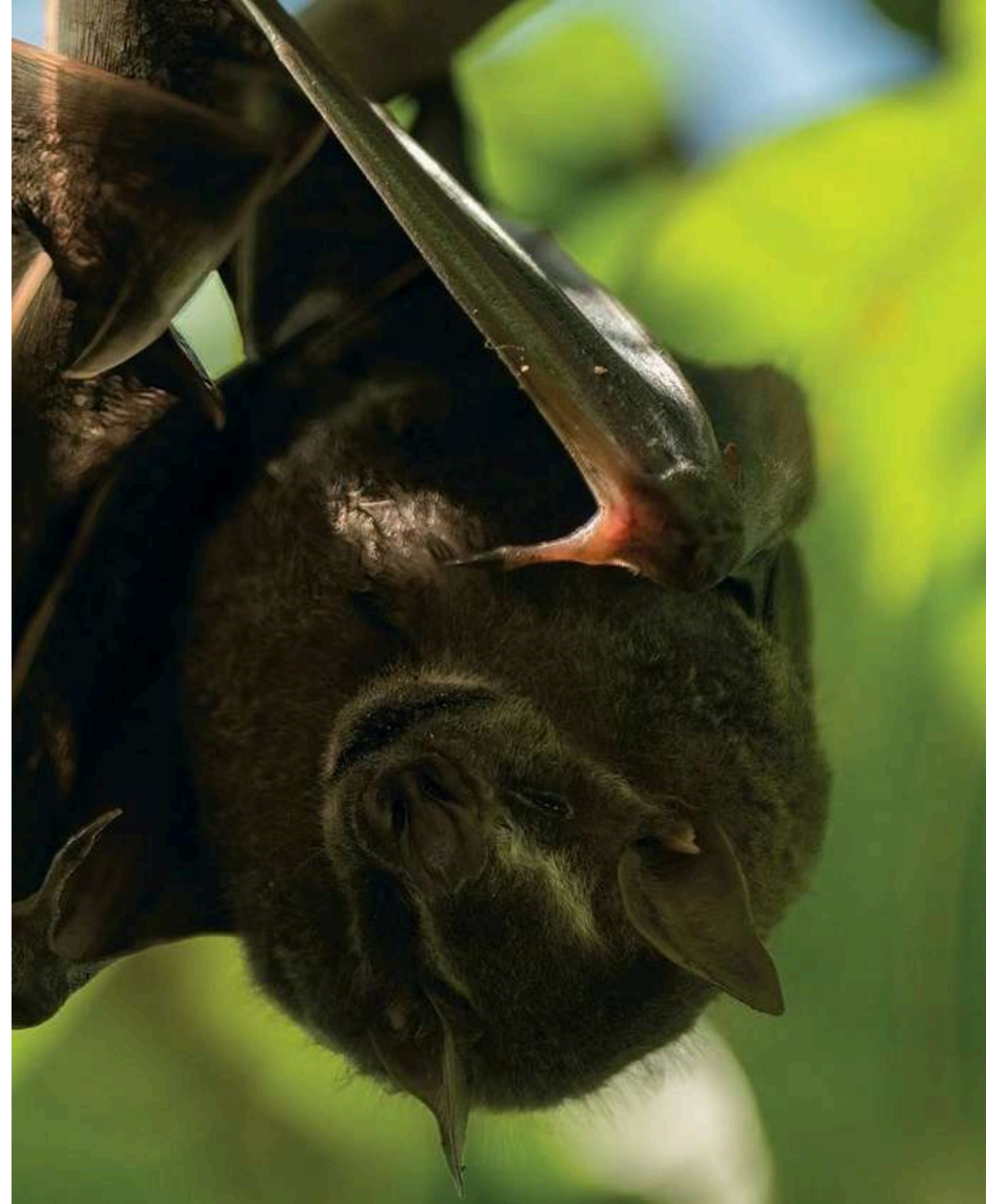


Bottom right: Combating and managing forest fires is now an urgent necessity given the recurrent droughts and heatwaves that make even cloud forests burn. This is why the work of fire brigades is more important than ever to prevent the release of the carbon stored in vegetation.



Bottom Left: The Totonacan Rattlesnake is an endemic species of northeastern Mexico that lives in the forests of the Sierra Gorda. They are fascinating reptiles of great importance for ecosystems and rarely attack humans. Carbono Biodiverso is now restoring their habitats, ensuring their long-term survival.

Right: Mexico is home to 138 species of marvellous bats. They are nocturnal mammals that pollinate plants and crops, control insect populations, eat fruits (like the one in the picture), and fish. We depend on them for our quality of life, and only two species consume blood.





Left: Mists signify precipitation and water recharge if there are healthy forests to absorb them. This is why the protection and regeneration of these forests through Carbono Biodiverso has such a wide socioecological impact. They provide services that benefit us all and help mitigate climate change.

Above: The Mountain Trogon is a bird characteristic of temperate and cloud forests, where it depends on dead standing trees for nests and feeds on fruits, seeds, insects, and small reptiles. Without them, the forests they live in would not be the same.



Top left: Part of the forests and scrublands of the Sierra Gorda are the property of women who have joined efforts to conserve them and are now beneficiaries of Carbono Biodiverso. They have taken up their role as environmental service providers and guardians of Mexico's natural heritage.

Next: Our colleagues perform important surveillance and monitoring work in the forests that are part of Carbono Biodiverso. They ensure these forests are being allowed to regenerate and support landowners in caring for them, guaranteeing that impact and progress is made in the Sierra Gorda Biosphere Reserve.

Bottom left: Every year, the forests and shrublands of the Sierra Gorda receive thousands of feathered travelers who've flown all the way from Canada and the United States in an incredible and dangerous journey. Healthy and regenerating ecosystems are the best welcome we can offer them.





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