



WORLD
LAND
TRUST

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Expansion and restoration of Reserva Ecológica de Guapiaçu

WLT's Buy an Acre project in Brazil



Country

Brazil

Partner/Organisation

Reserva Ecológica de
Guapiáçu (REGUA)

Biome

Tropical and subtropical
moist broadleaf forests

Ecoregion

Serra do Mar
coastal forests

Habitats

The reserve is largely covered by primary forest, a mature and unaltered ecosystem, and young secondary forest. The areas of secondary forest go through a process of ecological succession, where habitats change and replace one another over time. This begins with pioneer species gradually recolonising damaged land. Patches of former pastureland are being actively restored through a reforestation programme to preserve and enhance the native ecosystems. The reserve is situated in a basin of land in which numerous tributaries converge to form the Guapiáçu river. It also comprises a mosaic of wetland and riverine habitats, vital for aquatic and bird species.

Project summary

Within the upper reaches of the Guapiáçu Watershed in South-east Brazil, lies some of the last remnants of Atlantic Forest. Also known as the Mata Atlântica, this neotropical forest is renowned for its incredible array of biodiversity and endemic richness. Since 2001, REGUA has been working not only to protect, but also to restore these areas of forest which have faced significant losses from logging, agriculture, and urbanisation over the last century.

REGUA now protects over 12,000 hectares (ha) of forest through its reserve and collaborative management. In the past, portions of the reserve were used for agriculture, including for grazing livestock. Now, through the planting of over half a million native trees, more than 250 ha of this formerly deforested pastureland is being restored into a thriving ecosystem. The resilience and success of the new forest is strengthened by the diversity created by 160 different tree species. Supported by WLT, REGUA seeks to increase these remarkable efforts through expanding both the reserve itself and the forest restoration activities within it.

Through our Buy an Acre programme, WLT will fund the expansion of an additional 1,587 ha of vital land to the east of the current reserve - the most ambitious collaboration of the partnership yet. As well as the conservation of this significant habitat, WLT will support the regeneration of a further 40 ha of pastureland. This will happen through a four-year period of planting to recover the land to natural forest. The existing reserve is patrolled by a team of experienced rangers, whose dedication will extend to the newly acquired area.

Main threats to the area

The last stronghold of Atlantic Forest in which REGUA resides is one of the most threatened and fragmented forest regions on the planet. Only 2% of original ancient forest is estimated to still be intact. Despite holding National Park (Serra dos Órgãos) or State Park (Três Picos) designations, the higher slopes of the forest have not escaped human encroachment. On private land within the parks, the presence of small agricultural plots and residences has caused the depletion of 11% of forest cover between 1985 and 2010. The clearance of hillside forest to create pastures and accommodate cattle grazing has brought about erosion and soil runoff. This is contaminating water and reducing water quality. The reserve's fauna faces continued hunting pressures, with larger mammalian and avian species such as Tapirs, Curassows and Guans being especially targeted, particularly in proximity to human settlements. In the past, persistent hunting led to the complete disappearance of several species from all but a handful of protected zones.

Lowland Tapir



Currently: @refauna, @asa_socioambiental (sponsored by Fumas Energia) and REGUA work jointly as partners to carry out the tapir reintroduction programme at REGUA. Image credit - Josh Shaw.

Global prioritisation

The rich biodiversity and unique mix of flora and fauna of the Brazilian Atlantic Forest make it crucial for the survival of innumerable endemic species. This haven for endangered life is prioritised as a global conservation hotspot, due to the extensive deforestation, habitat loss, and fragmentation it has endured.

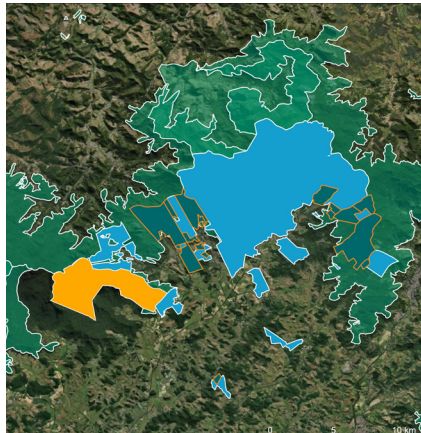
Key species¹

Southern Woolly Spider Monkey (Muriqui) (*Brachyteles arachnoides*, CR), Lowland Tapir (*Tapirus terrestris*, VU), Crowned Solitary Eagle (*Buteogallus coronatus*, EN), Golden-tailed Parrotlet (*Touit surdus*, VU), Central Humming Frog (*Chiasmocleis lacrimae*, EN), Brazilian Snake-necked Turtle (*Hydromedusa maximiliani*, VU).

Main methods for land protection

Acquisition of vital land for protection by rangers combined with active reforestation of denuded and eroded areas.

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



- Cozzolino property
- WLT supported properties
- Reserva Ecológica de Guapiaçu
- Other protected areas



Biodiversity

REGUA is a teeming haven for tropical birds; since 2022, 488 avian species have been recorded here, 188 of which are found only in the Atlantic Forest. The rich endemism of the biome remains central to its conservation prioritisation since, should it not recover, a substantial portion of its resident species could face extinction.

Recently, a study of odonata, the order of flying insects to which dragonflies and damselflies belong, described 207 species within the reserve. This surpasses the numbers discovered in any other single region in the world. Further to this, the forest streams and wetlands that permeate the reserve are home to 73 species of amphibians and 37 of reptiles, the highest concentration yet observed within any sector of the Mata Atlântica. The staggering number of butterflies amounts to 444 species with numerous additional species projected to be found in the higher altitudes.

REGUA also provides a home to mammals such as the Puma, Ocelot, Margay, Oncilla, and Jaguarundi. However, of key significance is the Southern Woolly Spider Monkey, or Southern Muriqui, which stands as South America's largest and rarest primate. With their total population estimated at less than 1,000, approximately 150 of these highly social animals are believed to inhabit the REGUA protected vicinity. Additionally, a collaborative initiative between REGUA and the Federal University of Rio de Janeiro (UFRJ) has seen the successful reintroduction of 14 Brazilian Tapirs (*Tapirus terrestris*). Further reintroductions of the Tapir are planned for the upcoming years, culminating in the establishment of a stable population in the area.

Local communities

Collaborating with local communities is crucial to the success of REGUA's conservation initiatives, to protect and restore the Atlantic Forest ecosystem while also benefitting the people who live in the surrounding areas. Regular consultations with community leaders on decisions that will affect the local populations fosters a sense of trust and allows the integration of traditional knowledge about the local environment with conservation strategies. The park rangers and visitor guides, whose guardianship protects the site itself, are employed from local areas, offering alternative livelihoods to those that could be ecologically harmful. REGUA also works with schools and groups in the area to help foster an awareness of the complex diversity and conservation importance of their natural surroundings. This is also focuses on the development of a sense of pride and stewardship in their home.



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Partner/Organisation

Since 2001, REGUA has been dedicated to the preservation and restoration of the unique and highly threatened habitats within the Guapiaçú catchment. Founded in Brazil as a non-profit charitable organisation, its foundations are deeply rooted in scientific inquiry for both the study of local wildlife and the responding conservation initiatives. Active collaboration with universities and research initiatives work to enhance knowledge and awareness of this remarkable biome, while successful eco-tourism also helps to sustain the operations and its management of the reserve. Since becoming a WLT partner in 2006, REGUA has excelled in its mission to safeguard some of the last fragments of Atlantic Forest, that have been brought to the brink by past actions.

UN Sustainable Development Goals directly advanced by this project



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