

PROJETO DE CONSERVAÇÃO TROCANO ARARETAMA



THE PROJECT DEVELOPERS & REDD+

Celestial Green Ventures PLC (CGV) is an Ecosystem Conservation Company specialising in the development of REDD+ forestry projects. Each of CGV's projects is designed to be mutually beneficial partnerships between CGV and the Landowners. The objective is to protect the regions' natural living forests which are vulnerable to the devastation caused by illegal logging, mining, and slash & burn agriculture.

The CGV Trocano Araretama Conservation Project's overarching objective is to mitigate GHG emissions, through avoided deforestation & degradation, while encouraging more effective forest governance, and providing the following additional co-benefits:

- ✓ **Conservation** of the natural forests, to protect the endangered habitat of the Indigenous Tribes and other communities.
- ✓ **Biodiversity protection** of both the plants and the animals which are reliant on this vulnerable habitat.
- ✓ **Socio-economic investment & improvements** for the local communities. This includes healthcare, education, employment and infrastructure improvements.

Celestial Green Ventures has signed a mutually beneficial 30-year agreement with the Municipality of Borba, making a long-term commitment to the project area, the municipality and its inhabitants. CGV is now working with the community to improve livelihoods of the local people.

Our partnerships and strategic alliances with Amazonian Organisations and Environmental Experts in Brazil and Europe, have allowed CGV to develop projects that resonate with many diverse groups, and enable both environmental and financial objectives to be simultaneously met.

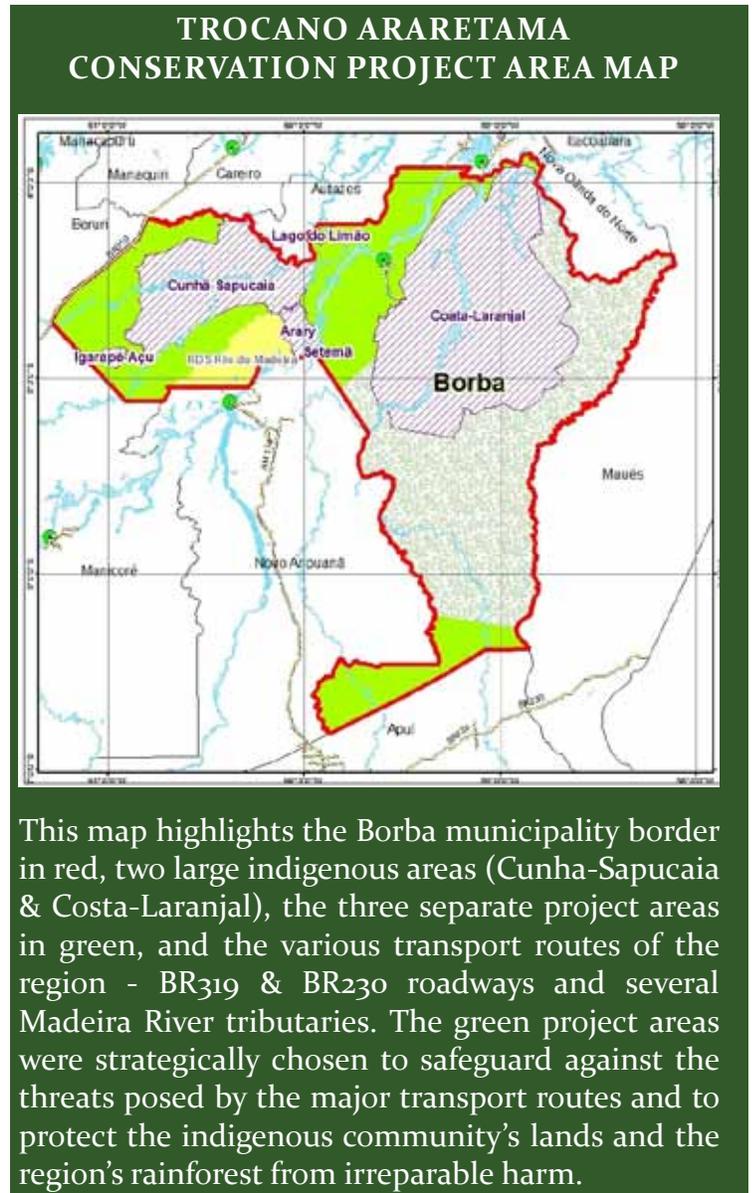
THE NATURAL FOREST STANDARD

The Trocano Araretama Conservation Project will be developed, validated and verified according to the Natural Forest Standard (NFS). The NFS is the standard of choice for Celestial Green Ventures and has been selected for the Trocano Araretama Conservation Project due to its emphasis on natural forests at risk of deforestation, and the additional integrated social & biodiversity benefits it brings to the project area, which are also the principal areas of focus for Celestial Green Ventures.

THE TROCANO ARARETAMA CONSERVATION REGION

The city of Borba was originally named *Aldeia de Trocano* or Trocano Village. It was the first village established in the State of Amazonas and its population is proud of their participation in the history of the region. The city is one of the rare examples of places which resisted the return to colonial rule, illustrated by the Cabanagem Social Revolution in the early 19th Century. After consultation with the project areas inhabitants, the name Trocano was suitably chosen and illustrates the company's continuing relationship with the local project partners, in the region.

The Trocano Araretama Conservation Project area is made up of three distinct project areas, totalling 1,346,541.26 ha. It is located in the municipality of Santo Antônio de Borba, which is positioned on the banks of the most important tributary in the southern Amazon Basin, the Madeira River. The project area is 208 km south east of the state capital Manaus. The main objective of the Trocano Araretama Conservation Project is to avoid deforestation and degradation of natural forests in the region.



Trocano Araretama Conservation Project in Numbers

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| Trocano Araretama Conservation Project Area | 1,346,541.26 ha or 13,465.4126 km ² |
| Total Land Area of Borba Municipality | 4,425,170.1 ha or 44,251.701 km ² |
| Population (2010) | 34,961 |
| Population Density | 0.79 inhabitants/km ² |
| GDP per capita | R\$3,394.98 (Reais) or USD \$1,726 |
| HDI (2000) | 0.599 Human Development Index, from 0 - 1 |
| Ethnicity | Indigenous groups Mura and Sateré-Mawé, and Caboclos |

Source: Instituto Amazônia Livre (2011)

BIODIVERSITY

The Trocano Araretama Conservation region has an abundance of varied biodiversity, and alone boasts around 2,500 species of fish, 2,500 species of birds, and over 3,500 species of trees. Unfortunately, this micro region is extremely sensitive to human interference, so increased monitoring and protection is vital.

The over extraction of the finite natural resources, including timber, pharmaceutical essences used for medicine and essential oils used for various beauty products, is contributing to the increased difficulty of sustainable living for local inhabitants.

This conservation project also has a focus on the measurement and protection of the biodiversity, and to achieve this, we have calculated a unique normative biodiversity metric (NBM) score, which essentially accounts for the quality of the inherent biodiversity within the region. This can then be evaluated at regular intervals, to determine any changes in the region's biodiversity score.

The unnecessary loss of biodiversity, which subsequently impacts the precious ecosystem of the region, will be addressed by a new and improved technology driven monitoring and intervention system against the perpetrators of illegal deforestation activities.

SOCIO-ECONOMIC & SOCIAL ISSUES

The region, as with the majority of the Amazon Basin, is suffering from multiple socio-economic problems, highlighted by a significant scarcity of financial resources. The dense nature of the rainforest restricts infrastructure and therefore the ability for companies to provide suitable employment. This unfortunately means that an extremely low GDP per capita is the norm, and often results in local people choosing to work with illegal logging companies and others who accelerate the rate of deforestation in the region, in order to survive.

The lack of quality infrastructure, jobs, education



Source: IAL, 2011

Children collecting solid waste in the dump of Santo Antônio de Borba

levels combined with issues surrounding water supply and waste treatment all contribute to a difficult environment in which to prosper. CGV in conjunction with our project partners are seeking to vastly improve the living conditions, employment and overall prosperity of the municipality's inhabitants.

THREE KEY REGIONAL DRIVERS OF DEFORESTATION

The Trocano Araretama Conservation Project, which is interspersed around the banks of the important Madeira River, and borders major roadways, has experienced several threats, which collectively contribute to the proliferating levels of deforestation in the region. The three key regional drivers are:

1. Large scale Illegal Logging & Mining

The aggressive and predatory nature of these illegal operations, is currently threatening to not only devastate the vulnerable Trocano Araretama tropical rainforest region, but also the global ecosystem, which is vital to us all.

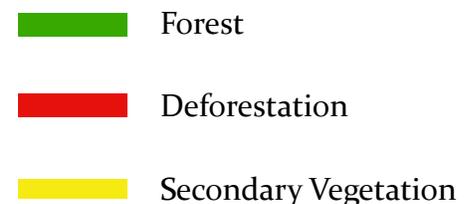
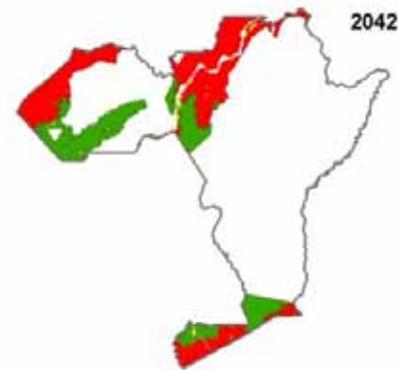
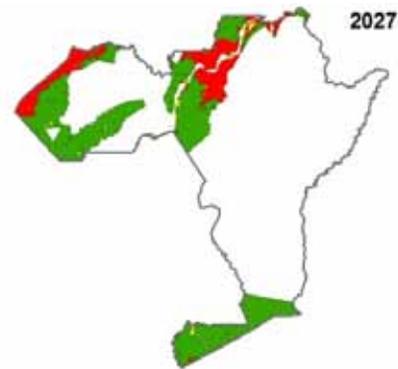
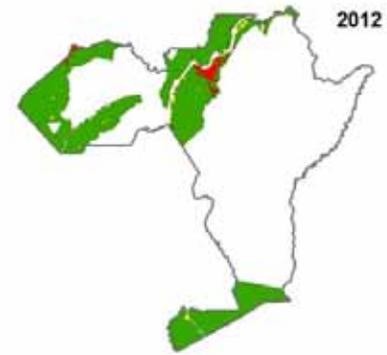
2. Slash & Burn Agriculture

Perpetrated by individual farmers and agriculturalists for the expansion of livestock for trading, for the cultivation of crops and the selective cutting & extraction of raw timber for sale. This is usually a technique utilised in subsistence farming but due to the nutrient-poor soil, the practice is continuous and results in increasing areas destroyed by the necessity to provide for one's family.

3. Transport Routes

The access points to the rain forest are where deforestation occurs more aggressively due to the ease of extraction. This causes a fishbone effect, where the access tributaries develop off the main transport routes. The Trocano Araretama project area is particularly at risk because of the major transport routes which exist in the region, including the Madeira River, major roadways and other illegally constructed roads.

The three images below show the predicted levels of deforestation in the Trocano Araretama Conservation Project areas if illegal, unregulated deforestation and degradation of the rainforest continues uninterrupted. The 2012 map illustrates the current sequestered carbon stock in the three project areas at the beginning of the conservation project. By 2027, without the project's activities, you can see significant deforestation occurring, especially along the major regional transport routes. Finally by 2042, the extensive deforestation is disturbingly illustrated.



Source: SimAMAZONIA

WHAT ARE CGV DOING TO ADDRESS THE ISSUES IN THE TROCANO ARARETAMA REGION?

During initial consultation stages with the local stakeholders of the Trocano Araretama project, we collectively identified pressing issues which needed to be addressed. The three project areas identified and established, will be a priority for improved forest governance to protect against the drivers of deforestation. The funds generated through the Trocano Araretama Conservation Project, as a result of the issuance of carbon offsets, will enable the municipality to implement the required strategies to control and monitor deforestation within the project area.

CGV want to provide employment alternatives for the local population, which will contribute to the preservation of their communities and the protection of the vulnerable natural forests. As well as the climate change benefits expected with the reduction of the GHG emissions from deforestation, the project will also bring several social and environmental benefits to the project area, through the investment of the funds in the following programs or activities:

1. Strengthening of Environmental Monitoring, Communication and Intervention Systems

Security in the project area is crucial to the success of the overall objective of the project. In order to successfully mitigate the effects of deforestation, CGV and its project partners utilise all available communication and monitoring technology and advanced techniques of digital remote sensing.

The funds will contribute to the utilisation of our newly developed CGV Geospatial Platform, the training and development of the monitoring teams, including full-time rangers supported by local inhabitants, and the use of new communication equipment, including specialised radio and GPS systems.

The ability of the monitoring teams to use fast and efficient communication methods to contact the enforcement authorities is crucial. Once detected, the teams will contact the Borba Municipality police, who then contact IBAMA (Brazilian Institute of Environment and Renewable Natural Resources), who are the Brazilian Ministry of the Environment's enforcement agency. This improved system of monitoring and communication will improve the quality of protection in the Trocano Araretama Conservation Project area.



Source: IAL, 2011

Meeting with the community of Borba, held in 2011: communication is crucial for the project



Awará and Novo Horizonte communities, which are both within the Trocano Araretama Conservation Area

2. Generating Income through Sustainable Business

The project funds will support an organisation to help local business people, to improve the capacity of managing forest products; contribute to innovative research to develop new products & services and the development of a market for sustainable products and services.

In the longer-term, funds will be made available for providing micro-loans and for the development of sustainable eco-tourism. These activities will also contribute toward the employment shift away from negative destructive jobs to positive community focused jobs, enhancing conservation and sustainability.

3. Community Development, Scientific Research and Education

Rural community centres will be built in order to train and give scientific information to locals and provide the opportunity to train specialised professionals, such as biologists, forest engineers and teachers. This also includes education about small-scale sustainable agricultural practices to avoid the devastation caused by slash & burn.

4. Environmental Services & Infrastructure Improvements

The communities will have direct benefits for their contribution to the conservation of the region and its biodiversity. These include funds for the development of improved healthcare, infrastructure (clean water, sewage & waste systems), and education of the local youth and subsequently to provide employment opportunities in the future.

UTILISING TECHNOLOGY & INNOVATION

Celestial Green Ventures are utilising new technology, which improves their ability to successfully monitor and protect the project areas in which it operates. CGV have developed a unique, innovative cloud-based geospatial data platform. It can also identify specific areas within each project area where illegal deforestation is occurring. This results in vastly reduced response times enabling an almost instantaneous redistribution of resources to the affected area, to curtail the illegal deforestation activities in partnership with the Borba Municipality police and IBAMA.

This new technology utilises collated research resources from the NASA Jet Propulsion Laboratory, SimAMAZONIA, PRODES INPE and CGV project data. This innovative tool illustrates multiple layers of environmental data, including historic & predicted deforestation, sequestered carbon stocks & biomass density and future risk of deforestation on a five-point intensity scale. This scale includes tonnes of carbon at risk, and therefore the forestry offset yield potential of an area.

OBJECTIVES OF THE TROCANO ARARETAMA CONSERVATION PROJECT

The relationship between CGV and the Trocano Araretama project partners is vital to the success of this project. Therefore constant communication between the project's stakeholders is key. This is carried out through both formal and informal methods, including communication with municipality officials and local inhabitants through conversations and yearly formal reports. This enables CGV and the project partners to monitor and determine, on an ongoing basis, whether any alternative strategies are required and ultimately whether successful progress is being made in the project area and within the region as a whole.

A successful combination of these programs, activities, new technologies and clear and honest communication, it is believed, will ultimately result in the accomplishment of the project's objectives, which are:

- ✓ To improve the ability of the local inhabitants to maintain a traditional, sustainable lifestyle as they have for many generations, uninterrupted.
- ✓ To provide employment, as an alternative to unemployment or working with illegal logging & deforestation corporations.
- ✓ To provide funds for community development, including healthcare, water & sewage systems, education and the establishment of new businesses.
- ✓ To monitor and protect vulnerable regions of tropical rainforest, and
- ✓ To reduce GHG emissions through the avoidance of deforestation, ultimately leading to the mitigation of climate change.

CONTACT US:

To find out more about CGV

- ✓ Visit celestialgreenventures.com and www.webstation.tv/CGV/
- ✓ Find us on Facebook or on LinkedIn
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