

YOU CAN'T
PROTECT
THIS

RENEWABLE BIOMASS Fuel-Switching Project

UNLESS
YOU **STOP**
THIS

PROJECT **TAPAJÓS**

SUSTAINABLE
CARBON
CLIMATE SOLUTIONS

PROJECT DESCRIPTION

Cerâmica Tapajós is a small factory that specialized in the production of red ceramic products like blocks and tiles for the local construction industry. In 2007, the administration at Tapajós made the decision to stop using native timber from the Cerrado ecosystem (Brazilian savanna) and instead use renewable biomass as fuel to fire the products in the kilns.

The choice to switch to more sustainable production has contributed to both a reduced negative impact on the Cerrado as well as allowed for the investment in environmental, social and economic sustainability initiatives.



Sugarcane Bagasse - An abundant renewable biomass in Brazil, used in Tapajós to develop sustainable bricks for the local construction industry.

THE STORY - SOCIAL EQUITY

By all means, the core business of Tapajós is producing structural ceramic products for the local construction industry; it is not producing carbon credits. And that is exactly why having an elaborate "SOCIAL-CARBON action plan" that outlines what will happen at the factory (and in the community) once new carbon credit revenues are received. This sort of detailed planning is a rare but welcomed practice because it ensures a path to achievable and measureable results.

The **SOCIALCARBON®** Standard monitors the improvements of a project over time, providing assurance and evidence of its contribution to sustainability. The **SOCIALCARBON®** application consists of monitoring the project in six crucial areas of sustainability.

This project will reduce
106,220 tCO₂e
during a 10-year period



São Paulo, Brazil

Technical Data

Project Status: Validated

Validator: TÜVNORD

Registry: Markit™ Environmental

Standards:



Ecosystem: Cerrado

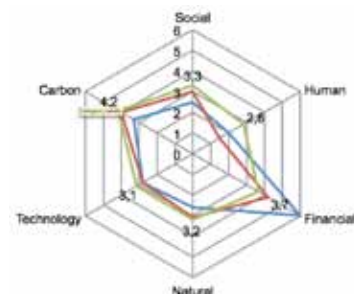
Switch From: Native Timber

sugarcane
bagasse

Switch to:



sawdust



Point 0 (AUG/07)

Point 1 (AUG/08)

Point 2 (DEC/09)



The Cerrado is the most biodiversity rich savanna on earth, occupying 21% of the Brazilian territory in the central and southeastern part of the country. It is considered to be a culturally significant biome due to its large population of indigenous peoples.

The Cerrado has suffered the most out of any other biome in Brazil due to rapid agricultural expansion in the region.

The economic activity of Minas Gerais and São Paulo, the economic powerhouses of Brazil, has also had a negative impact on the region. Metallurgical activity in Minas has led to consumption of native wood from the Cerrado, while sugarcane production in São Paulo has been the principal culprit of deforestation.

Due to activities such as these, today the Cerrado occupies only 41% of its original area of almost 2 million km². It is estimated that due to its rapid deforestation rate, the remaining areas of the ecosystem will disappear by 2030.

the CERRADO

Fragile Brazilian ecosystem that occupies approximately 21% of the country's territory

SOCIAL Contribution to Sustainability

- Additional benefits offered to workers: Medical Assistance, Food Staples, Collective Life Insurance
- Jobs in the production process in the red ceramic industries demand great physical efforts from staff. Despite this fact, Tapajós stands out for employing 9 women in the factory.
- Donations to institutions such as Churches and schools are frequently realized.
- Trainings are offered to employees. One of the topics was: red ceramic production, promoted by the IPT (Technological Research Institute) and Senai (National Service for Industrial Knowledge).



ENVIRONMENTAL Contribution to Sustainability

- Two types of renewable biomass are used: Sawdust and Sugarcane Bagasse.
- Tapajós ceramic is buying clay from CESP (Energetic Company of São Paulo)
- Broken or damaged before the ceramic firing process are fully reused and reintroduced to the clay mix. Ceramic residues after the firing process are donated to the city hall in order to be used for filling in terrain and roads.
- The ashes generated during the firing process are used to seal the kilns doors.

ECONOMIC Contribution to Sustainability

- The ceramic did not need any funding in the analyzed period.
- Tapajós uses four "Paulistinha" kilns, which work in a reversible burning cycle. The kilns are considered as equipments of medium efficiency, even though the Ceramic owners consider that the burning system of the kilns aggregates quality to the final products.
- The measurement of the temperature of kilns is executed by thermocouples (i.e., automatic sensors which are installed in the kilns). The bases are demonstrated in electronic panels which allows to better regulate the kiln temperature and the quality of the products.





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