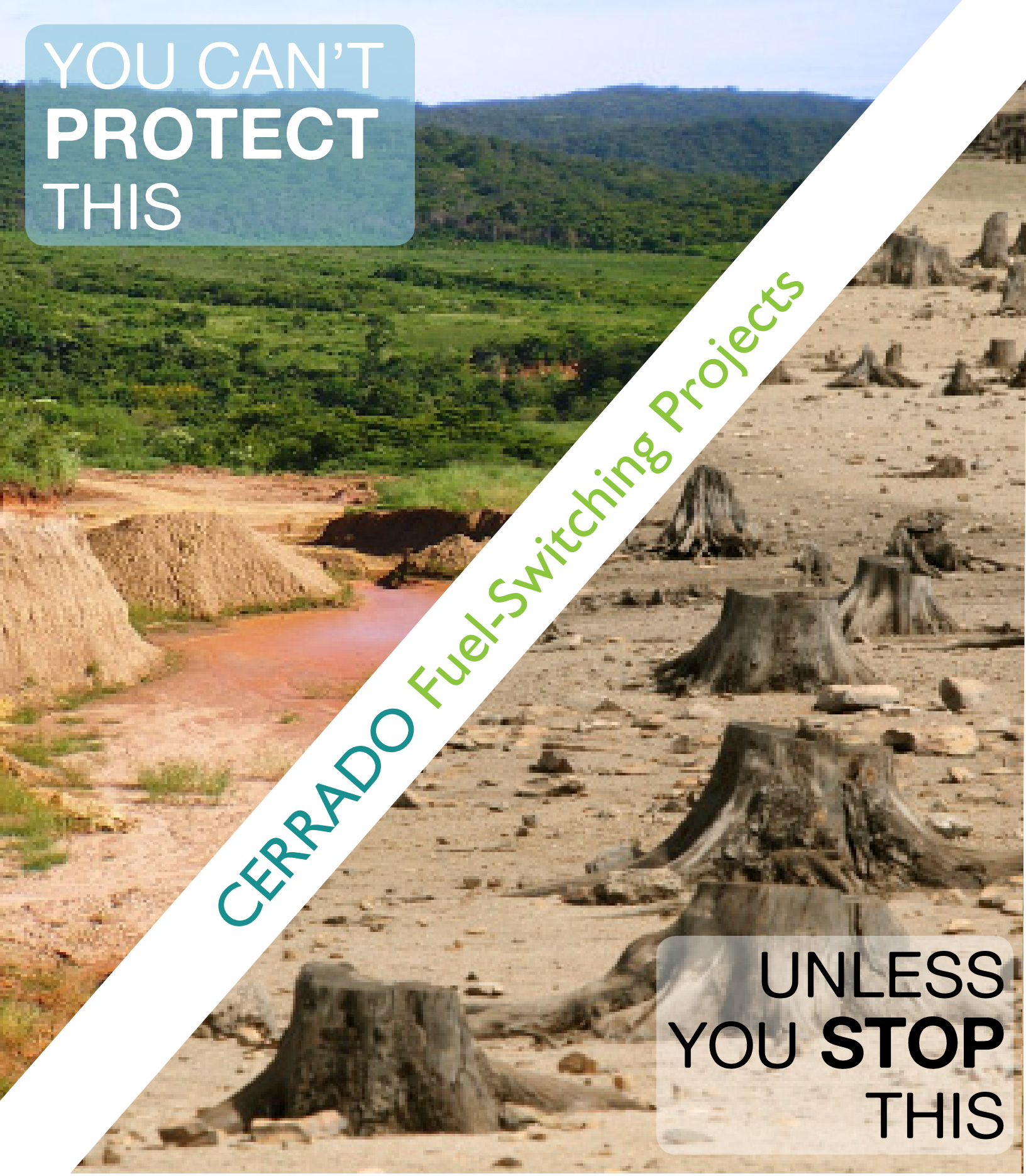

PROJECT UNIÃO E DOIS COMPANHEIROS

SUSTAINABLE CARBON CLIMATE SOLUTIONS

SUSTAINABLE CARBON CLIMATE SOLUTIONS

PROJECT IDEA NOTE

União & Dois Companheiros

Ceramic Facility Fuel Switching Project

This project will reduce 217,683 tons of CO_2 equivalents during a ten year period

Description of the Project

União and *Dois Companheiros* ceramic facilities are two companies (with one owner) that produce ceramic bricks and tiles. They are situated in *Paulicéia*, a town in *São Paulo* state.

For decades, both facilities had consumed wood from *Cerrado (*also known as the *Brazilian Savannah),* the country's second largest biome*,* to generate thermal energy for their kilns, to produce ceramic products. *Cerrado* is present in five Brazilian states, including *Mato Grosso do Sul*, situated beside *Paulicéia*, and had supplied most of the wood for the ceramic companies. In 2009, the government focused its attention on the issue of deforestation, the impact it had on the environmental balance in the region and its contribution to the increase in greenhouse gas emissions.

In November 2004, both companies had committed to being sustainable. They substituted the non-renewable fuel source of wood from *Cerrado* and replaced it with renewable biomasses, such as sawdust and sugar cane bagasse, thereby reducing their greenhouse gas emissions but also reused other industries' waste. Furthermore, the company invested in new equipment, education and training courses for workers so they can best utilize the new biomass fuels.

The new activities of the companies contributed to a carbon neutral cycle, reducing approximately **20,000 tons of CO2 equivalents per year** for a ten year period. The crediting period began in 2006.

This soccer field used by the youth soccer league and other members of the community was constructed by the entrepreneur

Sawdust being fed into the kilns to be efficiently and cleanly burned

SOCIALCARBON® Standard

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. On the following page, the SOCIALCARBON® Hexagon graphically represents the sustainability baseline scenario (Point Zero, 2007), how the project progressed over the first period (Point One, 2008) and its most recent assessment (Point Two, 2009).

Project Location

Municipality of *Pauliceia* in *São Paulo* state, Brazil.

Technical Data

This project applied the Small Scale Methodology: *AMS- I.E: Switch from Non – Renewable Biomass for Thermal Application by the User* – Version 01 from February 01 of 2008, approved by the UNFCCC.

It was validated and verified by TüVNORD, a DOE accredited by UNFCCC, in accordance with VCS 2007.1 and SOCIALCARBON® Standards.

To ensure reliability and transparency, the issued credits are registered on the Markit SOCIALCARBON® Registry.

For further information, please visit: http://www.markitenvironmental.com/socialpublic.php.

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Contribution to Sustainability

- The soccer field that was financed by the ceramic factories continues to be a community destination
- Benefits like food staple and company parties boost morale
- Training classes are given to improve worker knowledge of the industry
- Sanitary and working conditions have improved due to revenues from the carbon market, leading to a good improvement in the sustainability index of the human aspect of the project
- The fuel-switching to renewable biomass is complete

União and Dois Companheiros' SOCIALCARBON® Hexagon

Social Resource

Current Analysis (December 2009)

- Worker turnover rate, though usually high in this industry, is uncommonly high in this factory – an indicator that needs to be improved
- Tertiary benefits like food staples and company parties are provided by the owner of the facility

Future Improvements

- Improve the communication between employee and entrepreneur by installing a suggestion box

Carbon Resource

Current Analysis (December 2009)

- The ceramics presented consistent methods for proving the additionality of the project
- 92% accuracy in generating the number of credits expected per the calculations in the PDD

Future Improvements

- Devote more time and develop a proper plan for informing the employees on the importance of the project

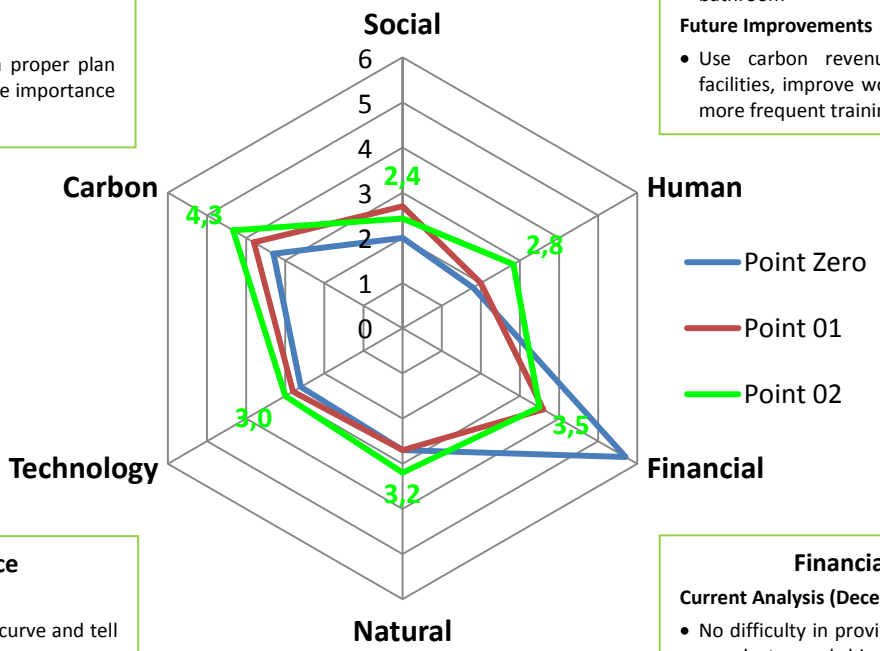
Human Resource

Current Analysis (December 2009)

- Training classes are provided sporadically to the employees of both factories by organizations like SENAI, SEBRAE and IPT.
- Improved sanitary and working conditions by installing a water fountain and renovating the bathroom

Future Improvements

- Use carbon revenues to further renovate facilities, improve working conditions and hold more frequent training sessions



Technology Resource

Current Analysis (December 2009)

- Thermocouples monitor the heat curve and tell the employees whether or not to put more biomass into the kilns during the firing process, decreasing waste
- The feeding process is semi-automatic

Future Improvements

- None are planned at the moment

Natural Resource

Current Analysis (December 2009)

- A SEBRAE consultant has elaborated an environmental plan that heretofore has yet to be implemented

Future Improvements

- None are planned at the moment

Financial Resource

Current Analysis (December 2009)

- No difficulty in proving origin of biomasses like saw dust, wood chips and sugarcane bagasse
- Production has increased over the past year and will continue to increase due to surging demand from the Brazilian construction industry

Future Improvements

- Increase productivity by 35% to keep up with market demand