Ilha do Bananal / Pium

Factsheet Tocantins, Brazil

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Factsheet – English

CiVinet

The capacity of civil society organisations and their networks in community based environmental management

www.civinet.eu

Introduction to case studies in the CiVi.net project

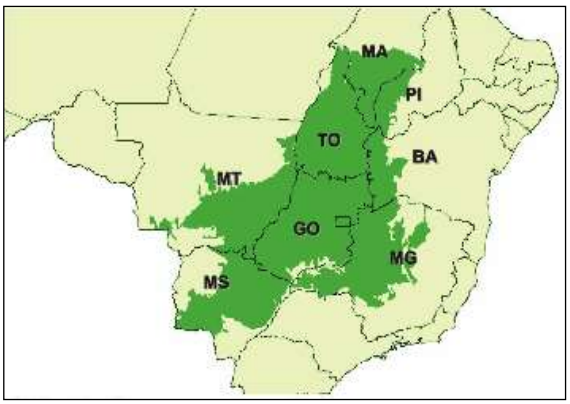
One of the main aims of the CiVi.net project is to identify 'success stories' of local communities where solution strategies have been developed for the effective management of commonly used natural resources. Therefore the project has taken an action research and case study approach, selecting a number of 'original' case study regions, i.e. communities where solution strategies have already been worked out. For each of the selected original case study regions possible 'transfer' regions are discussed, though the final selection of transfer regions will be made upon the start of the project after conferring with the local stakeholders of the original region, the project's advisory board and the Commission.

More information on the CiVi.net project and the Spanish and Portuguese version of this file can be found on the website of the project: www.civinet.eu. Information on the case studies and transfer regions is available via www.civinet.eu/english/79277/5/0/100

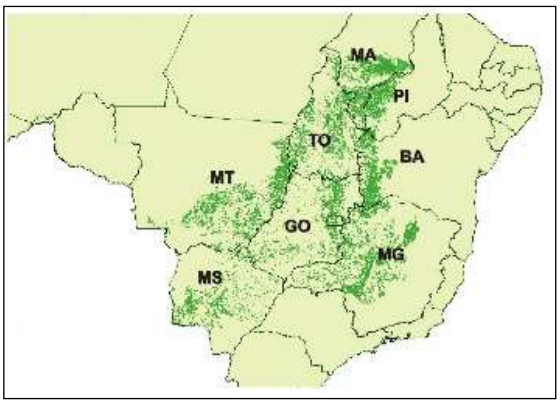
Ilha do Bananal

The successful experience identified in Tocantins was the innovation and application of tools to address two related problems: the lack of adequate human and technical management in small ceramic factories in Brazil and the pressures driving deforestation in Brazil.

Deforestation is leading cause for greenhouse gases emissions (GHG) in Brazil and deforestation in the Amazon and Cerrado represent 59% and 26% of all the deforestation in Brazil, respectively[1]. Despite conservation efforts, the rates of deforestation are increasing in Cerrado, in which three million hectares are cut down each year . The original area covered by Cerrado was 204 millions of acres. By 2002, registers provided by Brazilian monitoring systems show that 57% of the biome has been deforested (graphs presented below). The states that have been strongly affected by deforestation activities are Mato Grosso, Mato Grosso do Sul, Goiás, Tocantins, south of Minas Gerais and west region of Bahia. The drivers of deforestation are the expansion of agricultural areas, firewood commercialization, and increasing of urban areas, among others[2].



Original área covered by Cerrado.
(Source: Conservation Internacional from Brazil)



Area covered by Cerrado in 2002.
(Source: Conservation International from Brazil).

According to surveys of the Brazilian Energy Company, published in the National Energy Balance, native wood is widely used as a primary fuel by small Brazilian companies in the North and Northeast of Brazil. One of the main consumers of firewood is the red ceramic industry, which represents one of the most important economic activities of the Brazilian construction sector. Native wood is a low cost input for these companies,

[1] First Brazilian GHG Emissions Inventory

[2] Conservation International of Brazil. Estimativas de perda da área do Cerrado brasileiro. Available at: http://www.conservacao.org/noticias/noticia.php?id=31 Visited in: September, 10 2008.

so the only way to mitigate the use of native wood as firewood was to develop financial incentives to change fuel sources. Accessing carbon financing for fuel switching programs was identified as a potential mechanism to reduce the use of firewood. Since the first implementation of carbon projects in 2007, the use of native wood from the Amazon and Cerrado for fuel has begun to decline[3].

The emission reduction projects promote the use of renewable biomass as fuel in the ceramic kilns (used for firing roof tiles and bricks), instead of firewood. Renewable biomass comprises wood and agriculture residues such as sawdust, rice husks, sugarcane wastes, etc.

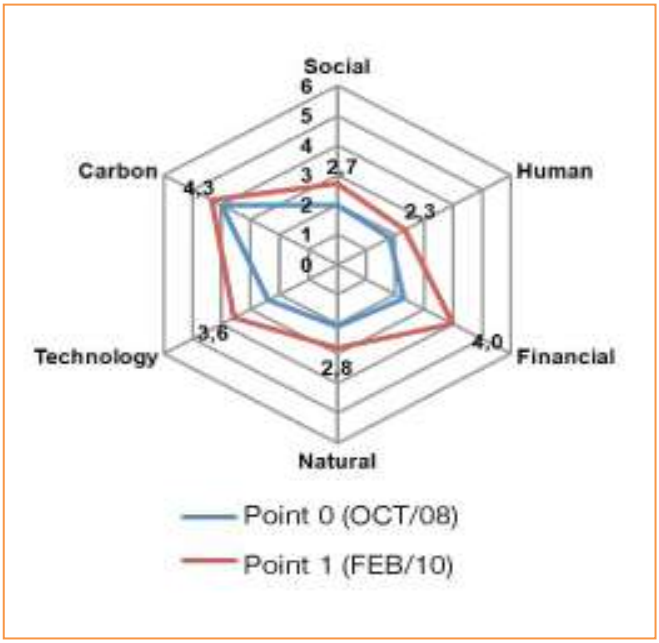
Initial Barriers

The red ceramic industry in Brazil is traditionally slow to adapt to technical advances when compared to other economic sectors or to ceramic industries overseas. Moreover, these companies are characterized by inadequate working conditions for the employees, in regard with ergonomics, health and safety aspects. For instance, the staff responsible for feeding the kilns with fuel is often submitted to high temperatures and high noise levels without the use of proper safety equipment. The companies also faced difficulties concerning natural resources management and most of the activities performed during the brick and tile manufacturing process did not monitor the use of water or production of atmospheric emissions and waste.

Staff at Reunidas Ceramic Industry, in Tocantins

SOCIALCARBON Standard

The SOCIALCARBON Standard was applied to ensure that the fuel switching projects would be correctly implemented and that the carbon credits generated would contribute to the sustainability of these companies. The methodology used by the SOCIALCARBON Standard is able to diagnose, monitor and promote the use of the carbon credit revenue for actions geared towards the improvement of the red ceramic companies.



The SOCIALCARBON methodology and standard assess a project's sustainability by monitoring six main resource indicators (social, human, financial, natural, technology and carbon). This methodology is based on the Sustainable Livelihood Approach. For each carbon credit monitoring report (in this case, the VCS monitoring report), a SOCIALCARBON report is created, detailing the performance of the ceramics manufacture in accordance to specific indicators for the industry. The SOCIALCARBON report makes the identification of strengths and weaknesses of the companies possible, and the project developers are able to define an action plan in order to improve their performance over the crediting period.

[3] Adapted from study: "Diagnóstico Empresarial do Setor Cerâmico da Região Central do Estado de Tocantins", developed by the Brazilian Service of Support for Micro and Small Enterprises (Sebrae) from the State of Tocantins.

The use of the SOCIALCARBON Standard has proved to be an efficient approach to monitor and address many of the weaknesses of the red ceramic industries. Currently, 48 red ceramic companies have initiated the fuel switching programs, which has led to an avoidance 2,516,944 tons of CO_2 emissions. In addition to the reduction of emissions, the social, environmental and economic aspects of the project are fully assessed by the SOCIALCARBON reports and continuous improvement is promoted and evaluated over the project lifecycle.

Renewable biomass at GE Teobaldo Ceramic Industry, in Pernambuco, Brazil

SOCIALCARBON and Cattle Ranching

The successful application of SOCIALCARBON methodology and standard to assess and ensure the benefits of the emission reduction projects can also be applied to cattle ranching projects.
Currently, the cattle ranching in Brazil is done in three systems.

1. Extensive Cattle Ranching: In this system, the animals are maintained in pastures without supplementary alimentation (such as feedlots and silage) and occupy a large portion of land. Both the costs and the efficiency of this system are considered low.
2. Semi-extensive or Rotational Cattle Ranching: In this case, the cattle are kept in the pasture with high fertilization and irrigation during dry periods in order to quickly increase their weight.
3. Intensive Cattle Ranching: In this type of ranching, higher quantity of livestock is kept in a smaller area, with effort focused on the rapid weight development to increase profit margins.

66% of the total area of Tocantins State (16,825,727 ha) are used for agricultural and cattle ranching activities. According to the Brazilian Institute for Geography and Statistics (In Portuguese, IBGE- Instituto Brasileiro de Geografia e Estatística), 10,290,856 hectares are used for pastures and 811,874 hectares are used for agriculture. These activities are responsible for 12.9 % of Tocantin´s Gross Domestic Product (GDP).

Deforestation for cattle ranching in Amazon Forest

In 2007, the Tocantins was ranked the 11th biggest cattle producer of Brazil, according to data from the Brazilian Cattle Yearbook. Cattle ranching is rapidly growing and a study developed by one of the biggest livestock companies in Brazil, JBS, stated that in 2012 the number of animals confined for cattle ranching in Tocantins would increase by 75% over 2011 production. A multitude of projects are being implemented in order to support cattle ranching in this region. Since October 2008, SEBRAE (Brazilian Service of Support for Micro and Small Enterprises) has been implementing a project that aims to improve technology development and transfer for cattle ranching in Tocantins, especially for small producers, who face barriers of access to more modern and profitable technologies. It is also expected that Brazilian banks will provide around R$ 760 million for livestock industry until the end of this year and credit for cattle ranching will increase by 50% from 2011.

Investment in cattle production is important for the country´s development; however, the increase of cattle ranching may also lead to an increase in deforestation in Brazil. According to data provided by Imazon ,

increases in the market price of beef have a positive correlation to increases in deforestation rate. Imazon researchers also state that deforestation in Tocantins is increasing due to the expansion of soy crops and cattle breeding, with the most of soy production in these regions beings used as feed for cattle ranching.
This case study aims to evaluate the feasibility of implementing sustainable cattle ranching in the region of Tocantins to avoid GHG emissions due to deforestation by using the knowledge learned from the implementation of the SocialCarbon methodology in the red ceramic industry. The SOCIALCARBON Standard and its tools will be applied to monitor deforestation rates and the improvement of cattle pastures in the State of Tocantins, and at the same time provide solutions for increasing profitability and technological development for the livestock industry.

Leibniz Centre for Agricultural Landscape Research (ZALF) | Foundation for Sustainable Development (FSD) | Organisation for International Dialogue and Conflict Management (IDC) | Fundación Neotrópica (NEO) | Foundation for Agricultural Development | Swiss Federal Institute of Technology (ETH) | Ecologica Institute |

The CiVi.net project is part of the Seventh Framework Programme of the European Union, with a focus on community based management of environmental challenges. Theme: ENV.2011.4.2.3-1 / Project ID: 282750

The CiVi.net project aims to analyse, transfer and disseminate successful and sustainable community based solutions with regard to ecosystem service management in Latin America. The role of civil society organizations (CSOs) within these governance models is thereby at the core of the research.