

# SUGARCANE

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Impacts of Crops over Land, Environment and Society

Reporter Brasil

Biofuel Watch Center ONG Reporter Brasil www.biofuelbrazil.org

The launch of this report on the impacts of 2008's sugarcane harvest marks the conclusion of the first cycle of activities of the Biofuel Watch Center (BWC) of NGO Repórter Brasil. This research on sugarcane, an expanding crop facing the ethanol global boom, brings an alert on the contrast between the wealth and poverty that characterizes the sector: on the one hand, high investments from national and international groups guarantee cuttingedge technology development; on the other, the advance of monoculture generates environmental problems and thousands of workers are still suffering laboural superexploitation. During 2008, we have also produced a report on the impacts of soy and castor bean, and another on palm oil, babassu, cotton, corn and jatropha, always with the goal of subsiding, with qualified info and analysis, social movements, non-governmental organisations, authorities, entrepreneurs and specialists in general. In 2009, new reports will be published, aiming at verifying the evolution of the problems caused by the agroenergy crops. All of this work can be viewed in our web site in the internet:

www.biofuelbrazil.org.



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Brazil of Biofuels: Impacts of Crops over Land, Environment and Society - Sugarcane

#### NGO REPÓRTER BRASIL

Coordinator

Leonardo Sakamoto

#### **Biofuel Watch Center**

Coordinator

Marcel Gomes

#### Authors

Antonio Biondi Mauricio Monteiro Verena Glass

#### **Map Production**

Roberta Roxi Instituto Centro de Vida (ICV) - Alta Floresta (MT)

#### Design

Gustavo Monteiro

#### **Pictures**

Equipe Repórter Brasil Altino Machado (page 48) Aminemona (page19) João Zinclair (pages 31 e 44) João Roberto Ripper (page 15) MPT-Alagoas (pages 32, 33 e 34)

#### Translation

Roberto Cataldo / Verso Tradutores

#### Collabouration

Milenka Quisbert

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## Presentation

The 2008 sugarcane harvest was marked by the erosion in labour relations in agriculture and the advancement of that monoculture over the Cerrado, the Amazon, the Pantanal surroundings and part of Atlantic Forest within Brazil's North-eastern region. That is how the Repórter Brasil's Biofuel Watch Center (BWC) expresses its concern with the ethanol boom in the country, in this third report on impacts caused by crops used to produce agrofuels. It is the first comprehensive research study to be publicised in Brazil about the social and environmental impacts of the current harvest.

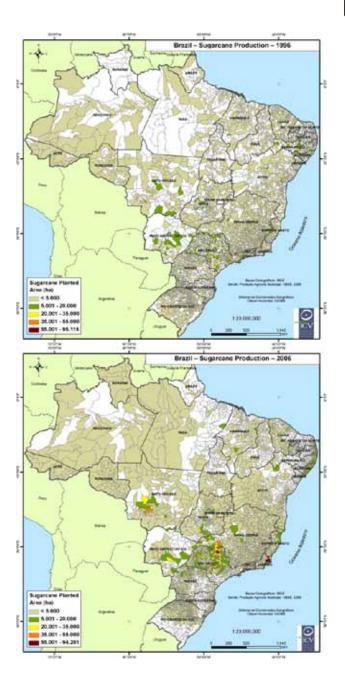
Investments of billions of reais received by the sugar-alcohol industry from Brazilian and foreign businesses and institutions have encouraged the advancement of sugarcane plantations in areas already consolidated, such as São Paulo, and over new borders in Brazil's Midwest region. The international financial crisis that emerged in the second half of 2008 should delay a series of new projects, but not to the point of reversing the expansion cycle. That is shown by the facts that the national sugarcane production increased 13.9% in 2008 over the last harvest and it should increase 7.6% more in the next year.

Despite that, the crisis was used by businesses to justify lowering wages paid in rural areas. Since the late 1990s, wages had been accumulating small increases when compared to the growth in food prices, but that trend was reversed in 2008. Wage readjustments obtained in negotiations rarely reach two figures while the price of a package of basic food items increased 16%². In the state of São Paulo, which concentrates 59.5% of the country's sugarcane production, workers' decreasing purchase power encouraged strikes, often repressed violently by the police, as well as layoffs by the companies. The climate in plantations became so explosive that union leaders remembered the historical demonstrations that happened in the area of Guariba, SP, in the 1980s.

As can be seen, dissatisfaction is not recent. It has its roots in a model based on overexploitation of labour, where part of the frequent increases in productivity is appropriated by farm or processing mill owners. Since 2000, workers' productivity has grown 11.9% in the state of São Paulo, but cutters' pay increased only 9.8%<sup>3</sup>. The 2008 harvest worsens labour conditions in several aspects. For instance, the amount of violations registered made by inspectors to employers in the state for not meeting requirements of weekly time off and lack of individual protection equipments has relatively increased. And 2,553 people were liberated from sugar-alcohol enterprises that

used contemporary slavery - virtually half the slaves found along the year.

From the environmental viewpoint, sugarcane expansion reached areas such as the Cerrado, the Amazon, the North-eastern Atlantic Forest and even Caatinga. In 2008, 24 companies in Pernambuco were fined for several environmental crimes. Pantanal, one of the world's main environmental assets, is under pressure from projects to install processing plants in the state of Mato Grosso do Sul, near tributary rivers that are important for the biome. The promise of agro-ecological zoning, which could organise the expansion of the crop, remains unfulfilled by the government.



Without preserving the environment, there is a virtual consensus that agrofuels loose their comparative advantage regarding fossil fuels, when we considered burning and release of greenhouse effects gases. In that aspect, the state of São Paulo witnesses the advancement of mechanised harvest, which, on the one hand, brings considerable environmental advantages, but, one the other hand, is seen by workers as a risk to their jobs, since compensatory policies such as agrarian reform and professional training are shy. Until 2014, about 180 thousand people are estimated to have lost their jobs only in sugarcane plantations in the state.

More details, analyses and stories of impacts caused by the advancement of sugarcane in the country can be seen in the pages of this report, divided into three major parts according to their production and historic peculiarities: Mid-South, Northeast and The Amazon. In order to do this work, researchers from the Biofuel Watch Center travelled eight Brazilian states - Acre, Alagoas, Bahia, Pernambuco, Maranhão, Mato Grosso, Mato Grosso do Sul, and São Paulo - and interviewed hundreds of workers, union leaders, researchers, authorities and businessmen from the sugarcane industry. Furthermore, this work would not have been possible without support by Cordaid, the Doen Foudation, and Solidaridad, as well as Centro de Vida Institute (ICV), which produced the maps especially for it. To all of you, our sincere gratitude.



### MID-SOUTH

Brazilian Mid-South has concentrated 87.8% of the sugarcane production destined to the sugar-alcohol industry in 2008. The region includes São Paulo, the main producing state in the country, with 59.5% of the total production, and states where the crop advances more quickly such as Goiás and Minas Gerais. In the 2008 harvest, Brazil's sugarcane production increased 13.9%, from 501.5 million tons to 571.3 million. São Paulo accounted by 58.9% of this increase, Goiás, by 12,3%, and Minas Gerais by 10,9%. Data were released by Brazil's National Supply Company (CONAB) in December 2008.

The Mid-South is also a priority region for expanding ethanol's industrial park. According to the Sugarcane Industry Association (União da Indústria da Canade-Açúcar, UNICA) - which includes the industry's largest companies, 29 processing mills started operations in 2008, including 13 in São Paulo, 9 in Goiás, 4 in Minas Gerais, and 3 in Mato Grosso do Sul. Since 2005, 81 ethanol companies opened in the region, which still has 372 of the 447 plants registered at the National Agency for Petroleum, Natural Gás, and Biofuels (Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, ANP), and over half of them - 230, to be precise - are located in São Paulo.

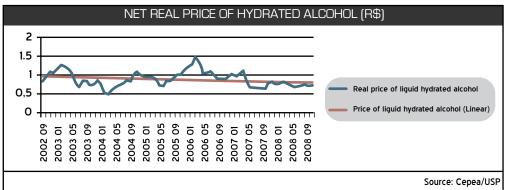
The major driving force behind today's expansion is the increasing demand for ethanol. As it is known, most companies can produce at least three products from sugarcane: sugar, ethanol, and electricity, which, for many of them, is no longer a by-product. During the last harvest, 56.9% of the production was directed to make that fuel and the rest went to sugar, according to CONAB. Domestic consumption of ethanol is mostly encouraged by drivers that buy the so-called "flex" cars. Launched in 2003, they are sold by the auto industry as polluting less and allowing drivers to choose gasoline or alcohol as their fuel.

Between January and October 2008, 93.7% of the two million cars sold in Brazil<sup>4</sup> were "flex". That amount has a direct impact on decision makers in the sugar-alcohol industry, favouring investments in new industrial units by reducing the possibility of crises such as that of the 1980s. At the time, before the emergence of the "flex" technology, many buyers favoured gasoline cars, since they feared oscillations in ethanol prices or even its shortage at gas stations.

Today, the increase in ethanol production in Brazil has guaranteed lower and stable consumer prices. According to data from São Paulo University's Center for Advanced Studies in Applied Economy (Centro em Estudos Avançados em Economia Aplicada, CEPEA), the "ten-

dency curve" for prices of liquid hydrated alcohol shows a decrease, from values near 1.00 real per litre at the processing plant in 2002 to 0.80 real in November 2008. The values were deflated after the General Price Index - Market (Índice Geral de Preço - Mercado, IGPM), calculated by Getúlio Vargas Foundation.

Despite hydrated alcohol, companies also produce anhydrous alcohol, which is mixed in gasoline in Brazil. The total hydrated and anhydrous production has been increasing. The Mid-South alone produced about 24.3 bil-



lion litres in the 2008 harvest, 17% over 2007 and virtually twice as much as three years ago<sup>5</sup>. Most of that production stays in the country to serve the "flex" vehicles. However, exports are increasingly becoming an attractive alternative for producers. In 2000, the country sent 227 million litres abroad; in 2003, 757 million; in 2005, 2.6 billion; and in 2007, 3.5 billion litres.

But, surprisingly, increasing sales do not translate as financial health for many companies. In order to increase production, to build or buy more processing plants, many companies have increased their debts. That scenario, added to strong growth in the offer of ethanol in the domestic market, made the price of fuels stop at levels that are not considered remunerative by businesses and have restricted their profits. That is what can be seen by data from the few Brazilian sugar-alcohol companies listed at the São Paulo Stock Exchange (BOVESPA) - whose financial results have to be publicised.

COSAN, present in the stock exchange since 2005 and having produced 1.5 billion litres of ethanol in the 2008 harvest, had losses in its two last fiscal years, from May to April of the following year. In the fiscal year of 2005, the damage was 17.1 million reais and in 2008, 47.8 million. Profits of 64.6 million happened in the fiscal year of 2006 and 357.3 million in 2007. It should be noted that most of that value - 89% - is not the result of operational profit, but rather of a lawsuit the company won against the federal government.

Other sugar-alcohol companies listed at BOVES-PA also reported losses in their balances in the last months of 2008. It is the case of Açúcar Guarani, which recorded 128.3 million reais in losses between April and September 2008, increasing the 27.8 million loss it had had in the same period in 2007; Nova América, whose losses increased to 18.9 million between May and September 2008, over 13.2 million in the same period of 2007; Costa Pinto, which went from profits of 5.9 million to 16.0 million losses in the same period; and São Martinho, the largest sugarcane processing company in Brazil in the current harvest, whose losses

reached 66.6 million reais between April and September 2008, over its previous loss of 43.7 in the same months of 2007.

To make things worse, the international financial crisis that emerged in the last months of 2008 helped to deteriorate the situation, since it reduced

the amount of credit available at the market. Companhia Albertina, in Sertãozinho, 330 km north of São Paulo, filed for judicial recuperation in order to restructure its debt of about 100 million reais. The same was done after that by the Naoum Group, which has processing mills in Goiás and Mato Grosso, Alagoas's João Lyra Group, and the Othon Group from Rio de Janeiro, according to news published on the press<sup>6</sup>.

However, despite all those red figures, sugar-al-cohol companies remain optimistic in the medium run. According to UNICA's president, agronomy engineer Marcos Sayaya Jank, "the economic fundaments of Brazil's sugar-alcohol industry remain absolutely solid and indicate remunerative prices for the coming years, thanks to increasing demand for flex vehicles, the new uses of ethanol in alcohol chemistry (bioplastics), growth in sugar and ethanol exports, and the increasing offer of electricity from sugarcane biomass?".

That view is shared by the Brazilian government, which organised an international conference on agrofuels in November 2008, which President Luiz Inácio Lula da Silva closed with a speech advocating such energy alternative<sup>8</sup>, and the Brazilian Social and Economic Development Bank (Banco Nacional de Desenvolvimento Econômico e Social, BNDES) - the country's largest financial institution for industrial funding. Depending on the effort - and the money - of this bank, which ultimately reports to the Presidency, Brazil's ethanol industrial park will continue

to grow in coming years, although at a slower pace because of the world 2008 economic crisis. That can be seen in its loan portfolio. In 2008, BNDES released 6 billion reais for investments in the sugar-alcohol industry, 61% more than the previous year. Since 2004, it executives have signed contracts to support the construction of 43 new processing plants in the country.

BNDES explains its investment in ethanol as follows: "The importance given to the sugar-alcohol sector is a result of BNDES's trust in the fundaments that guide the medium- and long-term expansion of the industry, such as: sales of flex-fuel will continue to be over 90% of the total cars sold; ethanol produced from sugarcane is recognised as more competitive than that produced from other raw materials; and specially the need to reduce CO2 emission will make it crucial for other countries to increasingly adopt the mandatory mix of ethanol to gasoline, as already occurs in Brazil<sup>97</sup>.

## CHAPTER\_1 LABOUR-RELATED IMPACTS

There is not doubt about who has more to lose when companies' financial balance is not positive. The difficulties faced by the industry along 2008 affect directly workers' wages, especially those involved with the arduous task of cutting sugarcane. That is why 2008 was marked as the year with more demonstrations at companies' doors, to the point that union leaders thought that it was almost possible to promote a general strike of all cutters in the state of São Paulo - the last one took place in 1986.

According to the Ministry of Labour and Employment, in 2007 there were 572,283<sup>10</sup> workers directly involved with Brazil's sugar-alcohol industry - from plantations to services at the companies - who were paid an average of 1,053.34 reais. Most of those jobs - 215,735 - is offered in São Paulo, where the average pay reaches 1,398.68, or 32.7% above the national average<sup>11</sup>. However, even in São Paulo there is a difference between wages according to the position in the production chain. While employees involved with industrial processes in ethanol production received an average 1,434.00 in 2007, those related to planting sugarcane were paid 1,142.00, that is, 20.3% less.

It must be underscored that those data from the Ministry of Labour and Employment refer only to workers who have some sort of formal work contract, leaving out of the statistics a huge number of employees, especially those with less education who do low-paid jobs such as cutting. The Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística, IBGE) sustains that 27.1% of sugarcane industry employees in 2005 had not formal working papers<sup>12</sup>. Both trade unions and business associations estimate that a million jobs are directly created by sugarcane processing plants<sup>13</sup>.

Many of them have been affected by the deterioration of companies' financial situation in 2008, when the slow process of real increase in workers' salaries was reversed for the first time in ten years. To demonstrate that, a comparison will be made between statistics for employees in sugarcane plantations in the state of São Paulo, provided by the Ministry of Employment, and prices of the package of basic items14 in the city of São Paulo, computed by the Inter-Union Department of Statistics and Socio-Economic Studies (Departamento Intersindical de Estatística e Estudos Sócio-Econômicos, DIEESE). That relationship reveals that, since 1999, workers had been improving the purchase power of their salaries year by year since 2007. At that time, with a 509.00-real monthly wage it was possible to buy 4.54 basic item packages worth 111.91 reais each. In 2007, monthly income jumped to 1,142.00, corresponding to 5.55 packages worth 205.48 reais15.

It all changed in 2008. The basic package reached 238.66,00 - a 16.1% increase over 2007, but wages were not readjusted that much. According to the São Paulo State Federation of Rural Waged Workers (Federação dos Empregados Rurais Assalariados do Estado de São Paulo, FERAESP), most of the companies raised wages at 7% in 2008. With that increase, the income predicted for sugarcane workers would be 1,221.00 reais - or 5.11 basic food packages - less than the 5.55 of 2007. That projects real losses in workers' income. The situation is even worse for cutters, the ones with lowest wages in the sugar-alcohol industry.

In the state of São Paulo, FERAESP says that companies pay cutters a minimum wage between 500 and 600 reais plus an amount that varies according to the amount of sugarcane cut per day. That is the so-called payment per production. FERAESP estimates that by the end of each month, most cutters receive a total between 800.00 and 900.00, while those who get to cut more might earn up to 1,300.00. For the FERAESP representative in the sugarcane-producing region of Ribeirão Preto, Zaqueu Ribeiro de Aguiar, the loss in wages' purchasing power in 2008 partly explains the increase in the number of strikes in the region during the current harvest. He estimates that in October 2008, the peak of demonstrations, about

10 thousand workers from several companies had crossed their arms in the struggle for better salaries.

The perspective of reduction in real wages paid to sugarcane workers in 2008, especially cutters, reinforces the contradiction between the sugar-alcohol industry, pointed out by industries as a source of fuel that might definitely replace petroleum in the future and a mass of workers whose payment cannot guarantee their livelihood.

Many scholars, unions leaders, and activists in general see sugarcane cutting as a classic example of "overexploitation of labour" – a term spread by Brazilian intellectual Ruy Mauro Marini after he launched a series of writings between the 1960s and 1970s, including "Dialética da Dependência" (1973).

One of the theoretical pillars of the concept of "overexploitation of labour" is the appropriation, by capitalists, of productivity gains obtained by workers, who increase their fatigue during the activity but did not receive an equivalent payment. An analysis made by Repórter Brasil after data collected by São Paulo's Institute of Agricultural Economy (Instituto de Economia Agrícola, IEA) points out that it is precisely what has been taking place in the relationship between businessmen and sugarcane cutters. Since 2000, the price paid to cutters per sugarcane ton has increased 9.8% in real value<sup>16</sup>, reaching 3.45 reais in 2008. Workers' productivity, in turn, has grown more during the same period, by 11.9%, from 7.6 tons cut per day in 2000 to 8.6 tons in 2008 in the state of São Paulo.

#### CASE | Strike and worker repression

"It was almost a 'Guariba". The sentence was said by union leader Zaqueu Ribeiro de Aguiar, from the São Paulo State Federation of Rural Waged Workers (FERAESP), to describe the unrest that marked this harvest in the Ribeirão Preto, SP, region - one of the main sugarcane areas in Brazil.

He is referring to the historical strike of sugarcane cutters in Guariba, a nearby town. in 1984, which brought together about 5 thousand workers in the struggle for better salaries. According to Aguiar, 24 years later, in October 2008, at least 10 thousand cutters crossed their arms in distinct cities of São Paulo, such as Colômbia, Viradouro, Terra Roxa, Morro Agudo, Pontal, and Sertãozinho. But the movement was not unified and remained isolated in each processing plant.

Just like at the time of Guariba, strikes did not result from a centralised union organisation, but rather from common dissatisfaction with wages offered by companies. After the strikes, many companies raised the minimum wage and the value paid per ton of sugarcane, but a lingering habit reminds of the past: persecution to the so-called "strike heads" - workers seen as having "more awareness" and influencing others.

Rural worker Victor Ronaldo de Alencar, for instance, was one of those fired after a 9-day strike in September at Albertina Mill in Sertăozinho. Workers achieved some of their demands, such as food vouchers and readjustment in the price paid per ton of sugarcane cut, but the leaders lost their jobs, because they allegedly did not work efficiently. Albertina was the 111st at UNICA'S ranking for sugarcane grinding at the 2007/08 harvest, with 1.5 million tons processed, and produced 33.7 million litres of alcohol in the period.

The same happened to 30-year-old Raimundo Nonato de Souza, who came from the state of Piauí to work in sugarcane cutting





at the Bela Vista Mill in Pontal. After a 14-day strike in September and having taken part in the strike commission that negotiated with the company, he was fired based on just cause, because he allegedly was not an efficient cutter. "And I had never received even a warning", said Souza. Eight other cutters that worked at the Bela Vista and Bazan Mills, both belonging to the same group, and who had also taken part in the strike, also lost their jobs unfairly.

The companies were included in one single group after Bazan bought Bela Vista in 2002, in a deal estimated at the time at 57 million reais. In the 2007/08 harvest, Bazan was 37th place in the state

Sugarcane cutter Victor Ronaldo de Alencar, fired after a strike in Sertãozinho, São Paulo

for sugarcane grinding, with 3.2 million tons processed, and Bela Vista was 58th, with 2.4 million, according to data provided by UNICA. The former produced 101.2 million litres of alcohol and 274.4 thousand tons of sugar, and the latter 75.8 million litres of alcohol and 142.5 thousand tons of sugar.

Persecution to workers is already dealt with by FERAESP. According to union leader Aguiar, the federation adopted the strategy of suing all the cases, even demanding compensation for moral damage to workers. "And we are winning", he said. Both companies say their clients include some of the country's large distributors such as BR. Contacted by the Biofuel Watch Center, the company confirmed that she buys product of Bazan and Bela Vista plants trough spot contracts, arguing that there is no legal barrier to do so - what is true. The distributors show a important good will by excluding enterprisers who use slave or child labour. However, social responsibility policies should consider more and more the labour conditions practiced by their clients - and, in this case, Bazan and Bela Vista have serious problems.

Problems are not limited to São Paulo. By the end of the harvest, Alcoopan, located in Poconé, Mato Grosso, at Pantanai's so-called north door, and which is included in the Ministry of Labour and Employment's "dirty list" of employers that used slave labour, fired workers involved in sugarcane cutting and did not pay the money due to them at the end of the contract. About 200 were migrants from the Northeast and, since they were not paid, they were not even able to return to their states.

Then cutters occupied the companies' facilities and even set part of the plantation on fire. The solution, mediated by the State Labour Attorney's office in Mato Grosso, will demand the sale of one of the group's properties to pay what cutters and other employees are entitled to. Claiming financial problems, the company threatens to shut its doors.

#### ► Human rights violations

According to researcher Francisco Alves, from São Carlos Federal University (UFSCar) Department of Engineering, payment per production<sup>17</sup> is behind a series of violations of workers' living conditions seen in recent years, including several deaths. To earn a little more at the end of the month, many of them work beyond their physical limit. According to data from the Catholic Church's Migrant Pastoral Commission based in Guariba, São Paulo, at least 3 cutters died in 2005 for excess of work in the state, 8 in 2005, 4 in 2006, 5 in 2007, and 2 in 2008.

Alves estimates productivity figures above those provided by IEA and says that it jumped from 3 tons a day per worker in the 1950s to 6 tons in the 1980s, and 12 tons by the end of the 1990s and early this decade. A worker who cuts 12 tons - estimates the UFSCar professor - walks 8,800 meters, makes 133.332 sickle hits, carries 12 tons of sugarcane in 15-kg bundles, on average - so that worker walks 800 times and makes 800 flexions, carrying 15 kg in his arms for 1.5 to 3 metres. He makes approximately 36,630 flexions and thorax twists; and he loses an average of 8 litres of water. "Such detailing on sugarcane cutting makes it easy to understand why rural workers who do that job die in São Paulo: it is because of too much work", he wrote<sup>18</sup>.

The situation might worsen in a context of wage stagnation, when workers tend to cut more to increase their income. According to FERAESP, in several São Paulo areas the daily average is already 16 tons and some workers have cut 30 tons a day. Excess of activity is also linked to several sorts of accidents at work. According to the latest data released by the Ministry of Welfare and Social Assistance, accidents in the sugarcane industry increased again in 2006 (more 5.1%), to 8,789 cases in the whole country. In 2005 that figure had reached 8,359 cases and in 2004 it was 8,979. The state of São Paulo concentrates 61.2% of accidents recorded in the country and the regions where the crop is expanding see an increase in the figures - Mato Grosso do Sul, for instance, leaped from 99 cases in 2004 to 232 in 2006. Since not all accidents are reported, authorities estimate that accident rates in the sugarcane industry are at least 50% higher than official statistics say.

Statistics by the National Institute of Social Security (Instituto Nacional do Seguro Social, INSS) also indicate the seriousness of accidents at work recorded in the industry. Summing up Work Accident Reports (Comunicados de Acidentes de Trabalho, CAT) made to INSS between 2005 and May 2008, the result is 82,948 accidents recorded in sugarcane plantations and sugar and alcohol processing mills - almost 70 per day in the whole country. São Paulo concentrated most of the CATs in the period, a total of 43.2%, but in relative terms, the North-eastern states take the lead. See more details on that issue in the section about sugarcane in North-eastern Brazil. In São Paulo, there are 5.15 accidents per 100 thousand tons of sugarcane produced, but that figure reaches 11.98 in Pernambuco and 15.65 in Alagoas.

With so many problems, labour control authorities have paid special attention to the sugar-alcohol industry in 2008. The Department of Labour Inspection of the Ministry of Labour and Employment, through the Special Mobile Inspection Group and the teams of State Labour Departments<sup>19</sup>, has acted against violations of workers' rights, which include irregularities in contracts, lack of hygiene and safety conditions and even slave labour.

Between January 2007 and July 2008, labour inspectors in Brazil carried out 3,088 actions, which reached 1.9 million workers. In the same period, 2,236 notifications took place in the sugar-alcohol industry, most of them for problems classified as hygiene and comfort-related (44%), such as lack of proper bathroom facilities and drinking water for workers, followed by irregularities in management of their health and safety (17%) and lack of Individual Protection Equipments (IPE). Besides, there were 65 interdictions - stopping machines and services - and 21 embargoes - stopping construction works.

In São Paulo - Brazil's largest sugarcane-producing state, 544 inspections in the sugar-alcohol industry took place in 2007, and 546 in 2008. The state is among those covered by the action of the so-called "state rural groups", specialised in rural inspections. According to its coordinator Roberto Martins de Figueiredo, the aim is to fight illegalities committed against workers and to pressure employers to follow the full legislation. In 2006, the state rural group carried out 160 inspection actions in the industry in the whole state, being 109 in 2007 and 50 in 2008. In each of those years, 95,596, 74,777 and 52,065 workers were covered respectively. Figueiredo explains that the number of actions decreased because irregularities increased in other crops, such as oranges, but the sugarcane industry still has serious labour problems. "Some things have improved, others have not", he says.

That is what statistics say about notifications written by inspectors, presented on the table below. Data indicate that, in relative terms and between 2007 and 2008, the number of notifications about irregularities in payment (0,37 notification per action to 0,68), lack of weekly time off (0,23 to 0,52), improper restroom facilities (0,44 to 0,48), the absence of effective individual protection equipments (0,45 to 0,62) and excessive working hours (0,17 to 0,28) has increased in the last three months. Conversely, there was a relative decrease in the number of notifications related to irregularities in working papers (0,29 notification per action to 0,26), lack of breaks (0,17 to 0,14) during work, as well as improper transport (0,36 to 0,26) and lodging (0,24 to 0,06).

SLAVE LABOUR CASES – 2008 IN BRAZIL								
Per industry - 2008	Cases recorded	%	Cases inspected	%	Workers involved	%	Workers freed	%
DEFORESTING	7	2	7	3	99	1	83	2
CATTLE	137	48	85	40	1,74	25	1,026	20
REFORESTING	19	7	18	8	264	4	248	5
EXTRATIVISM	5	2	5	2	68	1	49	1
SUGARCANE	19	7	19	9	2,553	36	2,553	49
OTHER CROPS	35	12	30	14	876	12	720	14
CHARCOAL	48	17	38	18	1,252	18	410	8
OTHERS AND NON-INFORMED	14	5	12	6	201	3	155	3
TOTAL	284	100	214	100	7,053	100	5,244	100
Source: CPT								

#### ► Slave labour

The most serious cases of human rights violations involve contemporary slavery. Despite efforts by the Brazilian government and private companies, slave labour is still being denounced in the sugar-alcohol industry in several states. Accordingly to CPT data, in 2008, the industry was leading the ranking for the number of workers freed: 2,553 (49%) of a total of 5,244, above the 1,026 (20%) freed in the cattle industry and 720 (14%) in other agricultural industries. In 2007, the number of released slaves in the sugarcane sector was bigger - 3,060 (51%) of 5,968 released slaves -, but that number doesn't show, necessarily, better working conditions in the rural areas, because it depends on the number of denouncements effectively checked by the mobile group.

CPT points out that in number of employers caught using slave labour in 2008, the sugarcane industry is only the fourth, with 19 (9%) of 214 cases, behind cattle (85 cases or 40% of the total), coal (38 or 18%) and other crops (30 or 14%). That means that the use of slave labour is less disseminated in sugarcane than in cattle, but when it happens, it usually involves a higher number of workers since sugarcane is labour intensive. In other words: a sug-

arcane farm can be the scenery of the rescue of more than a thousand workers at the same timer, which does not occur in cattle ranching properties. In cattle ranching cases, when there is slave labour, the reports of the Ministry of Labour and Employment been pointing out that the groups of workers are smaller, but the level

of exploitation is higher. That relationship is confirmed when data accumulated between 2005 and September 2008 are examined. In that period, 785 operations against slave labour took place all over the country, of which 42 were in the sugar-alcohol industry. Despite representing only 5.3% of actions, the industry was responsible for 6,030 people freed - 35% of the total of 17,419 workers. The table below presents slave labour statistics in 2008 per industry.

As for workers rescued in the sugar-alcohol industry between 2005 and May 2008, most were in the Mid-South of Brazil, which is logical, since 87.8% of the country's sugarcane production comes from that region. It should be noted, however, that the cases of slave labour are not concentrated in São Paulo - the state with 59.5% of the production - but rather in states where plantations have expanded more recently over new agricultural borders. They are often in areas distant from urban Centers where inspection is more difficult. Between 2005 and September 2008, the Mid-South leader in number of rescued workers was Mato Grosso do Sul (1,635), followed by Mato Grosso (1,070), Goiás (873), Minas Gerais (415), and São Paulo (161). In the same period, Pará, in the Amazon, had 1,064

	CASES OF SLAVE LABOUR IN 2008 <sup>20</sup> – SUGARCANE – MINISTRY OF LABOUR				
UF	City	Name of company	Workers freed	Compensation (in R\$)	
MG Guaranésia		Guaranésia Alvorada do Bebedouro S/A - Açúcar e Álcool		0.00	
IVIO	Guaranesia	(Destilaria Alvorada do Bebedouro - DAB)	33	0.00	
MG	São Sebastião do Paraíso	Central Energética Paraíso S/A (CEPAR)	8	0.00	
CE	Paracuru	AGROVALE Cia Industrial Vale do Curu	141	0.00	
MS	lguatemi	Nelson Donatel and others	126	239,441,02	
MT	Nova Olímpia	Usinas Itamarati S/A	67	213,872,87	
GO	Porteirão	Usina Fortaleza Açúcar e Álcool Ltda.	244	352,913,55	
SP	lcem	Agrisul Agrícola Ltda.	55	82,655,60	
GO	Jataí	Elcana Goiás Agroenergética	95	118,065,66	
GO	Quirinópolis	Agro Pecuária Campo Alto S/A	421	822,766,79	
	Quilliopolis	(Usina São Francisco)	421		
GO	Campo Alegre	BRENCO - Companhia Brasileira de Energia Renovável S.A	17	17,044,54	
AL	União dos Palmares	Laginha Agro Industrial S.A	52	134,642,47	
AL	Penedo	Penedo Agroindustrial S.A 203		195.666.58	
AL	Penedo	(Usina Paisa/Grupo Toledo)	203	193,000,30	
AL	Rio Largo	Usina Santa Clotilde	401	0	
	Total 2 2,177,069,08				

workers rescued, while Alagoas and Ceará, at the Northeast, had 656 and 156, respectively.

As can be seen in the table, the case with the most workers freed took place in Quirinópolis, Goiás. In March 2008, inspectors rescued 421 people from the São Francisco Mill. According to inspectors, lodging facilities were improper and overcrowded. São Francisco is related to Usina São João (USJ), based on Araras, São Paulo, a member of the Sugarcane Industry Association. USJ director Hermínio Ometto Neto was a member of UNICA'S deliberative board.

According to inspectors, 18 people lived in one of the dormitories, with two rooms and a bathroom. A cistern was open and located less than ten metres from the cesspool. Another dormitory was an adapted bar with no window. "The only ventilation was the door. When it was closed, there was no air circulation", said an auditor. An official of the company challenged the inspectors, saying that the problem was isolated in the lodging issue. "It was an isolated act, in 65 years of São João's history we had never been through such a situation. That is too much punishment for such a large company that creates so many jobs", said lawyer Rogério Castro.

Another embarrassing moment for the sugaralcohol industry, in 2008, was the exclusion of companies belonging to the José Pessoa Group - Agriholding, Agrisul Agrícola Ltda, Companhia Brasileira de Açúcar e Álcool (CBAA), Debrasa, and Jotapar - from the list of signatories of the National Covenant for the Eradication of Slave Labour. The business conglomerate has five units to produce sugar and sugarcane alcohol in the country: in Japoatã (SE), in Campos dos Goytacazes (RJ), in Icém (SP) and two in Mato Grosso do Sul - in Brasilândia and Sidrolândia. Their exclusion, determined in July by the Covenant's Watch Committee, of which Repórter Brasil is a member, was caused by its recurrence in cases of degrading labour.

The José Pessoa group had already been suspended from the National Covenant since the Ministry of Labour and Employment's mobile inspection group rescued 1,011 workers under extremely precarious conditions from the Farm and Processing Mill Debrasa, in Brasilândia, MS, in November 2007. In June 2008, another operation by the mobile group found 55 workers who worked for the Agrisul Mill, in Icem, SP, near the border of São Paulo and Minas Gerais, subjected to serfdom by debt. In the explanations sent to the national Covenant's Watch Committee, CBAA sustained that "it vehemently repudiates the practice of labour in conditions analogous to slavery, whether by alluring workers or by offering degrading conditions in the work environment and mainly

as a result of serfdom by debt". The company reaffirmed that it was not aware that some of its workers were ties to debts in local stores, with which it has no connection. CBAA still informed that it was effecting the "dismissal of workers as a measure imposed by the inspection".

But the explanations were not considered enough to guarantee the permanence of the José Pessoa Group in the Covenant. "The justification provided by CBAA was once again considered unsatisfactory in face of the evidence gathered by the mobile inspection group", stated the note released at the time by the National Covenant Watch Committee, which includes the Ethos Institute - Business and Social Responsibility, the International Labour Organisation (ILO) and Repórter Brasil. In order "to enforce the agreement", the Committee decides for "the definite exclusion of companies that are members of the José Pessoa Group" (read more about the issue on page 27).

The national Covenant for the Eradication of Slave Labour is one of the main tools in Brazil to fight contemporary slavery. Launched in 2005, it is signed by over 160 companies committed to cut from their list of suppliers the companies caught in the act of using slave labour. Large fuel distributors such as Petrobras, Ipiranga, Esso, and Texaco are members and use the so-called "dirty list" of employers (http://www.reporterbrasil. org.br/listasuja/) as their main reference. The list is periodically updated by the Ministry of Labour and Employment. In the last update, on December 29, 2008, 205 employers were registered as having benefited from slave labour. They suffer restrictions not only from the covenant's signatories, but also from several institutions and public funding agencies. At least seven out of those 205, are sugarcane farms or sugar-alcohol companies: in Mato Grosso, those mentioned are Alcoopan Álcool do Pantanal and Silvio Zulli, both from Poconé; in Mato Grosso do Sul, Nelson Donadel from Distillery Centro Oeste Iguatemi (Dcoil), from Iguatemi; in Goiás, Agrocana JFS, in Ceres, Ipê Agro-Milho Industrial, in Inhumas, and Energética do Cerrado, owner of Itarumã, in Itarumã; and in Ceará, Raimundo Vasconcelos from the Soever farm.

Not all fuel distributors get involved in the struggle against slave labour. On the contrary, by buying products from processing plants that commit such crime, some companies allow employers remain in the market using slave labour. That is the case of Petromarte (Brazil's eight largest alcohol distributor in volume, according to ANP), Exxel and Energy, all based in the state of São Paulo and that purchased ethanol from Alcoopan, in Poconé (MS), after it entered the "dirty list" in December 2006 for having been caught with 318 slave workers. It should be noted that Petromarte, Exxel, and Energy have not signed the National Covenant for the Eradication of Slave labour.

Also in order to reinforce the struggle against contemporary slavery, the 2nd National Plan for the Eradication of Slave Labour was launched in 2008. The new document, made by the National Commission for the Eradication of Slave Labour (Comissão Nacional de Erradicação do Trabalho Escravo, CONATRAE), includes 66 actions to prevent and punish the crime. Its aims include a specific one for sugarcane and have several authorities responsible at the Executive, Legislative and Judiciary, as well as civil society organisations and the International Labour Organisation (ILO). Its main actions are prevention, repositioning workers, and economic repression. The plan will work for the approval of the proposal for Constitutional Amendment 438, which is known as "The Slave Labour Amendment" and establishes the confiscation and use for agrarian reform of all land where such disrespect for human beings is found. The proposal has already passed in the Senate and depends on a second confirmation vote at the Chamber of Representatives, but it faces strong resistance from the ruralist parliamentary group.



#### CASE | Migration and vulnerability

One of the factors helping the exploitation of the mass of workers involved in sugarcane cutting is their vulnerable situation. By and large, they have migrated from poorer regions of the country such as the North-eastern states, and travelled to São Paulo or to new sugarcane areas in search of work. According to the industry, there are at least 330 thousand cutters in the country, of which 135 thousand are in the state of São Paulo. Researchers like Francisco Alves<sup>20</sup> estimate that the figure is between 180 thousand and 250 thousand (2006) in the state. The Migrant Pastoral Commission, an organisation linked to the Catholic Church that supports that community, estimates that 70 thousand of them work in the area of Ribeirão Preto.

Marcos Antonio Rodrigues, 31 years of age, is one of them. Originally from Fortaleza, Ceará, in Brazil's Northeast, he has lived in Pontal for three years and works for Bela Vista. He lives in a simple house with his wife and two children - one is four years old and the other is ten years old. At least five days a week he faces a tough routine: getting up at 4:30 am, catching the bus at 5:50 to go to the rural area, where he works cutting sugarcane: work starts at 7 am and goes until a 15-minute break at 8:45: it restarts at 9 and goes until 11; then he eats what he brought for lunch and restarts cutting at 12 am, until 1:45 pm; then another 15-minute break and back to work at 2 pm, until 3:20 pm or sometimes until 4 pm. For all that, he earns little more than a thousand reais a month. "Life here is very difficult. I intend to stay on sugarcane a little longer, but when I can I want to leave it. This is no profession", he says.

Some 20 km from Pontal, in Sertăozinho, there is a community of migrants from Pimenteiras, Piauí. One of them is 31-year-old Francisco Vital da Costa. He has come to São Paulo for ten harvests now, to work on sugarcane cutting, at the beginning of each year, and returns to his hometown after 10 or 11 months. He has worked in Morro Agudo and since three years ago he has been in Sertãozinho. In 2008, he brought his wife and his two children to live in a small rented house with two rooms and a bathroom. In 2009, Costa says he will return to Sertãozinho, but he does not know whether or not he will bring his family.

In a recent work<sup>21</sup> aimed at defining the profile of immigrants, researchers Márcia Azanha Ferraz Dias de Moraes and Margarida Garcia de Figueiredo, members of the Extension Group on Job Market at the Luiz de Queiroz Higher Education School, at São Paulo University (ESALQ/USP), investigated a group of immigrants coming from Pedra Branca, Ceará, who chose the city of Leme, São Paulo, as their arrival point. According to the researchers, the so-called spontaneous migration was justified by workers by the lack of jobs or other opportunities in their original region: "In order to change the 'culture' of coming to São Paulo, there would have to be activities that absorbed that labour" at migrants' original place.

#### **▶** The reasons for migration

In November, when the sugarcane harvest ends in Southeast Brazil. the town of Dom Pedro, Maranhão, is busy with the arrival of its sugarcane migrants and with the news that many of them will remain away, trying their luck in the new harvest. Fagno Melo is one of those who has just returned to the community of Centro dos Pretinhos, in the town's rural area. At 20, this was his first attempt, but the destination is long known among many of his neighbours: São Paulo's sugarcane region.

To make the trip, Fagno had to accept help from his father, who borrowed 1.000 reais - at a 10%-a-month interest rate. The amount was enough for his trip and that of other two relatives, organised by local "travel agencies". Those businesses - the vast majority of which are clandestine - only mediate between companies or the so-called "cats" (illegal middlemen) and workers, and provide precarious transport to their destinations.

But Fagno's odyssey in sugarcane cutting still took weeks until he started to work. He waited 37 days to be hired. In the meanwhile, he had to pay the 70 reais a month for the rent in the house he shared with other eight cutters. Fagno is one more of the thousands of Brazilians that cross the country each year in an attempt to get rich in sugarcane plantations. In the case of the state of Maranhão, and especially in its central region - where Dom Pedro is located - that dynamic is even stronger.





In the nearby town of São José dos Basílios, the Land Pastoral Commission went to search for a reason for such constant migratory flow. The study drew the profile of the region's migrant: a young man, illiterate or with incomplete basic education, who migrates much more because of poverty and lack of jobs than for his own will. But the most intriguing factor is that, although migration is still routine in those areas, 27.65% of interviewees sustain it has not brought any changes to their lives. And many others report negative impacts such as a worse family situation and missing distant relatives.

Julia, in Leila's arms, lows her father only

Fagno is one of those who saw little change after his trip. His was paid 1,100 reais, a high value when compared to the minimum wage paid by an occupation in Dom Pedro, if so. "But it is difficult to save money", he says. That is because the cost of living becomes very high. At the end of the trip, what is left is the so-called "deal" - a value due to the end of the contract - which is always around 600 and 700 reais. Fagno's neighbour Francisca Leila dos Santos is at the other extreme in the sugarcane migration chain. She is the so-called "widow of a living husband". During her three-year marriage, she has spent only 9 months - not in a row - together with her 26-year-old husband Jeanclei. That is the same time that the couple's only daughter Júlia has spent with her father.

In November 2008, Leila received the news: her husband will not be coming back until late 2009. All that is to pay for the land plot where they will build their house - a condition for Jeanclei remain in the town for good. In the meanwhile, Leila lives out of what he sends her. "This has been the worst year of all. He says that positions for manual labour are scarce". That is why the monthly amount has been reduced. "It used to be 250, 300 reais, but now it won't be 200", he estimates. But, apart from missing him, she understands his reasons for migrating. "There is no factory here, no jobs. I agree with him", she rationalises.

While people from the state of Maranhão are still migrating towards sugarcane plantations in the Mid-South of Brazil, the crop gets closer and closer to them, and that expansion goes into the state. One large company - a Agroserra - was established in Balsas, southern Maranhão. But while proximity mitigates some of the pain caused by migrating, the reality of work can be even worse in one's own homeland.

Aldemir Paulino da Silva listened on the radio that the company was hiring in Dom Pedro. He faced work from 5 am to 6 pm, from Sunday to Sunday. During that time, he used to cut 100 metres of sugarcane. The amount cannot be considered high - there are those who cut up to 250 metres - but it was enough to give him cramps and back pain. He used to get 0.07 real for each metre.

However, one day, while he was cutting, his supervisor established the price at 0.05. Paulino and other colleagues did not like it and went "to reduction" - they were fired. "We thought we would get what we were entitled to, but so far we got nothing", he says. That happened in 2003. Cases like that multiply and have made strikes frequent, so much that in the last harvest the company did not hire people from Dom Pedro, because it considered them rebellious and troublemakers. But Paulino's only rebellion is against sugarcane. "I don't want to go back to that".

#### CHAPTER 2 **ENVIRONMENTAL IMPACTS**

Ethanol production in the Mid-South of Brazil has had important direct and indirect impacts. Presented as a model to replace petroleum and as an important alternative to fight global warming, Brazil's ethanol has also threaten highly rich biodiversity areas, water resources, and air quality in that region - as well as workers and residents' health in areas near plantations.

To illustrate it, in 2008 the sugar-alcohol industry got the highest fines in the state of São Paulo, motivated by emission of polluting agents over legal limits. And even the Pantanal region is threatened by the industry's expansion in recent years.

#### ► Advancement of monoculture

Sugarcane monoculture, considered damaging in itself by several specialists, is visibly advancing in almost all of the states of the Mid-South, specially in Mato Grosso do Sul, Goiás and Minas Gerais (see the table). After Ribeirão Preto and other areas in the state of São Paulo were turned into sugarcane oceans, large areas in the Mid-Southern states can also become large sugarcane plantations.

of developing the Deforesting Alert Integrated System (Sistema Integrado de Alerta de Desmatamentos, SIAD). The project - innovative and crucial to monitor and reduce negative impacts of human activity over the Cerrado, estimates that between 2003 and 2007, such activities led to the loss of some 1.9 million Cerrado hectares (or about 1.9 million soccer fields like Maracanã).

According to the Ministry of the Environment's (MMA) study "Priority Preservation Areas, Sustainable Use, and Benefit Sharing for Brazil's Biodiversity", there are over 400 areas considered priority in the Cerrado. Ferreira said that "we can say that all areas identified by the MMA as priorities for biodiversity preservation are somehow under threat".

At least 16 of them have sugarcane as their direct threats. The number could be even higher if indirect impacts were taken into account: according to Ferreira, the expansion of sugarcane eventually has "a high environmental cost, since, somehow, it forces new deforesting" - whether because of direct deforesting to plant sugarcane or because of the occupation in areas of other activities, which, in turn, need to deforest in order to develop. In Goiás, the scenario shown by LAPIG'S studies points out the need to be more careful with the sugaralcohol industry. "We see that a large part of sugarcane expansion in the state happened over areas considered priorities", he says.

ADVANCEMENT OF SUGARCANE IN BRAZIL					
State	Planted area in 2007 (in thousand ha)	Planted area in 2008 (in thousand ha)	Increase (%)		
Mato Grosso	203,142.2	223,2	9.9		
Mato Grosso do Sul	186,791.2	275,81	47.7		
Goiás	285,372	401,8	40.8		
Minas Gerais	496,406.4	600,697	21		
Espírito Santo	59,147.6	65,2	10.2		
Rio de Janeiro	54,735.5	50	-8.7		
São Paulo	3,361,660.8	3,824,241	13.8		
Paraná	477,240.7	509,289	6.7		
Rio Grande do Sul	2,249.9	2,095	-6.9		
BRASIL	6,137,578.6	7,010,202	14.2		
Source Conah December 2008					

In this expansion of the sugarcane monoculture, deforesting in the Cerrado gains a new important cause, aside from those already existing (expansion of agricultural borders for grain crops, new pastures for cattle, and production of vegetable charcoal). According to Professor Laerte Ferreira from Goiás Federal University (UFG), the expansion of sugarcane has happened especially over areas already dedicated to other crops, "but we can also see that expansion, at a smaller scale, over native Cerrado areas".

Ferreira is the head of LAPIG (Image Processing and Geoprocessing Labouratory), which is in charge

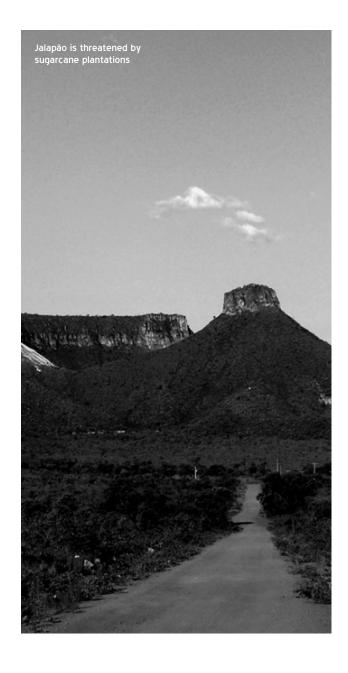
Editor of A Encruzilhada Socioambiental: Biodiversidade, Economia e Sustentabilidade Cerrado, Ferreira thinks it is possible to have dewith velopment preservation in the region. Besides the increase in informa-

tion on the Cerrado, the head of LAPIG advocates new governance for the region, which has to include all interests involved - as well as the environmental and social costs of development. The professor also believes that it is necessary to establish new models to develop the Cerrado, which include its tourist potential and the development of products based on biotechnology advancements. He sees all that depending on political will to preserve the biome.

The coordinator of the Goiás Forum to Defend the Cerrado, Altamiro Fernandes underscores that such role can be played by the Constitutional Amendment

PRIORITY AREAS FOR BIODIVERSITY UNDER THREAT BY SUGARCANE IN BRAZIL'S MID-SOUTH				
Name	Importance*	Priority	Area (km²)	
Rancharia, SP	Insufficiently know	High	271	
Santa Maria - Brilhante, GO	Extremely high	Very high	4849	
Corredor Serra do Maracaju, MS	Extremely high	Very high	6191	
Planalto da Bodoquena, MS	Extremely high	Very high	14342	
Sidrolândia - Terenos, MS	Very high	Extremely high	209	
Nascentes do Varadouro, MS	Very high	Extremely high	764	
Campo Florido - Veríssimo, MG	Very high	Extremely high	449	
Serra de São Vicente, MT	Extremely high	Extremely high	1303	
Goianésia to Barro Alto, GO	Very high	Very high	2542	
Bacia do Rio Corrente, GO and BA	Extremely high	Very high	9069	
Bacia do rio Grande, BA	Extremely high	Extremely high	11124	
Rio Caracol, TO	High	Very high	2558	
Lizarda, TO	High	Extremely high	2725	
Itaguatins, TO	Very high	High	1352	
Baixo Parnaíba, TO and MA	Extremely high	Very high	1689	
Jalapão APA, TO	Extremely high	Extremely high	3426	
*Regarding preservation and use of biodiversity / Source: Ministry of the Environment.				
Source: http://www.arcplan.com.br/mma/cerrado_fichas_das_areas_prioritarias.pdf				

Proposal (PEC) 115/95 recognising the biomes of Cerrado and Caatinga as National Heritage Sites. The Proposal has been stuck at the Chamber of Deputies since 1995. "The biome's degradation during this time has been high, its configuration has change at a fast pace, the climate, the seasons, the quantity and quality of water has been decreasing a lot", regrets Fernandes. He thinks the core problems in the Cerrado include deforesting native vegetation, soil nudity, and the resulting erosions as well as sedimentation and silting up of waterbeds, as well as their contamination: "society realised it had to react and guarantee the approval of the Constitutional Amendment".



#### CASE | Population stops deforesting in Colômbia, SP

Mobilisation by residents in Laranjeiras, a district of Colômbia, Northern São Paulo, has prevented the cutting of 216 hectares of forest to plant sugarcane. The Santelisa Vale Group, one of the largest sugar-alcohols companies in Brazil, was allowed by local justice to deforest the area, despite veto by the State Department for Protection of Natural Resources (Departamento Estadual de Proteção dos Recursos Naturais, DEPRN).

According to the judge at the 3rd Civil Circuit Court in Barretos. Mônica Senise Ferreira de Camargo, in charge of Colômbia, the license was granted because the DEPRN, when she demanded a proper justification to prevent the cutting, did not do so. But Colômbia residents did not accept the decision.

"That forest area had been almost totally cut down 25 years ago, to make charcoal. Now it had recovered, but the company wants to cut it again. It has agoutis, deer, jaguar, several kinds of birds, water

sources. It's ridiculous to cut such a treasure", says 35-year-old mason Luércio Pereira da Silva.

He and other colleagues prevented, right after the judges' decision, that tractors put chains to cut down the trees. "we came quickly and we stopped their work. But they came back during the night and cut down three hectares in only one hour. We came quickly and got to stop the tractors again. We even called the environmental police", says Silva, who then camped in the area.

The demonstrators say they are not members of any environmental group and have no political or economic ties - they are only concerned with the advancement of monoculture in the area. The case had a happy ending, at least for now. In early November, the São Paulo State Justice Court suspended the decision of 3a. Civil Circuit Court in Barretos and cancelled the license to deforest. The decision, however, is not final.



#### ► Sugarcane and water resources

The use of water resources is yet another subject in which the advancement of sugarcane monoculture raises concerns - and points out the need for special care in order for the multiple use of the country's water resources - determined in the national policy for the sector - does not fall in deaf ears. Concerns are visible: the large amount of water used by processing plants and sugarcane plantations, the risk of effluents being launched (or leaking) into rivers or, even the closing of water sources and the death - day by day, because the environmental legislation is broken - of streams and tributaries of some of the country's main rivers.

In the so-called Triângulo Mineiro, which includes the cities of Uberaba, Uberlândia, and Araguari another region with strong expansion of sugarcane in the Mid-South - the increase in monoculture is one of the factors that threatens the future of the waters of the Grande, one of the main rivers of the Paraná basin. Adriana Melo, a geography and environment professor and a member of NGO Geração Verde, represents organised civil society in the River Basin Management Committee for the Low Grande river. Melo sees "sugarcane expansion in the area known as Triângulo Mineiro, especially in Uberaba, totally out of control". According to her, the advancement of that monoculture in the region has happened under high environmental costs. She says that sugarcane producers "deforested where they should have not, buried the trees in order

not to be discovered, drained or levelled sources and wetlands, as well as invaded environmental protection areas".

In the whole Grande basin, she says, "deforesting caused water reduction in smaller rivers and their tributaries. Some streams no longer exist or became intermittent, and that will reflect on the Grande in the future", she warns. Melo points the Tronqueiras water stream, in Iturama, as one of the dying water bodies "surrounded by sugarcane". She explains that the water basin committee has been organising and advancing in tools for local water resources management. We now "live the drama", she says, at the same time that the committee lacks information and actions to deal with the subject.

Gustavo Malacco, a biologist and president of the Uberlândia's Association for Socio-Environmental Management of Triângulo Mineiro (Angá), and the civil society representative in the Water Basin Management Committee of Minas Gerais' Low Tributaries of the Paranaíba River underlines the perspective described by Adriana Melo. According to him, the expansion of the sugar-alcohol industry "has been quickly licensed by the state of Minas Gerais, with its total support", even because that expansion is "state policy".

According to Malacco, many problems result from such policy in the Triângulo and the Paranaíba area - the river marks the border of most of the states of Minas and Goiás. He mentions as examples the change in the deficit of the legal reservation out of the river basin, "breaking the Forest Code". For the president of Angá, the rules for the licensing of the industry are not tough and do not cover many impacts caused by businesses. Malacco also says that planting has not been taking place only in degraded areas, as sustained by the state government. And that shadowed pastures, which have small groups of isolated trees within the pasture, are giving way to sugarcane, representing the extinction of thousand of trees, cut down for the new crop.

The evaluation by the Minas Gerais Water Resources Management Institute (Instituto Mineiro de Gestão dos Recursos Hídricos, IGAM), a state agency, goes against the aforementioned concerns. According to the agency, "preservation and maintenance of water resources in the state is a permanent concern not only of IGAM, but also of all organisations involved with environmental regulation" in Minas Gerais. However, "IGAM has not received any denunciation about the problems mentioned". According to the institute, "the environmental aspects challenged are examined when a licence is requested" and environmental regulation to which the sector is subjected, together with the environmental control by the state, makes it difficult for actions to be in disagreement with environmental legislation.

#### **▶** Burnings and public health

In Mato Grosso do Sul, in face of a growing sugar-alcohol industry in the state, the State Attorney's Office decided to follow the licensing process preventively, inspecting occasional problems and suggesting additional measures to protect the environment.

Prosecutor Paulo Zeni gives special attention to the burning of the sugarcane straw to facilitate harvesting. In his view, the method "has proved to be a serious problem in the state of São Paulo", both in terms of pollution and generation of smut and respiratory problems, as well as an aggression to the fauna and the flora. "We hope it does not become a problem also in Mato Grosso do Sul", he says.

Zeni's concern makes a lot of sense. An article published in December 2008 by newspaper Folha de S. Paulo<sup>22</sup> says that "sugarcane processing companies lead the ranking of fines applied by CETESB (São Paulo's Companhia de Tecnologia de Saneamento Ambiental) for major environmental crimes in the Ribeirão Preto area in January and November 2008". And it adds that most fines over 15 thousand reais applied by CETESB in 2008 involved the industry. "From 70 fines, 31 were to those processing plants". Most fines given to processing companies, explains the text, "involve cases of burnings at non-authorised times or areas, or not authorised at all". Fines were applied to important companies such as Santelisa (Morro Agudo), Mandu (Guaíra), Guarani (Olímpia), Maringá and Zanin (Araraquara), Usina da Barra (Guariba), and Usina da Pedra. The newspaper underscores that "Usina da Pedra, in Serrana, is responsible for the most serious environmental crime in the history of the region - the leaking of sugarcane syrup in the Pardo River in 2004, which caused the death of fish".

Mato Grosso do Sul Federal University researcher Sônia Hess is a national reference for health impacts of sugarcane burning. A chemical engineer and head of the environmental engineer course at that university, she has presented data that show not only the physical fatigue sugarcane cutters often suffer in their work, but also other risks they are exposed to.

Prosecutor Paulo Zeni points out some of those risks, such as "launching ozone in the atmosphere, as well as other substances that are potentially damaging to human health (some of them pointed out as carcinogenic), reaching especially cutters, who work in direct contact with burning residues".

Zeni says that burnings are also responsible for "releasing large amounts of carbon dioxide into the atmosphere" and higher "risk of fire in forest areas and gallery vegetation". He points out the "major suffering of the fau-

#### CASE | The siege to Pantanal

In late 2005, when sugarcane plantations and alcohol processing plants were about to be allowed in the Pantanal, environmentalist Francisco Anselmo de Barros set his own body on fire. Severe burnings led him to die in a couple of days. Even though his act of martyrdom has been one of the facts that contributed to Pantanal's preservation from the expansion of the industry - together with strong mobilisation by civil society - the debate is still heated. And Pantanal is still under threat.

Currently, Mato Grosso do Sul (MS), the state with the largest area of Brazilian Pantanal, has 14 processing plants. The state government estimates that the figure will at least triple within ten years, with 28 new plants, and sustains that it should not cause environmental problems. The government argues that it all will happen totally according to the law and following local licensing rules. However, sources consulted by the Biofuel Watch Center, such as IBAMA/MS and the NGO Ecoa (one of the state's main environmental organisations), express their concern regarding the increase in the number of processing plants, plantations and potential risks for Pantanal's ecosystem.

Their main fears include the difficulty of state agencies to control the industry if it expands abruptly, as well as direct and indirect pressures for sugarcane and its companies to reach Pantanal one day. The other issue is related to the interconnection of that biome with others around it. Far from being an isolated system, Pantanal is strongly related to the other biomes surrounding it, and its vital vigour, its survival, depend on the preservation of the other local biomes.

Precisely for that, in 1985 Conama (Brazil's National Council for the Environment) prohibited the establishment of those companies not only in the Pantanal area, but also over the whole Alto Paraguay basin (the so-called BAP), where a large part of life and waters that form the wealth of the planet's largest wetland area come from.

Before 1985, however, several companies had already been established in the region, almost always at the margins of the major tributaries of the Paraguay, Pantanal's main river. In Mato Grosso do Sul,

for example, CBAA (Companhia Brasileira de Açúcar) from Sidrolândia has its mill very close to Pantanal and even closer to the Miranda River. The Sonora plant, in the city of Sonora, was built at the riverside of the Correntes river, in an area considered by the Ministry of Environment as extremely important for the conservation of biodiversity, since it is located between the Pantanal and Cerrado ecosystems.

In Mato Grosso - the cradle of several water streams that will form Pantanal, there are six plants within the Alto Paraguay basin, installed before Conama's prohibition. Barralcol, from Barra dos Bugres, for instance, is located aside the Bugres River, precisely in the area where the river reaches the Paraguay. Coperb, with plants in Lambari D'Oeste and Mirassol D'Oeste, has part of its operations at the margins of the Jubinha River and near the Cabaçal reservation. And, at the main door of Pantanal in Mato Grosso, in Poconé, the Alcopan group has its processing plant.

Such companies, already installed, mean not only direct risk to privileged areas of biodiversity at the Cerrado and the Alto Paraguai Basin, but also represent risks to the future of Pantanal itself. Prosecutor Paulo Zeni, of Mato Grosso's State Attorney's Office, mentions as core examples of impacts created by the industry in the state the displacement of large amounts of cattle to Pantanal, to make way for sugarcane plantations to serve processing plants, cases of deforesting, of vinasse overflowing into permanent preservation areas and also companies' intensive use of water resources in the area.

According to Zeni. "although so far there is no risk of authorising processing plants in the Pantanal, is must be said that there are still those who advocate it, and that is why we remain alert". Mato Grosso do Sul' state governor André Puccinelli (PMDB) Mato Grosso's Blairo Maggi (PR), for example, are seen as central advocators of agribusinesses in the debate about sugarcane's ecological and economic zoning, currently being made by the Federal Government.

In Mato Grosso, there are two new projects to install plants at the Paraguay basin. That is, zoning might reinforce the prohibition to install new plants at BAP and at the Pantanal or simply allow it, cancelling the effects of the 1985 CONAMA prohibition.



na and flora in general" caused by burnings, killing and wounding small and medium-size animals, destroying nests and eggs and also eliminating the habitat of several species. The prosecutor explains that "there is now a lawsuit at the Federal Justice to condition burning to a previous EIA/RIMA (Environmental Impact Study)".

According to him, "in some towns, there are already laws prohibiting or limiting such practices". In Dourados, for instance, a bill proposed by Councilman Elias Ishy was passed in 2007. The state government, in turn, reduced the deadline for the end of the practice, from 2022 to 2016. Ishy, Hess, Zeni, and others, however, expect eliminating it as much as possible. "We hope to encourage companies to speed up the process of harvest mechanisation, which would result in the virtual extinction of sugarcane plantation burnings", explains the prosecutor.

Physicist José Goldemberg, president of São Paulo's Special Bioenergy Commission, created in 2007, explains that in 2003, when he was still state secretary for the environment, he was one of the main promoters of the law approved in the state to introduce mechanised cutting in sugarcane plantations, to be adopted gradually. Since companies have been making deals with the government to speed up mechanisation, Goldemberg's expectation is that, between 2011 and 2012, with the expansion of mechanised harvest areas in, there will be virtually no burning in São Paulo. The state has a protocol determining the end of burnings in sugarcane burnings in mechanisable areas by 2014 and non-mechanisable ones by 2017.

According to Goldemberg, increasing mechanisation is excellent for the environment and public health, but it obviously brings reduction in jobs at cutting. The book Bioenergia no Estado de São Paulo: Situação Atual, Perspectivas, Barreiras e Propostas, launched by the commission in late 2008, indicates that cutters unemployed because manual plantations were replaced with mechanised ones might end up benefited by the very expansion of the industry in other functions. For that, investment by private companies and the state government in courses to qualify workers will be crucial, but not necessarily enough.

#### ► Energy balance

The advantages of Brazilian ethanol produced from sugarcane, regarding global warming, still generate heated debates. The industry, supported by the government and part of the academic community, points out several positive data in that respect.

In a 2008 publication<sup>23</sup> intended to present the potential of Brazil's ethanol in those respects, the UNICA points out that, in terms of greenhouse effect gas reduction, "estimates based on the analysis of the life cycle, which considers the production chain from planting to the vehicle, show that the fuel, produced from sugarcane, reduces greenhouse effect gas emissions up to 90% when compared to gasoline". The publication also says that "the energy balance of Brazil's ethanol is 4.5 times better than that of ethanol produced from beetroot or wheat and almost seven times better than corn ethanol".

The text also points out the energy self-sufficiency of Brazilian ethanol processing plants, which "generate their own electricity by burning sugarcane bagasse", besides creating surplus that can be sold in the electricity market". Finally, the publication underscores the industry's productivity, which is now at 7.5 litres of ethanol per sugarcane hectare and that, with "the new varieties developed in Brazil, together with the future introduction of hydrolysis of sugarcane bagasse and straw, can drive productivity up to 13 thousand litres of ethanol per hectare".

The steps towards increasing the industry's competitiveness in terms of energy generation, environmental impacts, and economic return are, however, permanent and challenging - and show that part of the competitive advantages of the so-called "sustainability" of Brazilian ethanol are still more in the future than in the present.

Therefore, José Goldemberg sees four core advancements to be looked forward to by the ethanol industry. The points, which demand investment by the government, private initiative, and participation by the scientific community, are: co-generation of energy, research and development of 1st generation ethanol production processes, science and technology research for 2nd generation biofuels as well as production transport via ducts and waterways.

Several of the aspects pointed out by the industry, however, are criticised and challenged by another part of the academic community and organisations working on energy and environmental issues. One of the main criticisms, again, is related to the use of burnings by the industry in ethanol production, with heavy launching of CO2 and other polluting agents into the atmosphere. Therefore, burnings made for deforesting in areas of native vegetation - whether they are in the Cerrado, in the Atlantic Forest or in the Amazon - or those made before the manual cutting of sugarcane can destroy the advantages of ethanol in reducing greenhouse effects gases.

#### CHAPTER 3 LAND-RELATED IMPACTS

In Brazil's Mid-South, the installation of tens of new sugar-alcohol processing plants has led to important changes in the territory, in terms of occupation or economic growth and job creation, or yet related to development and use of local infrastructure. Impacts are often positive, but there are also several problems, such as competition with grain crops and cattle, which leads their border to advance onto other places or areas; or yet the increase in land prices, making access to it more difficult for other uses, such as agrarian reform or food crops.

The NGO Ecoa, from Campo Grande, MS, conducted one of the main research studies to point out such changes. In the study "Biofuels - Sugarcane in the Paraná River basin - Grain production, cattle raising and sugarcane in the Ivinhema river sub-basin"24, Ecoa researchers Alcides Faria and Ângela Frata examine the expansion of sugarcane within the Paraná River area, where 80% of Brazil's production is concentrated. Focusing on the subbasin of the Ivinhema River, in Mato Grosso do Sul, the study finds, among other core issues, that the expansion of sugarcane plantations has been happening at a stronger pace in grain crop areas.

In an interview to the Biofuel Watch Center, Faria says that the sugarcane production chain is in search of the best soils, plain land, good infrastructure for transport and energy, proper climate and abundant water resources. Under such conditions, competition with grains is practically natural. The researcher points out the case of the town of Rio Verde de Goiás, GO, as being emblematic. "There the dispute between the grainprocessing industry, farmers and processing businesses resulted in a municipal law restricting sugarcane expansion", he explains.

The law is the object of a controversy at the courts, but it is not credible to say that sugarcane does not compete with food crops. Once again, Faria uses the region of Mato Grosso do Sul as an example to demonstrate such process. In Maracaju, Dourados, Rio Brilhante, and Sidrolândia, which are among the country's main producers of corn and soybean<sup>25</sup>, sugarcane is expanding over their areas.

In the region of Rio Brilhante, a town in Mato Grosso do Sul near Dourados, processing plants have added new problems to a policy already marked by impasses: agrarian reform. Camped for over five years by the BR-163 road, small farmers struggle to have the Santa Edwirges farm used to develop a model settlement for family-based agriculture. Among the tens of canvas and wooden tents built along the road, Cacildo Ferreira Vilela, Nelson Juris, José Trajano Nunes, Derlírio José Custódio, and João Valdir are some of the small farmers dreaming about the purchase or expropriation of the farm by the National Institute for Colonisation and Agrarian Reform (Instituto Nacional de Colonisação e Reforma Agrária, INCRA). Despite the analysis of farmers about the use of the property, the agency considered the farm productive in 2003. The assessment is valid for five years, and INCRA-MS sustains that the property is scheduled to be inspected soon.

The workers think that the expansion of sugarcane plantations in the region, which includes projects by important economic groups such as France's Louis Dreyfus and Brazil's Odebrecht, is one of the factors preventing the purchase of the farm that, which they say will be used to plant sugarcane. Even though it explains that the farm cannot be expropriated (but it can be bought) because it was considered unproductive in 2003, INCRA-MS does not hesitate to say that "the influence of sugaralcohol expansion over agrarian reform in Mato Grosso do Sul will increase the price of land and disputing areas that could be obtained by the agency". Such perspective, is refuted by SEPROTUR, the State Department for Agrarian Development, Production, Industry, Trade and Tourism.

In São Paulo, physicist José Goldemberg says that in 2007, state governor José Serra invited him for a talk and said he was concerned with the expansion of sugarcane in the state, among other reasons, for the pressure over areas dedicated to food crops and their possible displacement. It was after that dialogue that the State Special Bioenergy Commission was created, headed by Goldemberg and intended to indicate, among other aspects, what the government can do to avoid such conflicts. Goldemberg says that "there are things that the state cannot do regarding the industry, since everything is virtually in the hands of private sector".

São Paulo State Secretary for Agriculture and Supply João Sampaio said to the Biofuel Watch Center that the "state government has already adopted measures to put a stop to sugarcane growth". Sampaio explains that the major boom actually happened in the 2005/2006 harvest, and that later, "with the fall in sugar prices and the foreign ethanol market still stopped, producers turned to grain production, which was more profitable".

Sampaio adds that today São Paulo has about five million hectares of sugarcane, which means 20% of areas occupied with agriculture in the state and that "several crops are planted in the remaining areas", underscoring the importance of the state for national and world production of orange, coffee, natural rubber, table

fruits and flowers, among others. As this report shows, the calmness of the Secretary does not mean, however, that São Paulo has not the same problems verified in the other States.

Still about São Paulo, the plants, on the other hand, are focusing specially in installing electricity transmission networks. Physicist José Goldemberg explains that regarding co-generation of energy, companies are increasingly investing in the production of their own energy and also of surpluses to be sold, since negotiating energy has become a big business in Brazil in recent years. The expectations of the sector are that co-generation in the country will be around 9.5 thousand megawatts between 2012 and 2013, an amount overcame only by the Itaipu energy plant. Unica also estimates that the energy produced from the sugarcane biomass, today around 3% of the national energy production, could be 15% in 2020. Virtually all new sugarcane processing plants work with that perspective, while older ones now start to seek technologies and funding to take advantage of that.

In states where the industry is expanding, such as Mato Grosso do Sul, they try to establish themselves near high tension lines, according to the Ecoa study. In São Paulo, in turn, that is not always possible, both for new plants to be installed and for those that did not took that into account when they were installed. Therefore, there are plants 50-km from the lines. According to Goldemberg, there is a debate between National Electricity Agency (Agência Nacional de Energia Elétrica, ANEEL), businesses and the state government about the issue. For him, a change should me made in federal rules to establish who will pay the costs of those connections. Goldemberg thinks the new model should include sharing, in close percentages, by the public and private sectors.

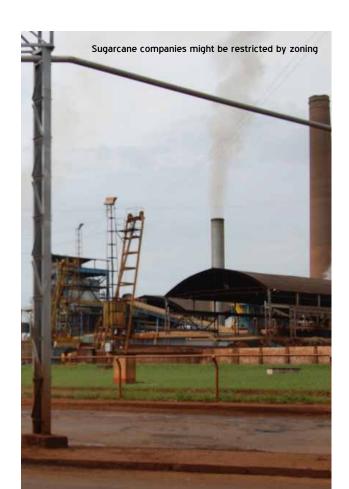
In face of impacts created by the sugar-alcohol industry over the territory and the strength it has shown in recent years, state governments in the Mid-South have worked with the idea of formulating ecological and economic zoning to plant sugarcane and install new plants. The federal government itself works in that direction and tries to consolidate, negotiating with states, a rule that organises the industry's expansion over Brazil's territory.

São Paulo's State Secretary for Agriculture and Supply João Sampaio explains that in September 2008, the government launched an agro-environmental zoning map "delimitating the areas in the state where there could be expansion of sugarcane and where it is not allowed, and installation of processing plants is even prohibited". According to the secretary, "the map is what guides public policies to encourage agricultural production".

In Mato Grosso do Sul, the state government plans to make an Economic Ecological Zoning, which, in the view of state prosecutor Paulo Zeni, "will deal with the [sugarcane] matter directly or indirectly and deserves to be followed closely not only by the Public Attorney's Office, but also by society and the media in general".

Even though zonings are seen as powerful tools by the region's governments, such as São Paulo, Mato Grosso do Sul, and Minas Gerais, the question to be asked is which power will they effectively have in the real economy and the strength of the sugar-alcohol industry. Besides being the focus of strong disputes and controversial interests, zoning processes also have to cease to be a mere space for negotiation between businesses, state governments, and the federal government, and become an object of debate by society.

They can also be tools to avoid future increase in competition between food crops and those used by the agro-energy industry, which could drive prices of basic items up and thwart effective food sovereignty for Brazil's population. A recent study by Getúlio Vargas Foundation indicates that between 2007 and 2008, increases in food prices in Brazil were caused by speculation in future markets, rather than agrofuel production. However, economic models say little about what would happen after an even larger expansion of agro-energy crops, as the Brazilian government and businesses want.



#### CASE | Sugarcane project fails in settlement

The land issue in the Pontal do Paranapanema region in São Paulo's Far West cannot be overlooked when considering the advancement of sugarcane. The Pontal did not used to be a traditional region for the crop, with only 5% of the area planted in the state, but in the last five years the installation of processing companies has encouraged it.

According to Paulista State University (UNESP) geography professor Antonio Thomaz Junior, many companies are benefiting from stolen land. "There is a practical alliance between businessmen and large landowners", he says, translating the relationship between sugar-alcohol companies and sugarcane farms. The professor estimates that there are at least 500 thousand hectares stolen in the region, whose grabbers intend to have regularised by the state.

The denunciation is reinforced by social movements that say that large Brazilian businesses are benefiting from land grabbing. In June 2008, Via Campesina occupied a construction site in Mirante do Paranapanema, which belonged to ETH Bioenergy, a company from the sugar producer Odebretch Group. One of the reasons for the protest is that ETH bought, in 2007, the Alcidia distillery, located in the town of Teodoro Sampaio, and which would have been installed 30 years ago in public land.

According to ETH's press department, it is investing 5 billion in creating production clusters in São Paulo, Goiás, and Mato Grosso, involving 520 thousand hectares of sugarcane. The new processing plant in Mirante will have a 4-million-ton capacity per harvest.

Another criticism raised by social movements is that sugarcane is advancing over areas where food used to be produced, and which could be used for agrarian reform purposes. There are now over 100 settlements in the Pontal area.

With not enough incentives to produce, many settlers end up becoming sugarcane cutters. At the Santa Zélia settlement in Teodoro Sampaio, Fátima Silva's<sup>26</sup> husband had to do that. "I thought I would have a decent life when I arrived in this land plot, but now, if we don't work for Alcídia [the processing company], we'll starve", she says.

When she was settled, Fátima received a loan from the National Program to Strengthen Family Agriculture (PRONAF), enough to enclose the plot, build a well, and buy six cows. The business, however, did not hold and she and her husband were not able to generate enough resources to pay for the loan and received more resources.

To cut sugarcane at Alcídia, her husband is paid 600 reais a month, leaving home at 5 am and returning at 6 pm. "Today we all depend on the company, because within our plot we get only a little income with the sale of milk. God only knows when I'll pay the loan", he regrets.

Settlers at Santa Zélia were also involved with a failed agreement mediated by the state government with Alcídia. In 2003, the deal was signed between the sugar-alcohol and Banco do Brasil to encourage sugarcane production in settlements. According to the contract, the company would be in charge of implanting the crop in the lots and would have to pay the settlers for that.

But settler Sônia Maria says that one of the companies in the agreement. Alcidia, transferred only some of the gains to her, saying that it lost money with the operation. "The company's employees would come, cut and take away the sugarcane, but then they said that it was not giving profit and I got the debt with the bank", she says.

Walter dos Santos, a technician in organisational management with the São Paulo Land Institute (ITESP), the organisation that supported the deal, says that it had negative effects in the Pontal area. "For the industry it was easy to support and fund the plantations, since it was government money. When the companies got the money and paid the loan, there was some profit for settlers, but in some cases they did not receive any profit from their land".

## CHAPTER\_4 IMPACTS ON INDIAN AND TRADITIONAL POPULATIONS

The expansion of sugarcane plantations and the arrival of new companies in Brazil's Mid-South demands special attention not only for the impacts on the environment and the territory, as seen above. In some regions, sugarcane is one of the major threats to the survival of traditional and Indian populations. It is the case, for instance, of a large part of Mato Grosso do Sul, where the strength of the sugar-alcohol industry and the development-oriented view place under heavy fire the demarcation of Indian lands<sup>27</sup>.

Besides the siege to villages and the struggle against the creation of new territories, expansion of agribusiness, with a special role played by the sugar-alcohol industry, intends to prevent directly or indirectly the culture and social organisation of those peoples and their relationship to the place where they live. If impacts on Indian peoples as a whole were not enough, the increase in sugarcane plantations and processing plants in the region has been the stage for conflicts that involve even the lives - and deaths - of many young Indians.

That is told in a tough and objective way by journalist Cristiano Navarro<sup>28</sup>, about the tragic events that took place at the Santa Cândida Farm, which supplies Distillery Centro Oeste Iguatemi Ltda (Dcoil), in Iguatemi, MS. With fake name and identity, a Guarani Kaiowá boy of only 15 years of age was "hired" to cut sugarcane in the farm. Registered with the name of another Indian, he became a 24-year-old man according to the documents counterfeited by his employers. With the new identity, he was put to work in the plantations, in spite of his father, who had retained the boy's documents to prevent him to get into cutting. The end of the

episode narrated by the journalist is emblematic of what happens in the region: "In the evening of December 15, 2006, inside a simple coffin from which blood was dripping, the corpse of Pedro [fake name given to the boy in the article] was delivered as a surprise at his grandmother's home. His throat had been cut that morning at the company he worked for. His body was found by military police around 2 pm, in a burned empty lot near a pile of sugarcane he had just finished cutting, according to the police report".

If Pedro's story sounds "exaggerated" or "specific", "absurd" or unprecedented", an "exception" representing a "dot off the curve", it should be said that fake documents, lack of safety in farms, overexploitation of workers, and violence against Indians in the region's sugarcane processing plants are recurrent events. In March 2007, for instance, over 400 workers, a large part of which were Indians, were freed from a cutting area belonging to Dcoil, where they were in conditions analogous to slavery. Subjection of workers to slave labour in Mato Grosso do Sul is not exclusive of Dcoil<sup>29</sup>. In November 2007, over a thousand workers - virtually all Indians -were freed from captivity in sugarcane cutting they being subjected by Debrasa, a distillery of the JPessoa Group installed in Brasilândia.

It is hard to understand how a major businessmen in Brazil, such as labour doctor Nelson Donadel, Dcoil's owner, or worldly renowned such as José Pessoa of the JPessoa group, owner of Companhia Brasileira de Açúcar e Álcool and Debrasa put workers in such a situation. Contacted by the Biofuel Watch Center, only the JPessoa Group returned with an explanation. The Social Responsibility supervisor of the company, Maria de Fátima Oliveira, said that "the accusations of degrading labour conditions against Debrasa, involving 831 indigenous people, where denied, and that the legal demands which needed adjustments where implemented". Fatima also said that that the accusations of slave labour use against the Group are false and are being questioned trough legal procedures.

The Attorney's Office in Mato Grosso do Sul (MPT-MS) has attempted to respond to the situation faced by the Indians who, together with migrants from North-eastern Brazil, represent the main sources of labour at risk under the extremely tough working conditions to which sugarcane employees are subjected to. In the case of Debrasa, for example, MPT-MS has filed a public civil lawsuit worth 10 million reais for the problem.

Besides, according to prosecutor Cícero Rufino, coordinator of MPT-MS's Group for Sugar-Alcohol Companies, a conduct adjustment agreement was proposed to the companies for cases of Indian labour. In

order for workers not to lose contact with their villages and their families for very long periods, the agreement establishes that Indians be hired in April, and that companies will take them to their respective villages each 45 days. By the end of that period, companies will pay all the money due to employees, who can stay between 4 and 5 days in their villages and then go back to work if they wish so. By the end of the year, companies must fire workers not based on a just cause, so that every two years they will be entitled to receive the legal 40% of state's Time of Service Fund and Unemployment Insurance.

According to the prosecutor, "unfortunately, that and other agreements related to hiring Indians have not been respected". He explains that, only in the JPessoa group, which has a second plant in the state, in Sidrolândia, besides several properties directed to sugarcane cutting, there are over 10 million reais in fines for unfulfilled agreements under execution at MPT-MS.

The high amount of problems related to the industry has led the MPT-MS to build the Processing Plants Group, to lead joint action by prosecutors working on the issue, with a secretary, monthly meetings, group decisions, more qualified action, etc. The coordinator of the group shows concern with the explosive expansion of the industry planned by states and the federal government. "With ten to 15 companies, we have all problems reported. If other 15 or 20 are installed in the coming years, it will be impossible to work as we do today, with preventive actions, etc".

The effects over the Indians also take place in less brutal and direct forms, but complementary - and equally important. According to social worker Margarida Margarida de Fátima Nicoletti, manager of National Indians Foundation in the region (Fundação Nacional do Índio, FUNAI Cone-Sul), regarding the demarcation of Indian land, the agency, as well as the Guarani, Kaiowa, and Ñandéva Indians "have been under all sorts of insults and criticism for blocking economic development". Nicoletti adds that FUNAI seeks to play its constitutional role according to Article 231, but that the media "has approached the subject in a very misinformed way, as a sniper shooting in all directions". She adds that owners and politicians - sugarcane processing plants and farms included in those groups - act towards hampering or even preventing studies and other works needed for demarcations.

Near the town of Rio Brilhante, in early November 2008, about 150 Kaiowá Indians are at the margins of the river that gives the town its name, near the BR-163 road. Currently installed in something between a village and a camp, the Indians demand the demarca-

tion of their land in that place, which they see as their traditional territory. For those Kaiowá, the place's rich gallery vegetation, the dense and calm Brilhante River, the fauna and the flora can become the tekoha - a space where we can live ideally - which they have been searching for since their ancestors were displaced by the regions' new dwellers. The farm's owners, in turn, headed by the most important one, Julio Cezar Cerveira, try to remove the Indians by Justice procedures.

The Indians point out the possibility that, as the areas' demarcation is carried out - which has not been done yet - they will remain in a narrower strip of land - a strategy adopted in other demarcation processes around the country. FUNAI works with that perspective, but it depends on the Judiciary. According to the region's FUNAI manager "the situation is no good, since a federal judge has already determined repossession to landowners and it should be executed by January 15, 2009". Indians say they are not leaving the place and that they have no alternative to live, eat, and keep their village together, among other crucial aspects of the Kaiowá.

Indian leader Anastácio Peralta, a resident of the Jaguapiru Indian village in Dourados, says that territory demarcation as well constitution of public policies to guarantee Indian's rights and real alternatives are crucial elements for the survival of Indian peoples who used to live in the area long before Brazil was "discovered" by the Portuguese. Working at the Dourados Department of Family Agriculture, he does not accept the view that taking Indians out of sugarcane cutting would damage Indians themselves, who would depend on that work. According to Anastácio Peralta, "Indians have been cutting sugarcane since 1530, approximately, that is an old talk".

That is the scenario seen in Mato Grosso do Sul, which supports and even encourages actions such as those by companies that subjected Indians and other workers to slave labour. At the same time that there is a strong campaign by conservative sectors in the state to stop demarcating Indian land - involving even parliamentarians and mayors - Indians, especially the Guarani, are confined within tiny territories with no alternative to produce and hunt for their consumption or to generate some income. Organisations such as the Brazilian Association of Zebu Raisers (Associação Brasileira de Criadores de Zebu, ABCZ) lead the list of those that oppose demarcations, while international businesses invest in ethanol plants in the state, major fuel distributors buy alcohol from them, and transnational groups in the food industry benefit from natural, economic, and political conditions offered by Mato Grosso do Sul.

The lack of alternatives for Indians in the area is not a mere result of other processes. It is often an objective and brings benefits for several segments, especially those that use degrading labour<sup>30</sup>. Under confinement and the lack of alternatives that mark Indians' everyday life, under cases of slave labour and the death of Indians - by homicide or suicide - and cases of alcoholism, malnutrition and other public health problems among Indians, the state celebrates the endless amount of land it has "available" to receive new sugarcane processing plants and agribusinesses. Governor André Puccinelli is even planning to make Mato Grosso do Sul the world's largest producer until 201531.



#### CASE | The Xakriabá in Pontal

Among all migrants that leave the poorest areas in Brazil to work in sugarcane cutting in São Paulo, there are groups of Indians coming from the Northeast and the Mid-South. One of those groups is the Xakriabá, who, according to project Indian Peoples in Brazil<sup>32</sup>, of the Socio-Environmental Institute (ISA), used to live where the states of Tocantins, Goiás, and Minas Gerais are now. During colonisation, the group was targeted by Jesuitical missions and economic pressures on their territory. But the last decades have been marked by valorisation of their identity, even resulting in the demarcation of their land, in São João das Missões, Northern Minas Gerais.

The difficulties they live with, through subsistence-oriented agriculture, have led many Xakriabá to migrate in search of jobs. Tens of them have gone to São Paulo to work in sugarcane cutting. They experience control and obedience that their are not used to in their life in the villages. In this harvest, 28-year-old Xakriabá José Aparecido Marco da Silva left his wife and daughter in Minas Gerais to work for Bazan in

Pontal, SP. This is the third year he travels to work in plantations - and it might be the last. "What they pay for the sugarcane we cut is too little. I don't want to come back next year", he lets out. According to Silva, other III Indians came with him from his community. One of them is 19-year-old Ronaldo Fernandes da Silva, who is facing his first harvest. "My father asked me not to come, but I wanted to make some money. I decided to face it. In the beginning it was sad to leave the place I was born in. But I'll be coming back there soon", he stated.

Violence marked the year of the Xakriabá in Pontal. According to report by the São Paulo State Federation of Rural Waged Workers (FERAESP) and by Da Silva himself, Indians were victims of police brutality during the strike at the Bela Vista and Bazan processing plants. "Some were hit by rubber bullets and three were arrested because they had slingshots. After that, they were scared and decided to return to Minas Gerais", he says. He thinks that this event might influence the decision to migrate in the next harvest. "The Xakriabás have been coming to São Paulo to work on sugarcane fro 10 to 15 years. But I think that many will think twice to see if they come next year", he predicts.





## North-eastern

Sugarcane played a crucial role in the socioeconomic historical making of Brazil's North-eastern region, which still today distinguishes the culture of the region from the others in the country. Established according to the model of North-American plantations (large monoculture-oriented properties) back in mid-16th century to produce sugar, the sugarcane industry was one of the main vectors for occupation and development of coastal areas and the so-called Zona da Mata - which includes the states of Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and part of Recôncavo Baiano - creating the bases for a social and political organisation that still now concentrates power and capital in the main sugarcane-producing states.

In Alagoas and Pernambuco, sugarcane became one of the core bases of the economy from the 16th century on, and in the 1910s, the state of Alagoas was the main sugarcane producer in Brazil<sup>33</sup>. Highly dependant on state support since imperial times, the sector had a positive performance until the 1930s. The decline that followed lasted until the 1970s with the creation of Proalcool, more credit available and strong foreign investments.

However, in the 1990s, the decrease in public investment, international economic instability, and an unsustainable debt led sugarcane companies in Northeastern Brazil to a serious crisis. Many shut their doors, both for lack of capital in their controlling groups and because investments were transferred to other states, such as Goiás, Mato Grosso, Mato Grosso do Sul, and Minas Gerais. The development of a modern sugar-alcohol industry in São Paulo superseded the old sugar agro-industries in the Northeast<sup>34</sup>.

The crisis in the sugarcane industry in Northeastern Brazil also increased conflict with workers and peasant movements in their struggle for land. The emergence of large companies - many of them family businesses - after the concentration of the production chain in the late 19th century had created a unique form of land occupation based on labour relations. Including several farms, processing plants had areas for small ranches and housing areas for their workers - a model that started to break apart after the advent of temporary or harvest-based work. With the crisis, several waged workers were fired and employers started pressuring them to leave the land where they lived in the farms, despite huge labour debts and workers' vested right over the ranches. On the other hand, farms that were broken and unproductive started to be aimed at by agrarian reform movements.

From 2003 on, the Lula administration resumed investments in the sugar-alcohol industry - as a response to talks started in 2002, when Lula ran for the presidency, Lula met with processing plants owners from São Paulo and Pernambuco to ask for their support. in 2007, he called them "national heroes" - sugarcane industry started to recover in North-eastern Brazil and the huge debts were renegotiated and partially cancelled - in early 2007, Banco do Brasil cancelled over 1 billion reais in debts of at least 20 companies, most of which located in that region<sup>35</sup>. In Alagoas, the governor cancelled over 1.5 billion in debts of sugarcane companies in the state 2008, dividing taxrelated debts of companies with due taxes into many instalments and cancelling fines, interest, and indexation<sup>36</sup>.

In 2008, according to data from Brazil's National Supply Company (CONAB)<sup>37</sup>, 1.037 million hectares were planted with sugarcane in North-eastern Brazil, a 4.3% increase over 2007 (994,1 thousand ha). Among the region's producing states, Alagoas, where the crop is present in 57 towns, it is first place in planted area (426.8 thousand ha). Pernambuco comes second (with 61 towns that produce sugarcane and 316.6 thousand ha planted - a 6.1% increase over the last harvest), followed by Paraíba (112.5 thousand ha, with a decline of 2.1%). Though with smaller areas, Maranhão, Piauí and Sergipe have presented significant growth in sugarcane planted area, respectively, 25.2%, 40.3% and 50.8%.

Of the total 67.8 million tons of sugarcane produced in this harvest in north-eastern Brazil, 39.7 were for sugar production and 28.1 for alcohol. With 70 production units registered at the National Petroleum Agency (21 in Alagoas, 21 in Pernambuco, eight in Paraíba, six in Sergipe, four in Rio Grande do Norte, four in Maranhão, three in Bahia, two in Ceará and one in Piauí), production of alcohol in the northeastern Brazil increased 2.75%, from 2.22 billion litres in the 2007 harvest to 2.28 billion in the 2008 harvest, according to CONAB.

#### Chapter\_1 Labour-related Impacts

In North-eastern Brazil, where mechanisation has not yet reached the levels of sugarcane plantations in the Mid-South, labour conditions in the industry are extremely precarious, according to FUNDACENTRO<sup>38</sup> - an agency researching safety, health, and environmental conditions at work, linked to the Ministry of Labour and Employment.

Regarding the main forms of labour relations, the agency points out a wide range between legality and illegality, which includes waged workers, labour contracts of unspecified duration including social security rights, harvest workers with short-term contracts, "clandestine" workers (without contracts, recruited by middlemen), and forced labour, in conditions analogous to slavery, with no rights whatsoever. In the last case, the Pastoral Land Comission informs that in 2008 the control operations released 1,498 worker in the Northeast region: 656 in Alagoas, 309 in Pernambuco and 192 in Ceará.



According to lawyer Bruno Ribeiro de Paiva<sup>39</sup>, who specialises in labour relations in the North-eastern sugarcane industry, the increase in temporary contracts reduced workers with permanent contracts to less than 30% of the total labour force. At the same time, says Paiva, Labour Collective Agreements have been systematically breached by companies, especially regarding payment and working conditions.

The precariousness of labour conditions for sugarcane workers in North-eastern Brazil has made the region the champion in accidents at work. Compared with the main producing states in the country, based on the ratio between volume of sugarcane produced and accidents, Bahia, Alagoas, and Pernambuco present the highest accident rates as shown in the table.



ACCIDENTS IN THE SUGARCANE, SUGAR AND ALCOHOL INDUSTRIES *					
States	Sugarcane produced in 2005, 2006, 2007 and 2008** (tons)	Accidents at work 2005- May / 2008	Accidents per 100.000 tons		
São Paulo	696,011,222	35912	5.15		
Paraná	121,734,660	8471	6.95		
Goiás	68,098,921	5280	7.75		
Pernambuco	62,468,835	7487	11.98		
Alagoas	89,296,088	13978	15.65		
Bahia	15,465,321	3582	23.16		

st The list includes only accidents reported by companies through CATs (Work Accident Reports)

\*\* Since accident data cover the period between 2005 and May 2008, 5/12 of the total 2008 harvest according to CONAB'S predictions for 2008 was considered. Production data on 2007 are also from CONAB, and those on 2005 and 2006 come from IBGE.

Sources: INSS (labour accidents), CONAB and IBGE (sugarcane production)

Contradictorily, as one of the industries that most contribute to early retirement of workers, many companies are also among the highest Social Security debtors in their states. Taking the examples of Pernambuco and Alagoas, the debts to INSS total 609,204,871.34 reais and 58,423,378.78, respectively40.

Despite the clear economic importance of the sugarcane industry for the largest producing states in North-eastern Brazil, wealth generation does not necessarily reflect on the living conditions of the population in production hubs. According to Paiva, data from the United Nations Development Program (UNDP), in 2000<sup>41</sup> the average Human Development Index (HDI) in Brazil was 0.757 (73rd place among the 173 countries assessed). In Alagoas, 91 of the 102 towns had HDI below 0.500, including all towns in the sugarcane region (seven of the 10 poorest Brazilian towns are in that state). Of Pernambuco's 184 towns, 116 had their HDI below 0.500, including nearly all the sugarcane region. The maximum (not average) HDI of 0.358 in Alagoas' sugarcane mid-region was above only the 10 poorest countries in the world. In the case of Pernambuco's sugarcane region, the maximum index of 0.438 was above only that of the 20 poorest countries.

On the other hand, economic recovery and public investments in the industry in recent years have not been reflected on improving labour conditions in a large part of processing companies in North-eastern Brazil. To mention only events that took place in 2008, cases of extreme violation of

labour laws found inspections by the Labour Attorney's Office - such as 40 workers under subhuman conditions at the Vida Nova processing plant, in Água Preta, in a Pernambuco's Mata Sul area, owned by state deputy Marco Barreto (PMN), in February; the rescue in the same month of 53 sugarcane people working in degrading conditions at the Laginha Plant, owned by former deputy, former senator and once candidate for Alagoas state government João Lyra (PDT), in União dos Palmares, AL; and the rescue of 284 sugarcane cutters at Vitória Agrocomercial Ltda, owned by José Bartolomeu de Almeida Melo (PDT), mayor of Palmares, PE, in December - are emblematic of an archaic mentality still predominant in the region's main industry. According to the newspaper O Globo (November, 2008), about the most recent case, "the company's [Vitória] lawyer, José Hamilton Lins, admitted precarious labour conditions, which he considered part of a colonial culture that needs time to adjust to the new labour legislation."

## CASE | Alagoas: 14 sugarcane processing plants notified for use of degrading and slave labour

The high precariousness of labour conditions for sugarcane workers became evident after the action of by the Public Attorney's Office (MPT) Task Force in Alagoas in 2008. Including the Ministry of Labour and Employment's Mobile Group, the State Labour Attorney's Office, the General Labour Attorney's Office, Highway Police, and Federal Police, Operation Zumbi dos Palmares, conducted between February 21 and March 28, 2008, inspected 15 of the largest companies in the state and found irregularities related to over 20 thousand workers in 14 of them.

As a result of the operation, the Mobile Group rescued 656 workers - 52 at the Laginha Plant, 203 at Penedo, and 401 at Santa Clotilde - and filed 12 public lawsuits demanding compensation for damages to workers' collective and diffuse rights that totalled 20 million reais. The State Labour Attorney's Office in Alagoas also filed 13 lawsuits because of Conduct Adjustment Agreements that the companies had signed and did not follow.

The situation found by labour inspections in Alagoas' sugarcane plantations in 2008 is not new. According to the task Force Report, tens of lawsuits and proceedings are under way at the 19th Region Labour Attorney's Office against 31 companies, related to labour law violations committed in the last ten years. The list includes five plants notified for using child and adolescent labour and eight for using slave labour<sup>42</sup>.

In an interview to the Biofuel Watch Center, MPT's chief attorney in Alagoas Rodrigo Alencar explained that the operation in the plants took place because of the increasing number of denunciations investigated and workers mobilisation against abuses by the companies. Indeed, inspectors found serious problems such as retention of working papers and debt books (two characteristics of slave labour, since they force the permanence of workers), totally broken individual protection equipments (EPIs) that were not replaced over six months, intimidation of workers at gunpoint and child and adolescent labour, among others.

On March 11. for instance, the inspection found 27 unregistered workers in a truck used to transport sugarcane (the so-called gaiolão, or big cage) in the town of Colônia Leopoldina, including ten adolescents of 14-17 years of age. They wore socks and slippers, rubber





sandals, and some were even barefoot, and none had received protection equipment. Sharing transport with animals, workers were heading, according to statements, for sugarcane cutting at the Gabāo farm, owned by businessman Antônio Cordeiro, a supplier of the Taquara Processing Plant.

Among the problems common to all plants inspected. MPT listed terrible lodging, food, water supply, EPIs, transport, and restroom facilities, among others. As a result of Operation Zumbi dos Palmares, in November 2008 the MPT signed an agreement of conciliation and conduct adjustment with the sugarcane industry in which sugar and alcohol companies committed to "fulfil the legislation to the benefit of rural workers". The companies Caeté, Santo Antonio Group (Central Açucareira and its branch Camaragibe), Toledo Group (Capricho and Sumaúma), Leão, Laginha, Porto Alegre Distillery, Mendo Sampaio, Santa Clotilde, Santa Maria, Seresta, Taquara, and Triunfo, targeted by 12 Public Civil Lawsuits, should pay compensation for the damage caused to workers' diffuse and collective interest.

#### CASE | The Laginha Processing Plant, João Lyra Group

Operation Zumbi dos Palmares at the Laginha Plant, located in União dos Palmares, rescued 52 workers. According to the MPT, the men, who worked in transportation of sugarcane cutters and in the operation of tractors at the plant had fatiguing working hours, did not receive overtime and lived under unhealthy lodging conditions.

Owned by ex-congressmen, former senator, and defeated candidate for Alagoas state government. João Lyra (PDT), Laginha Agroindustrial S.A. has a long record of labour and environmental law violations, according to 19th Region Labour Attorney's Office list of proceedings and lawsuits. Between 2000 and 2007, Laginha (mother company) and its branches Guaxuma and Uruba had 29 lawsuits against them for irregularities such as labour relations fraud, illegal contracts, environmental problems at work, use of child and adolescent labour, etc.

#### **▶** Work and pay

"Observing the working rhythm of sugarcane cutters, who are subjected to such (degrading) conditions, it is clear that all of them are near fatigue, which can lead to death. Asking them why they did not slow their pace, even when they were risking to die, they invariably answer that they did not believe they could die and that they earned so little per unit produced that they felt obliged to work as slaves, to fatigue, in order to earn a little more money. (...) Besides the inhumane and fatiguing work they do, all workers considered the measure of production of cut area even more unfair. It is made linearly, with a 2-yard-long stick. By moving the stick on the ground, the measurer simply reduces the area of sugarcane cut by the worker".

According to the inspection report of the 2008 Task Force, the following problems were found:

#### **▶** Dormitory

"We found dormitory with 53 employees working shifts irreqularly. The dormitory was very dirty and smelt very bad (...). Instead of mattresses, workers received only pieces of low-quality foam, dirty and broken, which did not provide conditions for hygiene and rest. (...) trash accumulated at the place, generating very bad smell (...)"

#### Food

"Workers at the place [dormitory] reported that the food was provided by a "barbeque restaurant"; it value was taken off their wages and it

was very bad (rotten), so they would throw it away". In the field, "those who were lodged by the company sometimes ate meals based on manioc or cuscus with sausages. Those who brought food from home had no containers to heat up their meals. That resulted in stomach diseases such as diarrhoea, vomits and colic".

#### ► IPEs and accidents at work

"Workers were found with no individual protection equipments or with some in bad shape that would not be replaced. They reported in their statements that the company would not replace the equipments because it was facing budget problems. They also said that sickles and files were worn out, what made cutting the sugarcane more difficult". In order to assess the impact of the lack of IPEs, inspectors collected accident reports at the company during 2007 and 2008. According to the records, over 250 accidents took place in the period, with cases of cuts in hands and feet, amputations, falls, and a death by crushing in November 2007. That is, in little over a year, according to MPT, 16.6% of Laginha's sugarcane cutters had accidents.



#### **▶** Bankruptcy

Because of a 70-million-real debt with British bank Calyon, the sugar-alcohol group João Lyra filed for judicial recuperation (bank-ruptcy) on November 26, 2008 for Laginha Agro Industrial S/A (which includes Laginha, Guaxuma, and Uruba, in Alagoas, and Vale do Paranaíba, in Minas Gerais). The bankruptcy was accepted by Judge Sóstenes Alex, from the Coruipe, AL, justice circuit.

#### CHAPTER\_2 ENVIRONMENTAL IMPACTS



Along its five centuries in Brazil's North-eastern region, sugarcane was the main responsible for the near extinction of Atlantic Forest in the area, currently reduced to 5% of its original extension, according to the Environmental Research Center in the North-east (Centro de Pesquisas Ambientais do Nordeste, CEPAN). Deforesting includes both Permanent Preservation Areas (APPs, such as gallery vegetation of the main rivers in the so-called Zona da Mata, plains alongside water courses and hill tops

and sides) such as legal reservations (mandatory preservation of 20% at the Atlantic Forest biome, of the original vegetal cover vegetal in properties).

According to the most recent update in the Ministry of the Environment's Map of Priority Areas for Biodiversity, from 2007, at least 21 new areas suffer some sort of threat by sugarcane crop in the Northeast. As shown in the table, the already small area occupied by the Atlantic Forest biome is threatened.

In June 2008, o Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) carried out Operation Engenho Verde in Pernambuco, one of the largest inspections on the sugar-alcohol industry ever made in North-eastern Brazil, notifying and fining the 24 largest processing plants in the state<sup>43</sup> with 5-millionreal fines each, in a total of 120 million, for a list of environmental crimes. The operation became nationally known because of statements by Minister of the Environment Carlos Minc, who, in a press conference called the state of Pernambuco "a disaster within the disaster",

where "as generalised mess takes place with political support and impunity", and called the owners of processing plants "outlaws<sup>44</sup>".

Among the charges in public civil lawsuits resulting from the operation, IBAMA lists companies' lack of environmental licences - which has caused environmental permanent and cumulative damages to the environment; severe degradation of Permanent Preservation Areas

*	8			
BIODIVERSIDADE AMEAÇADA	A PELA CANA - MATA AT	LÂNTICA NO NOR	DESTE	
Nome	Importância*	Prioridade	Área (em km²)	
Itaporanga, SE	Insuficientemente Conhecida	Alta	23	
Mata de Oiteiro e Caititu, SE	Insuficientemente Conhecida	Alta	299	
Serra Grande, AL	Extremamente Alta	Extremamente Alta	557	
Santa Rita, PB	Insuficientemente Conhecida	Extremamente Alta	44	
Região da APA de Piquiri-Uma, RN	Insuficientemente Conhecida	Muito Alta	50	
PE Pau-Brasil, PB	Extremamente Alta	Extremamente Alta	4	
Região de Japaratuba, SE	Extremamente Alta	Muito Alta	1279	
Pontal do Coruripe, AL	Insuficientemente Conhecida	Alta	33	
APA Pratigi, AL	Extremamente Alta	Extremamente Alta	955	
Porto Calvo, AL	Alta	Alta	89	
Camaragibe - Tapacurá, PE	Muito Alta	Alta	1019	
Itamaracá - Coetés, PE	Muito Alta	Muito Alta	815	
Mamanguape - Rio Tinto, PB	Alta	Alta	162	
Potíguara, PB	Insuficientemente Conhecida	Muito Alta	372	
RESEX Marinha da Lagoa do Jequiá, AL	Muito Alta	Muito Alta	107	
RESEC Manguezais da Lagoa do Roteiro, AL	Extremamente Alta	Extremamente Alta	8	
APA da Barra do Rio Mamanguape, PB	Extremamente Alta	Extremamente Alta	96	
Lagoas do Baixo Parnaíba, MA	Muito Alta	Muito Alta	4670	
Brejo da Princesa, PE	Muito Alta	Alta	606	
Serra do Cariri, PE	Muito Alta	Alta	2755	
Chapada do Arararipe, PE, CE e PI	Extremamente Alta	Extremamente Alta	780	
*Quanto ao estado de conservação e uso da biodiversidade				
Fonte: MMA / http://www.arcplan.com.br/mma/mata_atlantica_fichas_das_areas_prioritarias.pdf				

(APPs); occupation of APPs by sugarcane; inexistence or disrespect to Legal Reservations in sugarcane plantations; illegal or unauthorized burning in order to make the harvest easier, and pollution of water resources, soil, and atmosphere by sugarcane-related activities.

In the operation's report<sup>45</sup>, IBAMA points out the destruction of the gallery vegetation of all major rivers in the state's Zona da Mata, and the suspicion that industrial effluents are thrown into water courses, since "almost all companies have their industrial facilities by the rivers".

On the practice of burnings, the report points out that "strangely, out of the 368,188 hectares planted with sugarcane that in theory are burned a year in Pernambuco, data from IBAMA's PREVFOGO program show that only 77,682.1 hectares of controlled burning were requested in last year's harvest (2006/2007). That indicates that only 21% of the area burned were authorised, while 79% of the area was burned illegally.

The document also denounces that crimes of illegal burning are being concealed. "Companies often present police reports - documents that are simply companies' own statements - where 'arson' takes place in large parts of their areas short before harvests - a crime that ends up benefiting their victims, since they save on IBAMA fees as well as tools to control burnings, just moving ahead with their harvests with no problem (...). Either there are seasonal arson outbursts that fall only on the sugarcane industry or serious cases of environmental crimes and criminal misrepresentations. In both cases, landowners are directly responsible for the violation to environmental laws.



# CASE | Trapiche: environmental crimes and social and land conflicts

According to civil public lawsuits resulting from Operation Engenho Verde, most companies notified 2008 by IBAMA are recurrent in environmental crimes. It is the case of Trapiche, one of the oldest and most important processing plants in Pernambuco. According to that environmental agency, "it is not a first offender in the practice of acts to degrade the environment. This is the third time it is notified, always for carrying out a potentially polluting activity without an environmental licence".

Located in Sirinhaém (some 75 km from Recife), the Trapiche processing plant was founded in 1887 at the old Trapiche farm. In 1998, the company, then with 26,850 ha, was purchased by the group belonging to businessman Luiz Antônio de Andrade Bezerra. According to IBAMA, it plants sugarcane in an "area larger than 11,000 ha with no environmental license".

Occupying mostly hill tops and sides<sup>46</sup> (Permanent Preservation Areas), part of Trapiche's plantation takes over, absolutely against the environmental laws, a complex of 17 estuary islands covered with marshes, located at the limit between the towns of Ipojuca and Sirinhaém, in Pernambuco south coast. The islands belong to the Union and, according to study by the Land Pastoral Commission (CPT) and the NGO Terra de Direitos, exploitation rights were granted under lease "to private owners on November 14, 1898, to Companhia Agrícola Mercantil de Pernambuco. After several transfers of property, which, by the way, did not follow the law, Usina Trapiche S.A. presents itself as the last successor of the aforementioned leasing".

Trapiche sugarcane plantation takes over wetland



Historically inhabited by fishermen who survived solely from small fishery, subsistence-oriented agriculture and fruit collection, the islands started to be claimed by the company after its purchase by the group from Alagoas, which started to pressure traditional communities to leave the place. According to CPT, having illegally deforested all the original vegetal cover in its area, the company's intention would be to turn the marsh into its Legal Reservation.

CPT and Terra de Direitos, which have follow the situation of the 53 families of fishermen in the islands of Serinhaém, report that Trapiche used extremely violent and coercive methods to draw residents out of their land. That information is confirmed by Ibama. According to the agency, "there are denunciations of houses burned and demolished, plantations destroyed, fruit trees cut down, closing of the island's school, employment of several forms of threat, and lawsuits<sup>47</sup>."

After their expulsion from the islands, most families started living in the outskirts of the region's urban Centers, especially Serinhaém. Several of them received homes from the company in exchange for their old areas in the islands, but living conditions degraded considerably. Am IBAMA's socioeconomic study on the former residents and the fishermen community that used to live in the islands and at the Sirinhaém river estuary, publicised in May, 2008, points out that fishing has decreased a lot, despite being the largest source of food, and most fishermen ended up in sugarcane cutting, as the company's labour reserve.

Nowadays, only two of the 53 families - sisters Maria Nazareth dos Santos and Maria das Dores dos Santos - are in the area, more precisely in the Constantino Island. In a statement to the Biofuel Watch Center, they reported that, since their great-grandfather arrived there, families used to live well from fishing and small-scale agriculture, and that is why they resisted leaving the place.

Maria Nazaré, who lives in a little mud house by the marsh, from where she takes part of her livelihood (such as guaiamun crabs and small fish to sell), tells that her house was demolished several times by Trapiche's orders. "They offered us money and a house in the town for us to leave, but we didn't accept it. Then they sent thugs to scare us, and they would be around at night. Then came the police with more of the company's thugs, saying that the land belonged to Trapiche, they put my house down, arrested me, and beat me up. I was arrested twice. But we are afraid of nothing, we left and we have returned here some seven times already", says the fisherwoman. And she adds: "We won't leave it here because here we have our stomachs full".

According to CPT and Terra de Direitos, in June 2007 "Maria das Dores and Maria Nazareth were arrested by military police inside their houses, and they had neither been caught in any criminal act nor had any arrest warrant against them. Despite the clear illegality of those arrests, it was later seen that both are illiterate and were forced to sign blank documents (commitments, expert reports) to be set free by police authorities". The organisations also point that the company's employee Evânia Freire, who headed several attacks against the fishermen, "is a defendant in two criminal lawsuits under way at the Sirinhaém circuit court, under no. 451.2007.000111-7 and 451.2007.000020-8, accused of demolishing the houses of Maria Nazareth dos Santos and Maria das Dores dos Santos, respectively".



In 2006, conflicts with fishermen and the denunciation that the Trapiche had systematically thrown toxic effluents (vinasse) at the estuary led the organisations and IBAMA to propose the creation of a extrativist reservation (Resex) in the place - a process currently under evaluation at the Ministry of the Environment' Chico Mendes Institute. In parallel, following the arguments of the environmental agency, the Union's Regional Asset management (GRPU) in Pernambuco cancelled the leasing of the estuary to Trapiche (administrative procedure no. 10480006036/86-05) - an act that is awaiting a final decision by the Ministry of Planning in Brasília.



Despite the urgency of the situation, the processes of creating the Resex and cancelling the leasing are stopped, according to CPT because of strong political pressure. According to the Ministry of Planning's Coordination of Assest Management (CGGEP), "the issue of leasing of that area is so complex that the process was sent back, on November 15, to the GRPU in Recife to identify which areas can and which cannot be unleased".

## CHAPTER 3 LAND-RELATED IMPACTS

The crisis that shook the structure of the allpowerful sugar-alcohol industry in North-eastern Brazil in the 1990s, leading a large number of companies to bankruptcy (in Pernambuco, at least 14 filed for it)48 and leaving thousands of workers unemployed, was at the core of the land disputes in the main producing states. In a 2005 analysis of the land structure and rural development in the region's sugarcane area, the Inter-Ministry Working Group for the Sugar-alcohol Industry in the Northeast, which included the Presidential Chief of Staff and the Ministries of Agriculture, Agrarian Development, Finance, and National Integration, concluded that "the sugarcane zone in North-eastern Brazil is one of the most conflictive areas in the country, losing in intensity only to areas of agricultural border in the Amazon. The conflict situation is created by the high land concentration, resulting from the region's agrarian history that is completely associated to sugarcane monoculture and the dependence of wage workers and family-based farmers on large farm owners and sugar-alcohol companies".

By and large, in the last ten years, several factors, such as unemployment, violence against workers, high labour-related debts, converged to strengthen social organisations that struggle for land, such as the Landless Rural Workers Movement (MST), the Terra, Trabalho e Liberdade Movement (MTL), The Moviment for the Liberation of landless Workers (MLST), Organisação da Luta no Campo (OLC), the Pernambuco Federation of Agricultural Workers (FETAPE), and the Land Pastoral Commission (CPT). At the same time that they welcome an increasing mass of fired sugarcane workers, they started focusing on unproductive areas in the farms in their struggle for agrarian reform.

Public authorities ended up divided in their reaction to the demands of social movements in this conflict process. On the one hand, the national institute for Colonisation and Agrarian Reform (INCRA) considered



them legitimate and responded to social pressure by creating agrarian reform settlements predominantly in areas of bankrupted sugarcane farms. In Pernambuco, for instance, over 95 out of 298 settlement projects are in the Zona da Mata.

Representatives of the Judiciary and politicians, however, influenced by the old sugarcane oligarchy, have advocated the interests of businessmen and are one of the main obstacles to the advancement of agrarian reform in the region, according to human right movements and INCRA. On that matter, INCRA'S attorney general Valdez Faria said that "in the lawsuits related to the agrarian issue, the judiciary has chosen Law as an instrument for conservation and maintenance of existing social structures, over the concept of law as an instrument to promote social changes aimed at the construction of a society based on freedom, justice, fraternity, and solidarity<sup>49</sup>."

According to social organisations and human rights advocates, in spite of still representing one of the industries with the highest debts in North-eastern Brazil, government incentives to ethanol production have strengthened the dispute for land by the companies. That process involves both legal battles against expropriations of unproductive farms that did not meet their social function and attempts to regain land already destined to agrarian reform and displacement of former residents of companies' areas (which are currently a considerable part of members of movements that struggle for land).

In Pernambuco, legal disputes for land that belonged to broken companies have been one of the main elements encouraging agrarian conflicts. Cases such as Estreliana, in Gameleira (see case study on Usina Estreliana), and Aliança, in Ipojuca, for instance, are emblematic.

According to a CPT study, among over 20 farms belonged to Aliança, which went bankrupt in 1996 - the company fired over a thousand workers without paying their labour rights - 15 are claimed by INCRA to be used for agrarian reform.

Inspected by the agency in 1999, Aliança was classified as a "large unproductive property", but in 2001 the company filed for a Preliminary Order and a lawsuit declaring its productive status, and got a provisional decision that stayed administrative procedures for expropriation. In December 2002, in turn, the 7th Federal Court concluded that the company did not fulfil the social function of the property, so that INCRA'S procedure was correct. Again, Aliança appealed and was granted a sepersedeas decision, which ended only in April 2004 after a decision by the Tribunal Regional Federal.

Still according to CPT, the situation of small workers who, supported by State Justice, remained at the farms waiting for the payment of labour debts by the company, is sensitive because the company and its employees pressure and threaten them. In April 2008, about 200 families who have lived in the Falcão Farm for more than 20 years, planting foods for their own consumption, had their plantations destroyed by the military police, who justified it by saying they were executing a decision of the Labour Justice. The police's action was considered illegal by the State Justice.

Regarding the displacement of former residents of the farm areas (see case study of the Usina Salgado), labour lawyer Bruno Ribeira de Paiva sees the actions as part of a strategy for expanding sugarcane areas, which also aims at "producing" a new mass of cheaper labour. "The perverse policy of destroying small ranches and rural homes was disseminated among sugar-alcohol companies in the Northeast, worsening the already serious social problems. Displaced from their land, workers went to live in shantytowns in nearby towns, which they call "street ends". Besides worsening urban problems, that mass of unemployed people is forming a large stock of workers in those towns, and then they are hired during harvests to work in other regions of the state or in other states", said Paiva.

## CASE | Estreliana, a symbol of land dispute

One of the most emblematic cases involving land dispute by social movements, INCRA, landowners, and the Judiciary is the case of the Estreliana, a company located in the town of Gameleira, Pernambuco.

A history of the processes of dispute for land belonging to Estreliana (the company includes abut 20 farms), written by the NGO Terra de Direitos, points out that back in 1996 INCRA declared the São Gregório, Alegre I, and Alegre II farms as a property of social interest for agrarian reform purposes. In February 1997, Justice granted repossession to the agency, which settled 106 landless families linked to MST.

In 1998, Estreliana had its bankruptcy determined by the state government because of debts of 707 million reais (of which 15. 5 million in Social Security/INSS, 8 million in Workers' Time of Service Fund/FGTS, and 26 million in State Sales Taxes/ICMS). It also owed 90 thousand reais in workers' wages. The bankruptcy was cancelled after Higher Court Justice Zamir Machado Fernandes gave the posse back to owners José Costa Cavalcanti Júnior and Gustavo Costa Albuquerque Maranhão.

From 2006 on, relatively restructured after a series of negotiations involving territorial and fiscal rearrangements. Estreliana filed a lawsuit to recover the settlement areas. In a legal battle between the company (mostly favoured by regional justice) and INCRA, when decisions alternated to favour one or other part, the lawsuit ended up at the Supreme Court. On May 18, 2007, Minister Ellen Gracie considered that "expelling the families could create one more serious social conflict in a rural area in Brazil, causing damage to public safety precisely because of the maintenance of public order and social peace", the Court's decision favoured INCRA.



A similar process, although with a distinct end, took place at the Pereira Grande farm. Inspected and considered unproductive by INCRA in 2002, the area was declared of social interest for agrarian reform purposes by a Presidential Decree in November 2003. Then a legal battle started between INCRA and Estreliana. Defeated in the Supreme Court, the company won a lawsuit at the Federal Regional Court at the 5th Region in 2005. After appealing the decision at the Supreme Court, INCRA obtained a favourable decision from Minister Ellen Gracie and in March 2006 it settled 150 landless families with support of a presidential decree.

Surprisingly, shortly after that, Minister Gracie revised her decision and determined that repossession and execution of the expropriation will only be possible after the final decision on the Constitutional Claim proposed by INCRA. In face of that new decision, Estreliana filed a lawsuit (2006.83.00.005173-3) at the Recife's 7th Federal Court and was granted provisional ownership rights. In June 2006, the families that had been recently settled were expelled by the Military Police and all their plantations and their huts were destroyed.

In a statement<sup>50</sup> about the process, Antonia, a farmer member of the MST, reports that workers were settled during "the Lent period". The bailiff read us the decree signed by the President. We started to build and plant. Less than two months later the police came saying we had to go. They had dogs, helicopters. When one of our comrades showed the copy of ownership document by INCRA, they said it was a mistake. They gave us one hour to get everything, and then they poisoned our plantations. I had planted corn, black beans, manioc, potatoes...".

INCRA'S president at the time, Maria de Oliveira also felt indignation at the Supreme Court decision. "I want to say that I no longer believe in Justice when the Supreme Court guarantees possession, I put the workers in the area and a few days later that decision is revoked and I have to get the families out of their land under a whip", she protested.

Currently, families displaced from the Pereira Grande farm - according to the MST, most of them used to live in ranches in the area and were expelled without compensation by the company - await a final decision by Justice in camp within the São Gregório settlement. According to those at the camp, there is a strong felling of insecurity in the place because of repeated intimidation acts by the companies' employees. Food security for those landless workers is also at risk since, with no area to plant, they depend on basic food lots they received sometimes.

# CASE | Salgado, displacement of residents from area belonging to the Union

The Salgado processing plant, located in Ipojuca, PE, was founded in 1892 and has an area of about 15,500 hectares distributed over 19 farms. It now belongs to Ipojuca's former vice-mayor Marcos Queiroz (PT) and is one of the large producers of anhydrous and hydrated alcohol fuel in the state. It is also the owner of part of the area where the bi-national refinery Abreu e Lima is under construction, a joint venture of Brazil's Petrobras and Venezuela's PDVSA.

As is the case with many of the oldest processing plants in Pernambuco, in the mid-20th century there was at Salgado a workers' village with over 80 houses, a school and hospital services for employees. The company also received government authorisation to use land belonging to the Union, under leasing - an area that is partially used to plant sugarcane and also for workers' subsistence.

Nowadays, about 150 small farmer families - most of them with at least one member employed at the company - still live in those areas. Since 2006, however, the company has exerted strong pressure to drive the workers out, both through coercive actions by its security personnel and through eviction lawsuits.

From a legal viewpoint, both those actions and sugarcane still being planted in Union land (farms Salgado, of 1.7 thousand ha and Mercês. 1.4 thousand ha) are completely illegal, since the licence for its use was cancelled in January 2007 by the Union's Regional Asset management (GRPU) "for reasons of public interest in the area, for agrarian reform purposes".



According to a CPT's legal team, the analysis of Salgado's current status (based on official documents by the Pubic Attorney's Office's, IBAMA, and INCRA) points out the following fiscal and environmental situation: accumulated debts of about 12 million reais to FGTS (of which 9 million are already under execution), 100 million reais already being charged by the Treasury Department, of which over 80% are under execution, and 87.8 million to INSS; over 5 thousand labour

Cancellation of leasing of Union lands to the Salgado farm

#### DESPACHO

#### CANCELAMENTO DE INSCRIÇÃO DE OCUPAÇÃO

O Gerente Regional do Patrimônio da União no Estado de Pernambuco, conforme atribulções previstas no art.35. VI, do Regimento Interno da Secretaria do Patrimônio da União, constante no Ahexo XII da Portaria nº 232 de 03 de agosto de 2005, vem, por este ato, promover o CANCELAMENTO DE INSCRIÇÃO DE OCUPAÇÃO do Imóvel identificado como ANEXO AS PROP MERCES E USINA SALGADO, IPOJUCA, PE, sob o RIP nº2443.0000114-79, área do Tereno Total de 13.259.965,00m² e área da União de 13.259.965,00m², inscrito como ocupante a USINA SALGADO SIA, com fundamento no arts. 9°, II, 17, §2° da Lei 9.636/98; art. 132 de 53° do art. 89 do Decreto-lei nº9.700/46; parágrafo único do art. 5° do Decreto-lei nº2.398 de 1987 e art. 2°, §51° e 2°, do Decreto-Lei nº1.561, de 13 de julho de 1977,, em razão do interesse público na área, para fina de reforma agrária, conforme OFÍCIO/INCRA/SR-03/G/N°1.497, de 1° de Novembro de 2006.

Em 8 de janeiro de 2007.

PAULO ROBERTO FERRAR LUCAS ALVES

lawsuits; fines by IBAMA for planting sugarcane in Permanent Preservation Areas (APPs); illegal burning of sugarcane straw: lack of legal reservations in virtually all farms, etc.

Despite all that, the company stills claims the areas through lawsuits demanding repossession at Ipojuca's Civil Court. According to people who live at Salgado, the pressure for the farmers to leave increased after electricity was installed in their homes by the federal program Luz para Todos (Light for all), in 2006. That achievement would have been seen by the company as a sign that remaining in those areas



could be considered as residents' vested rights. "Electricity means development for our ranches, which would make it more difficult for the company to convince the families to exchange their plots by houses in town", explains a resident.

Even though nearly all residents have received eviction orders, no police action had taken place to apply the repossession until the late 2008. Questioned about the legal status of the areas, GRPU stated that after the cancellation of the company's use licence, it is up to INCRA to follow through with the process of regularisation in favour of the workers. The agency, in turn, sustains that it is awaiting a report from the State Environment and Water Resources Agency about the environmental situation of the land, after which it will be able to define the settlement in the place or the removal of workers to another area.

## CHAPTER 4 WATER-LAND IMPACTS

Among the nine states that make up Brazil's North-eastern region, Bahia is now the sixth largest sugarcane producer, with a planted area of 37.4 thousand ha<sup>51</sup>. Taking as a reference the units registered at the National Petroleum Agency (ANP), however, the state has three units, above only Ceará (two plants) and Piauí (one plant)<sup>52</sup>. The plants are União Industrial Açucareira Ltda, in Amélia Rodrigues, in the so-called Recôncavo Baiano area; Agro Industrias do Vale do São Francisco S/A -Agrovale, in Juazeiro, at the São Francisco valley; and Usina Santa Maria Ltda, in Medeiros Neto, at Bahia's Far South.

That situation can change in case an ambitious state government project to increase the area planted and develop industrial clusters to produce ethanol is implemented. Launched in November 2007, the Bahiabio Bioenergy program is aimed at providing for the production of 7.48 million cubic meters of ethanol in the state by planting 870 thousand hectares of sugarcane - more than twice the area planted in Alagoas (426.8 thousand ha), the fourth largest producer in the country.

According to data from Bahia's State Department of Agriculture, Irrigation and Agrarian Reform, Bahiabio includes the development of eight clusters of ethanol production and sugarcane expansion: Extremo Sul (300 thousand ha in the region of Porto Seguro), Salitre (20 thousand ha in the region of Juazeiro), Baixio de Irecê (40 thousand ha in Xique-Xique and Itaguaçu, Bahia), Médio São Francisco (60 thousand ha in the area of Barra and Irrigated sugarcane in Juazeiro, Bahia

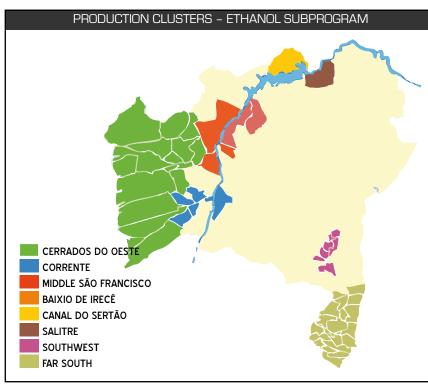
Cruz das Almas), Corrente (30 thousand ha in Bom Jesus da Lapa), Cerrados do Oeste (300 thousand ha in the area of Barreiras), Sudoeste (60 thousand ha in the area of Itapetinga, Caatiba and Barra do Choça) and Canal do Sertão (60 thousand ha in Casa Nova).

Except for the 300-thousand-ha area in the far South - which already suffers major impacts by the monoculture of eucalyptus<sup>53</sup> - the other sugarcane clusters of the program included intensive use of water, whether by Center pivot irrigation (in 300 thousand ha in Cerrado areas in the west of the state, where the basins of the Grande and Corrente rivers are already at the top of their use limit, according to Bahia's Superintendence of Water Resources) or through irrigation projects from the São Francisco River and its tributaries (irrigation projects Salitre, Baixio de Irecê, Corrente, and Middle São Francisco, under implantation of study, and the valleys of riv-

> ers Catolé and Gongogi, at Southwestern Bahia)54.

> According to geologist Luiz Carlos Fontes, regional head for the Low São Francisco area of São Francisco River Basins Committee (CBHSF), a first evaluation of Bahiabio might raise two main concerns: on the one hand, the increased and unpredicted demand for water from the river and its tributaries by Bahia's sugarcane project might extrapolate the allocable volume, which would imply high environmental impacts and could create instability between states covered by the Basin. On the other hand, the priority use of water resources for sugarcane might resume conflicts for land and water in the state.

> According to CBHSF data, the total demand for water resources in the



São Francisco River Basin, based on 2000, is an average 166 m3/s, and consumed an outflow of 105 m3/s. In Bahia, water units with more problems - where the relation between uses and average outflow reaches over 20%, thus characterising a critical situation - are the basins of rivers Paramirim, Santo Onofre, and Carnaíba de Dentro, Verde and Jacaré, Sobradinho's left bank, Salitre, Curaçá, and Macururé, precisely where part of Bahiabio's planning is located.

As for water-land disputes, CBHSF points out the main area for major conflicts in the sub-basins of rivers Alto Grande (Barreiras and Taguatinga region, dominated by the monocultures of soybean and cotton) and Salitre (region of Juazeiro and Sobradinho), also future sugarcane clusters proposed at Bahiabio. "The expansion of land occupation caused by the growth in agriculture in the Rio Grande sub-basin in Western Bahia and the increase in the use of water for irrigation make the region vulnerable for conflicts between water users. In the case of the Salitre sub-basin, besides the expansion of irrigation, limited water available and low capacity for diluting effluents in its water courses are factors to create conflict between users. The problem of chronicle lack of water also hampers the supply and dilution of effluents in much of the semi-arid region of the Basin<sup>55</sup>."

CBHSF has also mapped conflict areas of lesser relevance (where there are some potential conflict points), which cover virtually all the left margin of the São Francisco River between the state borders of Pernambuco and Minas Gerais.

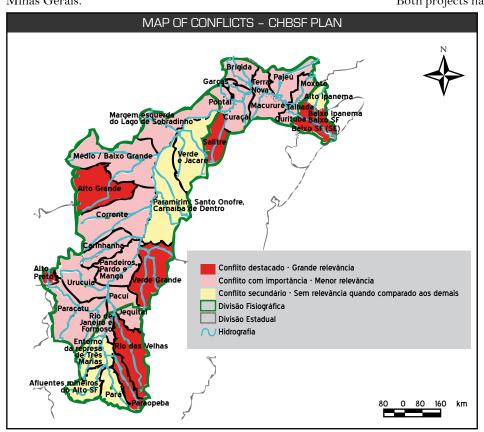
According to the São Francisco and Parnaíba Valleys Development Companies (Codevasf, a state-owned company linked to the Ministry of National Integration in charge of projects to use water resources in the São Francisco basin), irrigated perimeters<sup>56</sup> are reserved for business-oriented agriculture, regardless of prior or historical occupation of the land. According to the company, the projects' central aim is to provide structure and water at the lowest cost possible to complexes that are technically and economically able to produce at business scale, both in small and medium-scale modules and in large areas.

Not valued by Codevasf, land in irrigated perimeters is purchased by the company through expropriation by decreeing their public utility (mandatory sale) and then resold or granted at "minimum prices" through public tender to entrepreneurs considered proper. In the case of previous occupation by squatters or small farmers, it would be Codevasf's responsibility to compensate or resettle the "social debt" - an obligation it does not always fulfil.

Among irrigation structures included in Bahiabio, the Salitre and Baixio do Irecê canals are at the most advanced stage to establish large-scale agro-industrial projects. Stopped in 1999, works in both canals were resumed in 2007 with their inclusion in the Federal Government's Growth Acceleration Plan (Plano de Aceleração do Crescimento, PAC) which destined 251.5 million reais to Salitre and 241 million to Baixio do Irecê.

Both projects have been marked by land conflicts

and disputes that, not having received the necessary attention from public authorities for a satisfactory solution for inland populations, might become emblematic of irrigated sugarcane projects. More controversial because it involves actions of organised and politically strong groups as the Landless Rural Workers Movement, the MST, the conflict in Salitre involved occupation for over a year of part of the irrigated perimeter by some 800 families of landless people between April 2007 and June 2008. During that period, the irrigation structure was used by farmers for successful and diversified food production, which was cancelled after they were expelled. Today, the 1,000-some families are in a provisional area with no condition



to develop agriculture, according to the MST leadership (see details in the Salitre case study).

In Baixio do Irecê, in turn, the inland population that have planted for decades on what will be Codevasf's irrigated perimeter are being expelled "with no dialogue or compensation", as denounced by residents of the Boa Vista and Roçado communities, near the project area. Codevasf representatives in Brasília argued that the whole area would have been "bought" and that they are not aware of the presence of squatters, but, according to residents, local company officials have been trying to negotiate individually the solution of the impasse, preventing the organisation of communities and the standardisation of negotiations, as described in the Baixio do Irecê case study.

## CASE | Salitre Canal will serve the sugarcane industry

Located between the cities of Juazeiro and Sobradinho, the Salitre Cannal, which will withdraw 37 m3 of water per second from the São Franciso River (compared to 26.4 m3/second under the project to deviate the same river) should irrigate, according to Codevasf, 31.3 thousand hectares, of which 20 thousand might be destined, according to Bahiabio predictions, to sugarcane plantations. The part of the canal that has already been concluded serves 5 thousand hectares, but, according to the company, only in March 2009 the public tender process that will define the future users its will start.

In a Caatinga area, where drought is the core obstacle to developing production for subsistence in family agriculture, high public investment in large agro-industrial complexes started to be challenged by social movements, especially the MST,

already in 2005. In that year, the movement started a series of negotiations with Codevasf to establish irrigation structures such as small dams and wells, at the settlements of Remanso, Casa Nova, Sobradinho, Sento Sé, Senhor do Bonfim, and Juazeiro, as well as participation in the Salitre project. According to the MST state leadership, however, all agreements were broken by Codevasf.

In 2006, negotiation between the Movement, Codevasf and then Minister of National Integration Pedro Britto agreed on the transfer of an area in the Salitre perimeter to the national institute for Colonisation and Agrarian Reform (INCRA) to settle 800 landless families. In early 2007, the agreement was cancelled by current minister Geddel Vieira and in April of the same year about a thousand MST families occupied an area in the part of the irrigation canal that is ready.

During the period when part of Salitre remained occupied by the Landless Workers - when the government fought a legal battle for repossession - the MST camp developed intense production of food crops. In the first nine months of work, that production was estimated at about 330 tons of melon, 70 tons of tomatoes, 40 tons of watermelon, 30 tons of onions, 10 tons of okra, 3 thousand boxes of sweet peppers, as well as sunflowers seeds, pumpkin, beans, corn, vegetables, and medicinal herbs<sup>57</sup>.

Frequent eviction orders, increasing pressure by the military police and an agreement signed between the MST, INCRA, Codevasf and the state government, which signalled with concession of an area with



productive structure similar to that of Salitre, led MST to leave the area in June 2008. Camped in an area in the Sobradinho outskirts, about a thousand families are still waiting for promises to be fulfilled. Depending on a 40-real worth packged of basic food items "that comes every other month", since the displacement workers "have not produced a single black beans plant" because of the very bad quality of the soil, says the movement's state leadership. In Brasilia, Codevasf confirms that it agreed to set a new area for the families, but it will not establish deadlines for construction.



# CASE | The threat to inlander populations in Baixio do Irecê

According to Codevasf, the Baixio do Irecê project, whose water consumption will be 60 m3/second (nearly three times as much as the volume of deviation of the São Francisco River) includes the construction of an irrigation canal for 58.6 thousand ha in Xique-Xique and Itaguaçu da Bahia, at the right margin of the São Francisco River. Of that total, Bahiabio will allocate 40 thousand ha to plant sugarcane.





Of the 87 km planned, the Baixio do Irecê Canal already has 14 km ready to go on public tender (managed, because of a Public-Private-Partnership with the state government, by Companhia de Desenvolvimento Rio Verde (Codeverde) - a consortium formed by construction firms Odebrecht and Libian state-owned Lafyco). Part of the land it will serve, however, is traditionally used by the region's communities that traditionally live by the river and in the Caatinga, and despite Codevasf's claim that it would have already "bought" the whole area of the project, according to community members, the company is just taking their plots "without any negotiation".

According to the Land Pastoral Commission (CPT). which travelled the area in August 2008, at least 17 communities (Muquém, Esconço, Poço Grande, Nova Vereda, Boa Vista, Carneiro, Boca do Bode, Conceição, São João, Vista Nova, Curral do Meio, Muritiba, Pedras, Tapera, Roçado, Roçado do Rio Verde, and Maravilha) are potentially affected by being within the irrigated perimeter or because they have public land used in common to raise animals - and claimed by Codevasf/ Codeverde. Without their "own" area for animals, for instance, the Conceição community says they have had to pay Codeverde one of each eight bovines and one of each five caprines for the use of the area. The same happens to Muquem community members, who say they even have receipts for the animals they gave to the Consortium.

In October, 2008, a study on the situation of the communities of Bela Vista and Roçado (the ones nearest to the canal's water impounding structure), carried out by the Biofuel Watch Center (BWC), found that the people who live by the river are still very anxious because of the lack of information and negotiation by Codevasf and the advancement of a fence that would be delimitating the company's property.

In statements to BWC, residents of both communities sustained that "Codeverde employees arrived here and said that the land was theirs, they started to build the fence and they destroyed the plantations [of those who planted inside the perimeter]". One of the residents said: "People from the company have been advancing with the fence, taking over everyone's areas. What they say is: 'we bought the land, you'll have to leave'. Several times now, they have promised us a meeting to explain the procedures, but that never happened".

According to farmers, many of them are being approached individually by employees of the Consortium to negotiate compensations. The offers have ranged from 5 thousand to 25 thousand reais, but no document or guarantee of payment has been presented. Other accounts say that, after "plantations were taken over" (and fenced up by the company - no one could enter or get their production); company officials would have promised to "get back to say the price of the land, but it has been a year since they last got in contact".

#### **▶** Destroying a way of life

In her mud cottage in the Roçado community, a lady looks at the sides of the São Francisco River and remembers the times of the great flood, in late 1970, when the river level rose and covered everything: plants, fence, homes. In that year, everybody moved "more inland", to the Carneiro community, taking their cooking pans and their animals with them. When the waters lowered, people came back, rebuilt what had been destroyed and life followed its course.

She does not remember very well when her grandparents came to the area, but she knows "it has been a long time ago." Each

family demarcated some plots, let the animals loose where there was food for them, and when the river pressured, they would move to another part. Asked about her "monthly income", she looks puzzled and does not understand the question. "How much do you make a month? When you sell your production, how much do you make?" She has no income, there is not selling products, she explains. Inlanders plant what they eat, and when they need money for a doctor, clothes, other needs, they sell an animal. Cows, goats, and chicken are the bank.

Production and social organisation virtually at the margin of capitalism that characterises many of Brazil's inland communities, as well as the restriction on their mobility (in cases of floods, for instance), explain why many residents of the Baixio do Irecê impact region fear the project. They fear mainly threats of eviction or expropriation - whether legal or not, since "compensation is no good, selling everything is no solution, even if you, Mister, gave us 100 thousand reais for the plots. We get that money and then what? We are homeless". To promises

of job creation, there are two answers: "For us, a job will not work out because we can't do that [work in sugarcane or fruit]. Jobs are for other people"; and "people here do not want to be employees. Everyone only wants to work in their lots".

In face of inlander communities' dependence on a sociocultural structure built on centuries living with the semi-arid, imposing the new model of land occupation by the water-based agribusiness promoted by public authorities is extremely brutal. According to the logic of social development, argues CPT, two irrigated hectares are enough to maintain a family. Based on that calculation, if the Baixio do Irecê canal were destined to strengthen family-based agriculture and food production, about 29 thousand families could be benefited. Realistic, the lady of the Roçado community sees the priority change for public investment in irrigation as something positive, but very unlikely. "So the best is to leave it the way it is. We want this as it is now: people with their piece of land, which belonged to their parents, their grandparents".



# AMAZON



Opposite view publicised by President Luiz Inácio Lula da Silva's and even by organisations representing the sugar-alcohol industry, sugarcane expansion within the so-called Legal Amazon is for real.

Sugarcane has become the Center of a fierce fight between Brasil's Ministries of Agriculture, Cattle and Supply (MAPA) and the Environment (MMA) in their discussion about agro-ecological zoning. That is the core symptom that the advancement of those crops over the Amazon region is already real, despite official information saying otherwise.

Under pressure by foreign non-government organisations, in June 2007 Lula stated clearly that Brazil will not plant sugarcane in the Amazon region. "We are conducting agro-ecological zoning precisely to define what can be planted and where. We don't want to plant sugarcane in the Amazon because we know that land there is not productive for it. So there's no point in investing there", stated the president<sup>58</sup>.

At the time, speeches by the Sugarcane Industry Union (Unica) - the largest representative of sugarcane processing plant owners from southeast Brazil and specially from São Paulo - strangely converge with those of the federal government. The organisation's president Marcos Jank even said in an event that the Amazon region "is no good for sugarcane, since it rains a lot there and the soil is not proper "9"."

Less than a month after Lula's controversial statement, however, the largest and most disputed slave liberation ever conducted in Brazil showed that both the president and the industry leader were wrong, to say the least. On July 30, 2007, 1,064 rural workers were freed at once from the Pagrisa farm, in the town of Ulianópolis, Pará. The property produces 50 million litres of alcohol a year, besides 4 thousand sacks of sugar a day (see the Pagrisa case next page).

## **►** Zoning

Such events make the way to sugarcane zoning bumpy. So much so that the final publication of studies, coordinated by the Brazilian Agricultural Research Corporation (Embrapa) with the help of state organisations and universities, has been postponed several times and now little is certain about the matter.

By the time this report was finished, the final publication of the zoning, which was scheduled for July 31, 2008, had not taken place. The most recent news said that data collection had been concluded in early November, during the International Conference on Biofuels in São Paulo, Minister of the Environment Carlos Minc did not make any formal disclosure on the issue.

According to the first official statements, efforts have been made towards guaranteeing that plantations do not interfere in any area with primary vegetation or food production. Another aspect of the zoning will be the conditioning of public financing on producer's adjustment to the study's guidelines.

Strictly regarding the Legal Amazon, one of the few statements that has been repeatedly sustained, at least by the MMA, is that the new projects for processing plants in the Amazon will be stopped. Existing enterprises, however, will have their permanence in the region guaranteed. There are now 22 registered companies in the Legal Amazon.

Nonetheless, there are several differences between official figures and reality. ANP data, for instance, do not show the existence of plants in Acre, but there is one installed in the town of Capixaba, little more than 70 km from the state capital Rio Branco.

Such discrepancies are common regarding sugarcane industry expansion in the Amazon. Not even information by IBGE cover the real extension of plantations in Amazon land. In 2007 the agency recorded a total of 25,884 hectares occupied with the crop in the Northern

Region<sup>60</sup>. In Roraima, for instance, IBGE data indicate that the sugarcane area has remained the same at 548 hectares since 200461. Nevertheless, one owner had 700 hectares of sugarcane<sup>62</sup>.

The latest information on the 2008 harvest, release by Conab, shows an expansion of 23.5% in the Northern region, in comparison with 2007. Conab estimates that the area occupied by sugarcane is around 20.6 thousand hectares, but the data refers to only three states. The amount of land occupied with sugarcane crops is of 3.7 thousand hectares in Amazonas state,11 thousand hectares in Pará state and 5.7 thousand hectares in Tocantins state.

### **EXPANSION FRONTS**

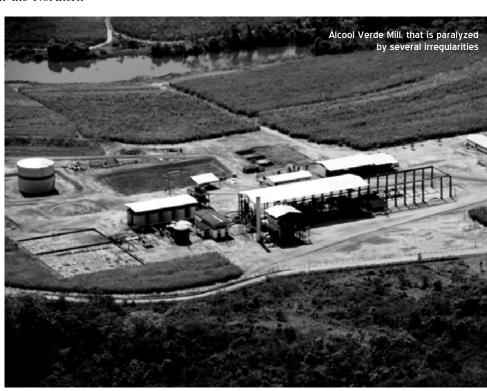
#### ► State of Amazonas

Once again, data are conflicting. The only company registered at ANP, Jayoro, says it has 4.5 thousand hectares alone, planted with sugarcane. According to the MMA, the company's plantation already threatens a Priority Area for Biodiversity<sup>63</sup>. It is the Environmental Protection Area (APA) of the Negro River Left Bank, sector Aturiá/Apuauzinho. According to study by the Ministry, presented in the last update of the Map of Priority Areas for Biodiversity, that area is of "extremely high" importance, and the priority for its preservation is also "extremely high". According to the agency, among other threats, the area is affected by guarana and sugarcane plantations, both belonging to Jayoro, which would be located over the sources of the Apuaú River.

#### ► Acre

The case of Acre is focused around one company: Álcool Verde, controlled by the Farias group\*. The company, located by the federal road BR-317, had had its operations prohibited because of environmental irregularities.

(\*) This text was corrected on February 26th 2009. On the contrary of what Biofuel Watch Center has affirmed in its report on sugarcane, Farias Group, investor on the Álcool Verde project, in Capixaba, Acre state, belongs to Eduardo Farias, son of the former senator Antonio Farias, and not to the federal deputy Augusto Farias.



The State and Federal Attorney General Offices have made a list of 14 demands for the company to adjust to the legislation and be able to operate normally. The main demand is related to exploitation of the company's water resources, which can reach 220 thousand litres/hour of water - a volume able to affect nearby water sources and the supply of neighbouring towns. In order to regularise its activities in that aspect, the plant will have to adopt alternative water systems and to monitor the volume of rivers and natural waterways from where it takes its water.

Another issue is saving archaeological sites located in the areas leased to plant sugarcane and the encouragement to declare so-called geoglyphs that are present in the area as heritage sites. Those are archaeological vestiges represented by geometrical drawings or other forms.

Finally, MPF and MPE also demand that the plant's production priority be the local consuming market. The Acre state government is a partner in the plant and therefore is also legally responsible in case any of those parameters is not met<sup>64</sup>.

#### ► Rondônia

The CONAB study does not take into consideration states such as Rondônia, for instance. And there, according to IBGE data, a clear expansion of sugarcane plantations is already seen. The area planted has grown steadily since 2002, when there were only 210 hectares registered.

In 2005, that figure was already at 700 and in the following year, it reached 1.278, until 3,047 in 2007.

The first processing plant in the state - called Boa Esperança - is located in Santa Luzia D'Oeste and belongs to São Paulo-based group Alcobrás. The plant is one of the beneficiaries of the 260 million reais provided by Brazilian Economic and Social Development Bank e Social (BNDES) to build alcohol processing plants in Rondônia. To supply those projects, 50 thousand hectares of sugarcane will be needed in the state<sup>65</sup>.

Sugarcane is already being cut in the property belonging to Boa Esperança. And, during its short life, the plant has several labour lawsuits against it. According to the Labour State Attorney's Office (MPT) in Rondônia, the company had to pay 100,000 reais to 37 sugarcane cutters since it did not fulfil its promise to provide wages of 1,500 reais a month, with good lodgings and generous meals.

Boa Esperança is also under investigation for charges of employing child labour, holding working papers, and illegal wage discounts.

In another town in Rondônia, Cerejeiras, another processing plant under implantation – a Usimat – received public funds of 125 million reais. The company's activities should start in 2009, and projected production is 80 million litres of alcohol a year.

#### **▶** Roraima

According to projections, Roraima is expected to reach 70 thousands of sugarcane plantations in 2015<sup>66</sup>. With that in mind, a plant is already being constructed in Bonfim by Biocapital. The company intends to produce 6 million tons until 2014, which would generate up to 530 thousand litres of ethanol.

Fiscal incentives have been drawing other investors to the state. Pernambuco-based group Camaçari Agroindustrial, which received a 100% de ICMS exemption, will produce 3 million tons of sugarcane until 2009. Those funds could also come from Japan, through companies interested in establishing Japanese biotechnology in the state.

For the state government, space will not be a problem. The official view boasts that there are up to 4 million hectares available to plant sugarcane in the  $state^{67}$ .

#### **►** Tocantins

Data from Conab shows that the state increased its sugarcane area in 58.4%, from 3.6 thousand hectares in 2007, to 5.7 thousand hectares in 2008 - a small amount in comparison to the Mid-South States.

The project of expansion of sugarcane plantations in Tocantins is led by a major member of the industry - the Pernambuco-based EQM group (see the Gameleira case below). The group purchased a 1,300 hectare-area in Arraias, in the far south of the state. In 2006, Tocantins Açúcar e Álcool started its operation with a 250,000-ton harvest and an expansion planned to 500 thousand<sup>68</sup>.

In the same year, the state government signed a partnership agreement with Maity Bioenergia for the construction of three new ethanol distilleries to be supplied by the production of 90 thousand hectares planted with sugarcane. And several other groups have been attracted to investing in sugarcane in the state.

# CASE | A thousand slaves at the Pagrisa processing plant<sup>69</sup>

The Minister of Labour and Employment's (MTE) mobile inspection group caught, on June 30, 2007, 1.064 workers found under conditions analogous to slavery. They were working on sugarcane harvest and planting for Pagrisa (Pará Pastoril e Agrícola S.A.) in Ulianópolis, PA, a town located 390 km from Belém.

According to labour inspector Humberto Célio Pereira, who headed the actions, some workers were paid only 10 reais a month, since the illegal discounts made by the company ate up nearly their whole wages. The auditor also informs that the food provided to workers was rotten and several people suffered from nausea and diarrhoea.

Drinking water, as reported by some of the farms employees, was the same used to irrigate plantations. It was so dirty that it looked like black bean broth. The dormitory, according to Pereira, was overcrowded and sewerage pipes were open. Coming mostly from Maranhão and Piauí, workers had no transportation available to take them from the farm to the Ulianópolis town Center, a 40-km ride. Pagrisa director Fernão Villela Zancaner even said that all workers had regular working papers.

The group produced about 50 million litres of alcohol a year in 2007 in Ulianópolis. In the same place, there is a sugar processing plant that produces 4 thousand sacks a day. Petrobras used to be the main buyer of ethanol from the company. After the inspection, its officials informed that is would cancel alcohol purchases from Pagrisa.

The Attorney General Office in Pará filed a criminal lawsuit against Pagrisa owners Murilo Vilella Zancaner. Fernão Villela Zancaner, and Marcos Villela Zancaner because of the liberation of workers. They are charged with thwarting, by fraud or violence means, rights guaranteed by the labour legislation (article 203 of the Penal Code), exposing the lives or health of others to direct and imminent danger (article 132) and reducing a person to conditions analogous to slavery (article 149).

According to MPF officials, the seriousness of the crimes committed by the Zancaner brothers warrants the 15-maximum prison sentence. The report by the mobile inspection group was examined by six federal prosecutors, who saw strong evidence of "Degrading labour and living conditions, inflicted collectively to manual workers in sugarcane plantations". The company has also been accused of forcing workers to work fatiguing days of up to 14 hours, with no overtime pay, since the start and finish times was signed at the same time by company's representatives.

The MPF has concluded, based on the evidence and the report, that the Zancaner brothers, "by their free and conscious will, reduced the 1,064 workers to conditions analogous to slavery, subjecting them to forced labour, to fatiguing working hours and restricting their freedom of movement by making it difficult for them to leave the farm, by the low wages paid, linked to the extremely expensive medications and transportation to the town". The lawsuit is proceeding at the Castanhal Federal Justice Court under number 2007.39.04.000812-4

That was the largest worker liberation ever made in Brazil. Since the creation of the mobile inspection groups in 1995, the largest such operation had taken place at the Gameleira Distillery (se case below) in June 2005, when 1.003 were freed.

Accordingly to CPT, between 1995 and 2008, 33,747 slave workers were released. Pará, the state where Pagrisa is located, beats all the records of slave labour: in the same period, 11,053 slaves were released (32.8% of the total). On the second place is Mato grosso, with 5,262 (15.6%) released workers, followed by Maranhão, Bahia and Goiás.

The liberation action at the Pagrisa farm generated a controversy proportional to the number of workers freed. A Senate external committee was even created to examine the action of the federal government's mobile group at the farm. After pressure by senators - who visited the farm almost three months after the inspection and demanded an investigation by the federal Police into the operation - the government temporarily cancelled the group's work and publicised the report on the inspection at Pagrisa.

Parliamentarians who visited the farm included senators Romeu Tuma (DEM-SP). Flexa Ribeiro (PSDB-PA). Kátia Abreu (DEM-TO). Cícero Lucena (PSDB-PB). and Jarbas Vasconcelos (PMDB-PE). They announced that they would demand a Federal Police investigation on the procedures adopted by the mobile group. According to the Senate News Agency, Senator Kátia Abreu said that the company is "very well managed and forms a community of rural workers". Senator Abreu is one of the strongest enemies of today's struggle against slave labour. As a federal deputy, she fought against the approval of laws that would help eradicating such practice.

According to the MTE's Labour Inspection Department, the visit by the senators, who made a vehement attack on the inspection work, created a climate of insecurity that threatened the continuity of operations. It should be noted that labour inspectors working in rural areas have been suffering violence by farmers opposed to notifications. The most publicly known case was the massacre of three MTE inspectors and a driver on January 28, 2004, in Unaí, MG, during a routine inspection. But that was not the only one: on February 8 last year, the mobile group was received with shots by farmers, who were supported by military police, in Nova Lacerda, MT. Threats against the group used to be constant already before the senators' statements. Several public and civil society organisations have condemned the senate's interference in the case.

# CASE | Gameleira, a company at the power Center<sup>70</sup>

Located at Confresa, in the state of Mato Grosso, the Gameleira Distillery was caught more than once with serious problems related to labour rights. Only in 2001, during and action by a federal mobile inspection group, 318 people were freed from slavery. When the record of the Ministry of Labour and Employment (the "dirty list") was created, Gameleira was already included in the first list publicised, in November 2003. Labour inspector Valderez Rodrigues, who inspected the farm three times, reported that the situation of workers in sugarcane cutting was very precarious and there were gunmen threatening to kill them. There were even beatings recorded. Working hours were fatiguing, many worked while they were ill and food was bad.

In the 2003 harvest, the distillery ground 300 thousand tons of sugarcane and produced 23 million litres of alcohol. In 2004, it served the markets in the North and Northeast regions of Brazil and did not export its production. The study identifying production chains showed that it has trade relations with major fuel distributors - Petrobras, Ipiranga, Shell, Texaco, Total, and PDV. Directors of those companies said that Gameleira offered alcohol at low, competitive prices.

After meetings led by the Ethos Institute, the International Labour Organisation and NGO Repórter Brasil, the four first distributors mentioned above, after learning that they were buying from a company in the "dirty list", cancelled contracts with Gameleira until it cleaned up its situation with the Federal Government. Those companies signed the national Covenant for the Eradication of Slave Labour on May 19, 2005, committing themselves to taking measures for the eradication of that kind of labour within their production chains.

The distillery belongs to Eduardo Queiroz Monteiro, an influent Pernambuco businessman and owner of the newspaper Folha de Pernambuco. He is the brother of National Industry Confederation president and federal deputy Armando Queiroz Monteiro Neto (PTB), who in 2004 was also a partner in the enterprise.

On June 1st 2005, then president of the Chamber of Deputies Severino Cavalcanti (PR-PE) called the National Union of Fuel Distributors questioning the reason for which the companies had cancelled purchase contracts with Gameleira. Cavalcalti confirmed publicly<sup>71</sup> that he had made a phone call to the Union as a "consultation" and said that his motivation was to find out why Gameleira's alcohol was no longer being purchased. According to him, the call was a request by federal deputies who wanted to know what problem was preventing the purchase. The congressman did not confirm it, but sources within the companies said that he had also called other distributors such as Ipiranga. The action by the Chamber of Deputies' president took place only half an hour after Ipiranga confirmed to Gameleira's lawyers the cancellation of the purchase. When the political interference tool place, Gameleira had already gotten a provisional justice decision to have its name excluded from the list72.

Ipiranga and other distributors kept their cancellation of the purchase. Company sources revealed that its decision follows determinations by the National Covenant and is in line with an ethical and social responsibility-oriented conduct. According to them, it will only resume fuel purchase from Gameleira when the Federal Government sends a document stating that there is no slave labour in the property, which has not been provided yet.

Then Labour Minister Ricardo Berzoini was visited by the company's lobby, represented by congressmen from the so-called "ruralist parliamentarian group", demanding that Gameleira were favoured. Nevertheless, he kept his support to the inspection groups and the National Covenant. Eduardo Queiroz Monteiro, under pressure by the loss of customers, even requested a new inspection by the Ministry of Labour and Employment to show that the situation was regular after the last operation.

Coincidently, while its directors were trying to find a solution with the Federal Government, new denunciations were made about contemporary slave labour in the property. On June 13, 2005, an inspection team sent to the property conducted the then largest liberation ever made in the country, with 1,003 people rescued and 1,451,023,71 reais paid as labour compensation. Workers had been taken there from Pernambuco, Maranhão, and Alagoas under false promises of wages and good working conditions given by "cats" serving the company. At the moment of the operation, nobody had received payment and all were forced to buy at the company's restaurant at prices over market values.

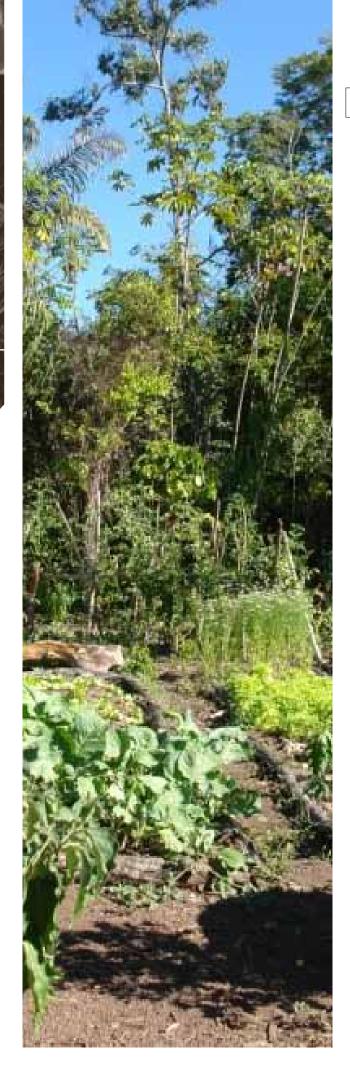
In order to revert the negative image that was attached to the name "Gameleira" after the scandals, businessman Eduardo de Queiroz Monteiro bought the part of the company that belonged to his family, purchased more land, enlarged facilities and changed the property's name. On May 27, 2006, the Gameleira Distillery became the sugarcane milling part of the just created Araguaia Distillery. The new company had 22 thousand hectares of land, of which six thousand were planted, producing 35 million litres of alcohol a day.

At the time, the EQM group stated that labour relations were all based on regular contracts and constant capital underwent a process of modernisation through financial investments. It announced that it would follow all aspects of the law, including rural labour regulations, and it promised to guarantee the 240 permanent workers and the 750 temporary ones decent lodging conditions, balanced food served on mobile restaurants and formal labour relations.

For the press announcement informing the re-opening of the company, attendance was confirmed by two state governors, Blairo Maggi, MT, and Marcelo Miranda, TO, and an ex-governor, Jarbas Vasconcelos, from Pernambuco, where the economic group that controls the Araguaia Distillery is based.

Fuel distributors such as Petrobras, Ipiranga, Esso, Shell e Texaco keep their commercial restrictions to Gameleira. The behaviour served as a corporate reference for future situations. Those companies have systematically cut employers present in the "dirty list" of slave labour from their list of suppliers. The federal government, through their lawyers, got to revoke the provisional decision that excluded Gameleira from the "dirty list". The company returned to the list and remained in it until after the two years demanded by its regulation. It was excluded after it solved all its pending matters with the Ministry of Labour and Employment.

Labour irregularities still occurred. A group of 14 workers was arrested in June 2007 in Confresa, when they were demonstrating against the 15-day delay in their payment. The group set eight tires on fire to block the access to the property. Workers-related civil society organisations denounced that demonstrators suffered police violence. However, the same organisations say that conditions are now better and do not match those found by MTE mobile group inspectors in 2005. The pressure by signatories of the National Covenant was effective. Besides Araguaia (former Gameleira), the EQM group has other three sugar and alcohol plants: Cucaú, in Pernambuco, Tuntum, in Maranhão, and Tocantins, in the state of Tocantins.



# RECOMMENDATIONS

Even though international organisations such as The United Nations (UN), the UN Food and Agriculture Organisation and the World Bank consider ethanol from sugarcane less problematic - especially regarding its competition with food production - than corn, which is produced in large scale in the USA, and despite efforts by the government and businesses in Brazil to sell an image of "clean fuel" for sugarcane alcohol abroad, the crop has one of the highest environmental and social impacts in the country.

While the sugar-alcohol industry increases its use of cutting edge technology in part of its production chain, overexploitation of labour and disregard for environmental laws are still common practices in the vast majority of processing plants, regardless of the geographical location. In 2008, the industry broke the record for liberation of workers under conditions analogous to slavery - 2,553 workers rescued, according to data provided by the Land Pastoral Commission - a practice found both in North-eastern states and in the Mid-South, where most companies are located, as well as the most modern.

Differently from the belief in ethanol as a cleaner fuel in terms of release of greenhouse effect gases, the expansion of monocultures over the native vegetation, over Permanent Protection Areas and over Legal Reservations, straw burnings and massive use of pesticides in all producing areas have caused a negative imbalance in that environmental gain.

Also in the optimistic wake of conquering new markets for Brazil's fuel, and consequently, of new or even old - plantation areas, sugarcane has become a stronger element for land conflicts with movements struggling for land and Indian communities, especially in the North-eastern and Mid-South regions. Strictly dependent upon public funding and policies, the sugarcane industry has one of the highest debts in the country, despite several re-negotiations (and even cancellations) and high investments and loans by state financial institutions. In face of this situation:

#### PUBLIC AUTHORITIES SHOULD

- 1) Demand the fulfilment of labour and environmental laws and apply punishments, especially fines in cases of disregard. Strengthen preventive operations of labour inspection in areas of sugarcane plantation in order to prevent cases of slave and degrading work
- 2) In mechanisable regions, direct agrarian reform to the mass of workers unemployed after replacement of labour by machines, in order to guarantee a decent life to workers and the use of land for food production purposes.
- 3) Create a national legal regulation framework that sets the criteria for hiring and paying sugarcane labour, extinguish payment of cutters by production and, to compensate, raise the minimum wage to decent levels, for instance, as defined by a minimum necessary computed by the Inter-Union Department of Statistics and Socio-Economic Studies (DIEESE) at 2,014.73 reais value corresponding to November 2008.
- 4) Give massive resources to sustainable projects for job and income generation in places of labour migration, especially in the North-eastern and Northern regions of the country.
- 5) Strengthen program Marco Zero a partnership between the Ministry of Labour and Employment and the state governments of Pará, Maranhão, Piauí, and Mato Grosso, consisting of the installation of special public agencies to mediate and train labour in places where the action private middlemen that recruit people for rural enterprises.
- 6) Since sugarcane work is one of the toughest in agriculture, being responsible for a large volume of early retirements because of health damage and disabilities, charge companies' debts to INSS and FGTS, conditioning any loan to the payment of those debts.
- 7) Not use funds from the Workers' Support Fund (FAT), via BNDES, to fund the sugarcane industry, investing those funds in family agriculture development.

- 8) In regions where land conflicts are stronger, such as Brazil's Northeast, assess land ownership based on the laws in force about the property's social function. When it detects any disregard for the law, it should use the area for agrarian reform.
- 9) Conduct transparent studies of agro-ecological zoning for sugarcane, opening the process for popular participation, prioritising environmental, social criteria, as well as those based on sovereignty and food sovereignty and prohibit plantations in the whole Amazon and in the Pantanal.
- 10) In cases where the government and stateowned companies were co-entrepreneurs together with private companies in projects of ethanol production, take the lead in the process of adjustment to all environmental, social and labour norms.
- 11) Guarantee and speed up the process of creation of Resex and Indian Lands where there are conflicts involving traditional and Indian populations, such as in Mato Grosso do Sul and at the estuary of the Serinhaém river, in Pernambuco.
- 12) Guarantee and speed up the process of settling families in areas belonging to the Union and in those considered unproductive by INCRA, such as the Salgado farm in Ipojuca and the Estreliana farm in Gameleira, Pernambuco.
- 13) Meet domestic demand for ethanol rather than demands by foreign markets, thus lowering the cost of fuel for Brazilian consumers.
- 14) As for ongoing irrigation projects, destine public funds and infrastructure to family-based agriculture and agrarian reform in Brazil's Semi-Arid region.
- 15) In case of public funding institutions, demand social and environmental counterpart actions for loans to the sugar-alcohol industry.

### BUSINESSES SHOULD

- 1) Put a stop to the occupation of new areas in the Cerrado, the Amazon, the Atlantic Forest and Pantanal by sugarcane. Conduct studies on socioenvironmental impacts and discuss them with the local community.
- 2) Demand from ethanol suppliers to confirm that they have followed all environmental and labour laws before buying fuel. Do not purchase products from companies that owe to social security, that are in the slave labour "dirty list" or have notifications e convictions for environmental damage.
- 3) Demand presentation of final documents of land ownership when signing contracts for ethanol purchase.
- 4) Immediately cancel purchase contracts with producers that are in Indian or slave-descendant (quilombola) land or land under recognition processes, when the anthropological study has been presented and the deadline to challenge it has passed.

It is urgent that the country discuss the concept of energy sovereignty and create policies that guarantee Brazilian population's universal access to cheap energy produced in a sustainable way, and mainly that does not collide with food production. In face of the high and inevitable social, environmental, and land-related impacts of the monoculture-based model of sugarcane in Brazil, whose production and logistic distribution chain is a major contributor for greenhouse effects gases, public policies for the industry must be reviewed.

In order for the country to have access guaranteed to energy for its development, ethanol production must be decentralised, meet local demands, create jobs and income locally and not demand large structures for transport and distribution. For that, there must be strong investments and technologies proper for smaller-scale production, as well as policies to incentive small production and trade.



- 1 Forescast by Consultoria Datagro, November 2008.
- 2 In São Paulo, comparison between Nov/2007 and Nov/2008, according to Dieese.
- 3 Values were deflated based on the National Consumer Price Index (INPC). For 2008, the index considered was 7.12%, for the 12 months between November 2007 and November 2008.
- 4 Data from Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA).
- 5 Data from Companhia Nacional de Abastecimento (CONAB).
- 6 http://portalexame.abril.com.br/ae/economia/usina-albertina-atrasa-salarios-enfrenta-greve-207127.shtml
- 7 Article published on the UNICA webpage (www.unica.com.br).
- 8 http://www.biofuels2008.com/CMS/uploads/publicacoes/08.11.25-19.24.42-discurso presidente lula.pdf
- 9 http://www.bndes.gov.br/noticias/2008/not220\_08.asp
- 10 Information obtained at the Ministry of Labour and Employment Annual List of Social Data (RAIS). It represents the sum of positions existing in classes 01139 (sugarcane plantation), 15610 (sugar processing plants), 15628 (sugar refining and grinding) and 23400 (alcohol production).
- 11 Besides São Paulo, the states with the highest number of workers in sugarcane are Alagoas and Pernambuco, with 86,932 and 85.042 positions, respectively. Those two states are only fifth and sixth places in Brazil in terms of sugarcane areas, but their production model, based on the intensive use of labour and low mechanisation of harvest, explains the high job creation.
- 12 Moraes, Márcia Azanha Ferraz Dias de. "O mercado de trabalho da agroindústria canavieira desafios e oportunidades". Magazine Economia Aplicada. São Paulo, v. 11, n. 4, p. 605-619, October-December 2007.
- 13 Information from "Cana-de-açúcar, entre o velho e o novo", by Elio Neves and Marcos S. Jank. Published on page A2 of newspaper O Estado de S. Paulo, on August 27, 2008.
- 14 The reference is the average price of the basic food item package in November each year.
- 15 The real increase in the income of sugarcane industry employees is corroborated by other studies, such as "Evolução da remuneração das pessoas empregadas na cana-de-açúcar e em outras lavouras, no Brasil e em São Paulo", by Rodolfo Hoffmann (Unicamp) and Fabíola C. R. de Oliveira (USP).
- 16 Values were deflated based on the National Consumer Price Index (INPC). For 2008, the index considered was 7.12%, for the 12 months between November 2007 and November 2008.
- 17 Alves, Francisco. Por que morrem os cortadores de cana? Saúde e Sociedade magazine, v. 15, n. 3, p. 90-98, September-December 2006.
- **18 Alves, Francisco**. *Por que morrem os cortadores de cana?* Saúde e Sociedade magazine, v. 15, n. 3, p. 90-98, September-December 2006.
- 19 The former Delegacias Regionais do Trabalho are now called Superintendências Regionais do Trabalho.

- 20 Alves, Francisco. Por que morrem os cortadores de cana? Saúde e Sociedade magazine, v. 15, n. 3, p. 90-98, September-December 2006.
- 21 Moraes, Márcia Azanha Ferraz Dias de; e Figueiredo, Margarida Garcia de. Migração espontânea de trabalhadores no setor sucroalcooleiro. Research report by the Extension Group on Labour Market at Luiz de Queiroz Higher Education School, at São Paulo University São Paulo. April 2008.
- 22 Folha de S.Paulo, supplement Folha Ribeirão, 16/12/2008, "Usinas lideram ranking da poluição ambiental na região"
- 23 UNICA. "Responsabilidade socioambiental A sustentabilidade da cana brasileira"
- 24 Available at <a href="http://www.riosvivos.org.br/arquivos/560616116.pdf">http://www.riosvivos.org.br/arquivos/560616116.pdf</a>
- 25 In terms of planted area in the 2007 harvest, according to IBGE, the towns mentioned are 7th, (Maracaju), 8th (Dourados), 11th (Rio Brilhante) and 17th (Sidrolândia) places among main corn producers in the country; as for soy, they were 13th (Maracaju), 16th (Dourados), 30th (Rio Brilhante) and 34th (Sidrolandia).
- **26** Names made up to preserve the identity of interviewees.
- 27 In Mato Grosso do Sul, the most dramatic situation is related to the Guarani (divided into two ethnic groups the Nhandeva and the Kaiowá). The impacts of the sugar-alcohol industry on the region's Indians in the Mid-South, however, also extends to other groups. In Mato Grosso do Sul, the Terena face several problems. The Xakriabá from Minas Gerais have been coming to work in sugarcane in São Paulo for at least a decade.
- 28 The article "O ciclo de um combustível à base de bagaço de gente e caldo de sangue", originally published on O Porantim, newspaper of the Indianist Missionary Council, received a journalistic award by IPS (Inter Press Service) in late 2008. Reproduced by several publications, including newspaper Brasil de Fato no. 266, the article had among its contributors journalist André Campos, from Agência Repórter Brasil.
- 29 Such situation is the subject of Marco Bechis' beautiful movie Terra Vermelha (ou Birdwatchers).
- 30 The use of Guarani slave labour, in Brazil and in other South American countries is historical not only in sugarcane, but also in other crops, such as mate - to the point that Guarani slavery in Bolivia has been one of the starting points for the International labour Organisation's legislation against modern slavery.
- 31 Mato Grosso do Sul state government webpage, 8.21.08
- 32 http://pib.socioambiental.org/pt/povo/xakriaba/1155
- 33 Albuquerque, Cícero Ferreira de A cana-de-açúcar e a sua contribuição para a formação Social de Alagoas e do Nordeste brasileiro. Palavramundo, v.1, n.1, 2007.
- 34 Andrade, Manuel Correa de Espaço e tempo na agroindústria canavieira de Pernambuco, Instituto de Estudos Avançados da USP, 2001
- 35 Folha de S. Paulo BB dá perdão bilionário para usineiros, 1.14.07
- 36 Extra Alagoas Governo Téo perdoa mais R\$ 1,5 bilhão de usineiros, 7.14.2008
- 37 CONAB, 2º levantamento da safra brasileira, August 2008
- 38 Conab, 3rd study on Brazil's harvest Sugarcane december 2008
- 39 Bruno Ribeiro de Paiva is a lawyer with the Pernambuco Agricultural Workers and a member of the Economic and Social Development Council (CDES)

- 40 List of debtors at the INSS Active Debt Consultation screened by UF
- 41 UNDP publicized HDI figures of countries in 2008, but the most recent data per city in Brazil are from 2000.
- 42 Companies caught employing minors are: Capricho, Roçadinho (notified twice), Santa Maria, Laginha (which belongs to the group of former senator João Lyra), and Central Açucareira Santo Antônio. Companies caught employing slave labour: Serra Grande, Santa Clotilde, Usina Caeté, its filiais Cachoeira, Marituba and Delta, Usina Taquara, and Usina Roteiro.
- 43 Companies notified were: Usina Bom Jesus S/A, Cia Usina Bulhões, Companiia Industrial do Nordeste Brasileiro, Usina Central Nossa Sra. de Lourdes S/A, Usina Central Olho D Água S/A, Usina Cruangi S/A, Zihuatanejo do Brasil Açúcar e Álcool S/A, Interiorana Serviços e Construções Ltda, Usina Ipojuca S/A, J.B. Ltda, Usivale Indústria e Comércio Ltda, Cachool Comércio e Industria S/A, Destilaria PAL Ltda, Usina Petribú S/A, Usina Pumanty S/A, Usina Salgado S/A, Cia Agro Industrial de Goiana, Usina São José S/A, Usina Trapiche S/A, Una Açúcar e Energia Ltda, Una Álcool Export Ltda, Usina União and Indústria S/A, Vale Verde Empreendimentos Agrícolas Ltda, Vitória Agroindustrial Ltda
- 44 O Globo Minc diz que Pernambuco é 'desastre do desastre'. Usinas são multadas em R\$ 120 milhões, 7.1.2008
- 45 Quotations from the report are from the article "Ilegalidade no Canavial", by O Eco webpage, 7.1.2008
- 46 According to the study "Movimentação de cana-de-açúcar numa agroindústria canavieira em condições adversas de operação", by Pernambuco Federal Rural University, 70% of the sugarcane planted by Trapiche are located on hilltops.
- 47 Biological expert report to determine the influence area of the Sirinhaém River's estuary, commissioned by IBAMA's Recife office, Recife, June 2008.
- 48 Silva Lima, Lenivaldo Marques Entre o Amargo da Zona Canavieira e a Harmonia da Usina Catende, 2003.
- 49 Agência Carta Maior "Judiciário retarda programa, avaliam especialistas", 3.20.2007.
- 50 Revista do Brasil O martelo contra a Reforma Agrária, 4.11.2007
- 51 CONAB, 2nd study on Brazil's harvest, August 2008
- 52 Conab, 3rd study on Brazil's harvest Sugarcane december 2008
- 53 About 600 thousand hectares in the far south of Bahia are occupied by eucalyptus monocultures, with impacts on soil (Desertification - "Os impactos do plantio de eucalipto e da produção de celulose em comunidades tradicionais no extremo sul baiano", UESB/UFBA) and native forest (deforesting in Atlantic Forest areas - "Veracel é condenada a pagar R\$ 20 milhões por desmatamento", MPF/BA July 2008)
- 54 Bahia State government, Department of Agricultura, Irrigation and agrarian Reform Bahiabio Bioenergy Program, November 2007.
- 55 CBHSF Plano de Recursos Hídricos da Bacia Hidrográfica do rio São Francisco
- 56 In Bahia, according to Codevasf, irrigated perimeters are: at the left margin of the São Francisco river: Formosinho and Formoso A/H, with a total 12,236 ha of operating area. Projects Correntina and Jaborandi are under preliminary studies, totalling 164,000 ha. The main sources for water impounding are the São Francisco, Corrente, and Formoso rivers. In the Barreiras region: São Desidério/Barreiras Sul, Riacho Grande, Nupeba, and Barreiras Norte, totalling 9,101.9 ha in operation. Project Brejos da Barra, with 4,300 ha, is under preliminary studies. The main water source of those projects is the Grande River. Irecê area: perimeters Mirorós, with 2,145 ha operational, and Baixio de Irecê, with a total area of 58,659 ha, of which 53,936 ha are in the stage of formulation of executive and basic projects and 4,723 ha under implantation. The main water sources are the rivers São Francisco and Verde. Juazeiro/Petrolina: Curaçá, Maniçoba, Tourão, Mandacaru, Senador Nilo Coelho, and Bebedouro, totalling 41,458.60 ha operating, as well as

projects Pedra Branca, Glória, Rodelas, Manga de Baixo, Apolônio Sales, Brígida, Icó-Mandantes, and Caraíbas, from the Itaparica complex. Under implantation, projects Salitre (1st Stage) and Pontal (PE), totalling 39,167 ha, of which 8,680 ha are already established.

- 57 Brasil de Fato newspaper Uma mini-transposição. Projeto Salitre: água destinada à exportação, February 2008.
- 58 Agência Estado. http://noticias.uol.com.br/ultnot/agencia/2008/06/01/ult4469u26112.jhtm.
- 59 Agência Indusnet Fiesp. http://www.fiesp.com.br/agencianoticias/2007/08/03/pres-unica-inverdadessucroalcool.ntc.
- 60 SIDRA/IBGE.
- 61 SIDRA/IBGE.
- **62** Preço baixo da terra atrai produtor. O Estado de São Paulo, 9.7.2008.
- 63 http://www.arcplan.com.br/mma/amazonia fichas das areas prioritarias.pdf
- 64 Ministério Público faz 14 exigências para que a usina Álcool Verde possa se instalar no Acre. Blog da Amazônia by Altino Machado. http://blogdaamazonia.blog.terra.com.br/2008/10/21/ministerio-publico-faz-14-exigencias-paraque-a-usina-alcool-verde-possa-se-instalar-no-acre/
- 65 Agrocombustíveis Solução? A vida por um fio no eito dos canaviais. Serviço Pastoral dos Migrantes, Pages 82 and 83.
- 66 Preço baixo da terra atrai produtor. O Estado de São Paulo, 9.7.2008.
- 67 Os impactos da produção de cana no Cerrado e na Amazônia. Rede Social de Justiça e Direitos Humanos e Comissão Pastoral da Terra, 2008.
- 68 Os impactos da produção de cana no Cerrado e na Amazônia. Rede Social de Justiça e Direitos Humanos e Comissão Pastoral da Terra, 2008.
- 69 Based on information from a series of reports by Repórter Brasil News Agency.
- 70 SAKAMOTO, Leonardo Moretti. Os Acionistas da Casa-grande: a reinvenção capitalista do trabalho escravo no Brasil contemporâneo (2007). Doutoral Thesis. School of Philosophy, Languages, and Human Sciences at São Paulo University, 2007.
- 71 SAKAMOTO, Leonardo; GOMES, Marcel; FILHO, Maurício Monteiro; THUSWOHL, Maurício. Severino Cavalcanti faz lobby por empresa flagrado com escravos. São Paulo: Agência Carta Maior, June 2, 2005.
- 72 On October 9, 2006, a Advocacia Geral; da União got to cassar a liminar junto ao Tribunal Regional do Trabalho da 10ª região and Gameleira returned to the list.
- 73 THENÓRIO, Iberê; SAKAMOTO, Leonardo. Recordista em libertações, empresa é reformulada e muda de nome. São Paulo: Repórter Brasil, 5.26.2006.